

**(1) Requirement:** The monitoring system bandwidth measured at its 20 dB down points must be equal to or greater than the emission bandwidth of the intended transmission.

**Response:** Tx emission bw is best represented by mode 6 in Table 23, Rx BW is represented in Table 41 of Mozart\_Production\_Analog\_DVT\_Report\_138088\_v33\_20Apr2011.doc

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Emission Bandwidth, -21 dB Wideband Mode 4(MICS)	300 kHz max	269.56 KHz	271.41 KHz	275.52 KHz	267.91 KHz	PASS	Regulatory subtest #1
Emission Bandwidth, -21 dB Narrowband Mode 2(MEDS)	100 kHz max	81.11 KHz	81.46 KHz	81.74 KHz	81.32 KHz	PASS	Regulatory subtest #1
Emission Bandwidth, -21 dB Mode 6	300KHz max	205.33 KHz	203.83 KHz	204.01 KHz	204.10 KHz	PASS	Regulatory subtest #1

Table 1 Regulatory Tests– In-band Spectral Mask – Emission Bandwidth

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Frequency (-3dB) TelC Narrowband	26 kHz min	34KHz	34KHz	34KHz	33KHz	PASS	Measured using baseband, not at carrier frequency. (Spec is 52 kHz at carrier frequency)
Frequency (-3dB) TelC Wideband	110 kHz min	134KHz	135KHz	129KHz	134KHz	PASS	Measured using baseband, not at carrier frequency. (Spec is 220 kHz at carrier frequency)

Table 2 Rx Filter -3dB Bandwidth (TelC)

**(2) Requirement:** Within 5 seconds prior to initiating a communications session, circuitry associated with a MedRadio programmer/control transmitter must monitor the channel or channels the system devices intend to occupy for a minimum of 10 milliseconds per channel.

**Response:** The timing specific tests were verified by Firmware VT. The attached document DSN001255, titled Tel M FWVT Test Results & Status Phase 1 TCP-M, lists each test and the run status of Pass. The Traceability Report (DSN001257) maps the requirement to the test name(s). The requirement is listed in telM\_protocol\_C\_A36244.pdf.

Test Results (from DSN001255.xls):

Test Results From: <a href="#">\\data\pace\fwvt\mozart\FWTest\FWVT_FORMAL\TestMode9_10</a>							
FWVTBatch Version: 1.0.0.0							
Proctor of execution: powelm4							
Configuration file: \\data\pace\fwvt\mozart\FWTest\FWVT_FORMAL\TestMode9_10\Testmode9_10.xml							
Total tests	Pass	Fail	Truncated	Exception	No result	No build	Pass Ratio
528	528	0	0	0	0	0	100.0%

Test Name (from DSN001255.xls):

255	M_TCP_Discover	m_DiscoverFull003	<a href="#">\\data\pace\fwvt\mozart\F</a>
256	M_TCP_Discover	m_DiscoverFull004	<a href="#">\\data\pace\fwvt\mozart\F</a>
257	M_TCP_Discover	m_DiscoverFull005	<a href="#">\\data\pace\fwvt\mozart\F</a>
258	M_TCP_Discover	m_DiscoverFull006	<a href="#">\\data\pace\fwvt\mozart\F</a>
259	M_TCP_Discover	m_DiscoverFull007	<a href="#">\\data\pace\fwvt\mozart\F</a>
260	M_TCP_Discover	m_DiscoverFull009	<a href="#">\\data\pace\fwvt\mozart\F</a>
261	M_TCP_Discover	m_DiscoverFull010	<a href="#">\\data\pace\fwvt\mozart\F</a>

Mapping test name to Requirement (from DSN001257.pdf):

<b>TRACING</b>	FWVT Tested	TLMC_M_013-DISCOVER FULL-DISCOVER ID REQUEST PACKET	Status: Up-to-date Rev: 2.3 Test: .M_TCP_Discover\m_DiscoverFull006\m_discoverfull006
			Status: Up-to-date Rev: 2.7 Test: .M_TCP_Discover\m_DiscoverFull001\m_discoverfull001

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**TLMC\_M\_013 - DISCOVER FULL - DISCOVER ID REQUEST PACKET**

When Discover service request is invoked by the Upper Layer, start a service duration timer and transmit a Discover ID request packet.

[A service duration timer will be started; select the least interfered channel (takes approximately 275 +/- 50 msec<sup>(1)</sup>); start the Listen Before Talk (LBT) timer; perform instigator wireless wakeup, send a "first request packet sent" indication to the Upper Layer (see Table 23); start the native mode timer (if the slave does not scan during polling), transmit a discover ID request packet.

Note the 'first request packet sent' indication is configurable. See the parameter called 'transmit notification enabled' in Table 123 (Master parameters from host)

Also note that the master will perform clear channel assessment before and after transmitting wakeup (if the slave scans during polling). The master will restart the Listen Before Talk (LBT) timer after the second clear channel assessment. This minimizes the interaction between the time it takes the slave to scan all channels and the time before the master starts transmitting wakeup again.]

**TABLE 23: FIRST REQUEST PACKET SENT INDICATION (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0xAA -First request packet sent
Sub-type	N/A	1	The indication sub-type	N/A
Size	N/A	2	The size of the info field	1
Info	indication status	1	N/A	0x01 - successful
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

1. CCA of the MICS band takes approximately 275 msec. CCA of the MEDS band takes approximately 550 msec. CCA of both bands takes approximately 825 msec. Note that if HDR mode is enabled, assessment of each channel, antenna pair is lengthened by 5 msec (to allow the HDR synthesizer to stabilize). This means the CCA of the MICS band is lengthened from 275 msec to 375 msec.

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**(3) Requirement:** Based on use of an isotropic monitoring system antenna, the monitoring threshold power level must not be more than  $10\log B(\text{Hz}) - 150 \text{ (dBm/Hz)} + G(\text{dBi})$ , where B is the emission bandwidth of the MedRadio communications session transmitter having the widest emission and G is the MedRadio programmer/control transmitter monitoring system antenna gain relative to an isotropic antenna. For purposes of showing compliance with the above provision, the above calculated threshold power level must be increased or decreased by an amount equal to the monitoring system antenna gain above or below the gain of an isotropic antenna, respectively.

**Response:** Attached document NDHF1405-124574 CTM2 RF DVT Report.pdf , section 9.4.8 verifies the capabilities of RSSI (received signal strength indicator). The report summarizes that the CTM is capable of discerning different signals that vary by 2 dB down to a level of -112 worst case. This means the radio can tell the difference between a signal at -112 dBm and one at -110 dBm at worst. This was testing was done over all 10 channels we use in the MICS band as well as over temperature at each of those channels.

9.4.8 RF-8: RX RSSI LINEARITY AND DIFFERENTIATION

Requirements	<a href="#">EETD31 Tel-M Rx RSSI Linearity and differentiation</a>  Verifies:  EE178 The Tel-M Receiver shall have a minimum monotonic RSSI range of -109dBm to -55dBm for Clear Channel Assessment (CCA) (i.e. no Rx attenuation present).  EE179 The Tel-M Receiver shall be able to differentiate -109dBm and -106 dBm across all MICS channels for Clear Channel Assessment (CCA) (i.e. no Rx attenuation present).
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**(4) Requirement:** If no signal in a MedRadio channel above the monitoring threshold power level is detected, the MedRadio programmer/control transmitter may initiate a MedRadio-communications session involving transmissions to and from a medical implant or medical body-worn device on that channel. The MedRadio communications session may continue as long as any silent period between consecutive data transmission bursts does not exceed 5 seconds. If a channel meeting the criteria in paragraph (a)(3) of this section is unavailable, MedRadio transmitters that are capable of operating on multiple channels may transmit on the alternate channel accessible by the device with the lowest monitored ambient power level. Except as provided in paragraph (b) of this section, MedRadio transmitters that operate on a single channel and thus do not have the capability of operating on alternate channels may not transmit unless no signal on the single channel of operation exceeds the monitoring threshold power level.

**Response:**

Section 11.2 of Mozart\_Production\_Analog\_DVT\_Report\_138088\_v33\_20Apr2011.doc

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Wakeup Transmit Time Wide	5 seconds max.	4.98 s	4.98 s	4.98 s	4.98 s	PASS	Time should be close to 5 seconds without going over.
Wakeup Transmit Time Narrow	5 seconds max.	4.95 s	4.95 s	4.95 s	4.95 s	PASS	

Table 67 Wakeup Transmit Times

**(5) Requirement:** When a channel is selected prior to a MedRadio communications session, it is permissible to select an alternate channel for use if communications are interrupted, provided that the alternate channel selected is the next best choice using the above criteria. The alternate channel may be accessed in the event a communications session is interrupted by interference. The following criteria must be met:

(i) Before transmitting on the alternate channel, the channel must be monitored for a period of at least 10 milliseconds.

(ii) The detected power level during this 10 millisecond or greater monitoring period must be no higher than 6dB above the power level detected when the channel was chosen as the alternate channel.

(iii) In the event that this alternate channel provision is not used by the MedRadio system or if the criteria in paragraphs (a)(5)(i) and (ii) are not met, a channel must be selected using the access criteria specified in paragraphs (a)(1) through (a)(4) of this section."

**Response:** N/A, Tel M does not use alternate channel

# Mozart Production Analog DVT Report

## Change History

Issue	Date	Description of Change
V1	20 Aug 2010	First draft from Alan Mathieu – not reviewed
V2	8 Sep 2010	RSSI section 5.11 updated per ECO 76
V3	17 Sep 2010	Test results added for the week of Sep 17.
V4	23 Sep 2010	Test results added for part of week of Sep 24. Added section for DVT plan deviations. Added Deviation #1. Added text under Regulatory Tests to allow DVT to progress with regulatory testing.
V5	27 Sep 2010	Test results added for week ending Sep. 24.
V6	27 Sep 2010	Test results added for part of week ending Oct. 1. Added Deviation #2.
V7	01 Oct 2010	Test results added for week ending Oct. 1.
V8	11 Oct 2010	Test results added for part of week ending Oct. 15. Minor update to Deviation #2 and added Deviation #3.
V9	15 Oct 2010	Test results added for week ending Oct. 15.
V10	19 Oct 2010	Removed complex impedance data in preparation for re-run. Added test results up to Oct. 19.
V11	21 Oct 2010	Completed actions from Oct.19 review. Added test results up to Oct. 21
V12	29 Oct 2010	Updated data in External Spurious Response Table 24. Added data integrity and completeness section. Added test results up to Oct. 29
V13	05 Nov 2010	Added results up to week ending Nov. 5
V14	12 Nov 2010	Added results up to week ending Nov. 12
V15	17 Nov 2010	Test results added for part of week ending Nov. 19. Added Deviation #6 and Deviation #13.
V16	17 Nov 2010	Updated procedure steps under section 5.4 Deviation #6 “Summary” to have numbered steps instead of lettered.
V17	21 Nov 2010	Added results up to week ending Nov. 19
V18	07 Dec 2010	Test results added for part of week ending Dec. 10. Added Deviation #7 and Deviation #14.
V19	10 Dec 2010	Corrected results for previously verified tables. Added results for week ending Dec. 10.
V20	19 Dec 2010	Added results for week ending Dec. 17.
V21	4 Jan 2011	Added results for Jan 4, 2011
V22	12 Jan 2011	Deviation #10 added.
V23	19 Jan 2011	Removed Deviation #10 (is now represented in Bench DVT Report), Revised WU Dynamic Range results per Action Tracker #142396. Added Deviation #4, updated revised deviation #7 and added deviation #12.
V24	23 Jan 2011	Added results for Jan 23, 2011
V25	01 Feb 2011	Updated the text in section “2.0 Scope” to clarify that this report only covers the Analog DVT part of Mozart DVT results. Added text to section “6.0 DVT Plan Deviations” to clarify that deviations detailed in this report only covers Analog DVT and added here a reference to the Mozart DVT Plan Deviations spreadsheet for a full summary of all deviations to the Mozart DVT plan. Added reference [4] Mozart DVT Plan Deviations to References table. Test results added for of week of Feb 01. Added Deviation #18.

V26	03Feb 2011	Test Results added for week of Feb 03. Updated Deviation #4 and Deviation #12 due to test updates or finding during data reviews.
V27	04Feb2011	Added results for Feb. 4, 2011
V28	07Feb2011	Added results for Feb. 7, 2011 Added Deviation #19.
V29	22Feb2011	Added results for Feb. 9, 2011 Updated Deviation #12.
V30	28Feb2011	Added results for Feb. 24, 2011 Minor clarification to deviation #12, table 1e. Added Deviation #20.
V31	01Mar2011	Updated per review held on 01-Mar-2011. Added note, DVT plan variance, to section 11.8 Wakeup External Spurious Response and Blocking and section 9.6 External Spurious Response Rejection (TelM and TelC) regarding "overtesting" compared to DVT plan. Updated version numbers for [1] and [4] in the reference table
V32	30Mar2011	Updated according to feedback from Medtronic received in an e-mail from John Pohl on March 28th, 2011 (subject: "Feedback on DVT Reports").
V33	15Apr2011	Updated acronym table based on feedback from Medtronic received in an email from John Pohl on March 31st, 2011. Added section 3.4 that defines the location of raw test results. Updated Approvals list based on input from MDT/John Pohl received in email on April 19th 2011 (subject: "Names on reports/L1.L2"). Updated section "Mozart Inductor Change" based on updated test plan, acceptance criteria and results.

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**Definitions, Abbreviations and Acronyms**

Abbreviation	Meaning	Description
ACR	Adjacent Channel Rejection	Metric for how well a receiver can receive a transmitted signal in the presence of a high-level interfering signal in the adjacent channel.
ACPR	Adjacent Channel Power Ratio	The ratio between total power of the adjacent channel to the main channel's power.
AltCR	Alternate Channel Rejection	Metric for how well a receiver can receive a transmitted signal in the presence of a high-level interfering signal in the alternate channel.
AltCPR	Alternate Channel Power Ratio	The ratio between total power of the alternate channel to the main channel's power.
AM	Amplitude Modulation	In the AM Rejection test, the interferer is an AM signal.
ATE	Automated Test Equipment	Refers to the Catalyst tester used to probe wafers and modules in manufacturing.
CCA	Clear Channel Assesment	Function to determine the current state of use of a wireless medium.
CW	Continuous Wave	An unmodulated signal.
DUT	Device Under Test	Mozart module or IC being tested.
DVT	Design Verification Test	Testing program that is performed to deliver objective, comprehensive testing verifying all product specifications.
ECO	Engineering Change Order	The specification or the implementation is likely to change during development. These changes are referred to as engineering change orders (ECOs)
EVM	Error Vector Magnitude	Metric used to quantify the performance of a digital radio transmitter.
IMR	Intermodulation Rejection	The difference between the fundamental and intermodulation signal levels.
MDR	Missed Detect Rate	Metric for Wake Up sensitivity. Number of wakeup packets not successfully detected divided by the total number of wakeup packets transmitted.
MEDS	MEdical Data Serice	The name of a specification using frequency bands 401-402MHz and 405-406MHz.
MICS	Medical Implant Communication Service	The name of a specification using the frequency band between 402MHz and 405MHz.
Mozart	Program name	Also used to refer to a module.
NB	Narrow Band	Mode of operation in the Mozart radio using 100KHz channel spacing.
PER	Packet Error Rate	Metric for sensitivity. Number of "bad" packets received divided by the total number of transmitted packets. This is after the Reed-Solomon error correction.
TelM	Telemetry M	Medtronic's name for the Mozart radio protocol and system.
WB	Wide Band	Mode of operation in the Mozart radio using 300KHz channel spacing.
WU	Wake-Up	Mode of operation in the Mozart radio.

## 1 Purpose

This document contains the summary of test and analysis results from the formal Analog DVT (Design Verification Test) on production Mozart Modules per design requirements documented in “Tel M RF Module Requirement Specification” [1], revision I and Engineering Change Orders as documented in “Mozart DVT Plan Deviations” [4]. The summary of data provided in this report provides the required evidence that the design satisfy the design requirements.

## 2 Scope

This document only covers/reports results referred to as Analog DVT efforts in the “Mozart DVT Plan” [2]. Other DVT efforts, referred to as Bench DVT and Digital DVT, are conducted and reported separately as detailed in the “Mozart DVT Plan” [2].

## 3 Assumptions

### 3.1 Devices Used in Production DVT

The module serial numbers and the tests they are assigned to are available in document “Mozart Production DVT Devices” [5].

ATE data on DVT devices: ATE DVT data from 14 Aug 10 has been entered into cdca as “Mozart Proto 3 DVT data from ATE” [7] and “Mozart Proto 3 DVT data from ATE (stdf file)” [8].

### 3.2 Mozart Inductor Change

The wire diameter for the 43nH inductors (L1 and L2) was changed from 28um to 32um to address potential wire break issue. In order to investigate any potential module performance change related to changing the inductors, the ATE distributions for specific inductor dependant tests was compared between samples of rev006 modules and rev008 modules. For test plan and acceptance criteria see “Mozart 70470 006 vs 008 ATE analysis for inductor change DVT confirmation” [3].

The comparison and shift analysis showed passing results as per the acceptance criteria and no DVT regression is required. The null hypothesis for all tests were rejected and engineer rationale describes all shifts is acceptable. The variances for all tests are essentially equal for rev006 and rev008 and are acceptable. For more information see “Mozart 70470 006 vs 008 ATE analysis for inductor change DVT confirmation RESULT” [11] and “Mozart Module L1 & L2 Inductor Change Statistical Analysis” [12].

### 3.3 DVT Software Version

DVT started with software Version 5.1 and ended with Version 6.9, software changes were managed and documented in “Mozart DVT Test System” [10]. Each raw test result has the used software version recorded in its logfiles.

### 3.4 Raw Test Results Location

All raw test results have been copied from the testers to a common directory on the mozart\_dvt drive. The results are divided into three directories; RX, TX and SPUR. They correspond to the different type of testers that was used during Analog DVT. The directories are found here:

mozart\_dvt\Test Executive Results\Formal DVT

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#### 4 Approvals

Name	Title	Company
Marcus Strom	Mozart DVT Lead	Proprietary Company Name Removed.
Alan Mathieu	Mozart DVT Engineer	Proprietary Company Name Removed.
Randy Koploy	Mozart DVT Engineer	Proprietary Company Name Removed.
Guy Delight	Mozart Project Engineer	Proprietary Company Name Removed.
Dan Wiley	Mozart Project Manager	Proprietary Company Name Removed.
Jon Klaren	Mozart DVT Engineer	Proprietary Company Name Removed.
Peter Nanawa	Mozart DVT Engineer	Proprietary Company Name Removed.
Bill Verhoef	Design Verification Test Engineering	Medtronic Inc.
Chuck Farlow	Senior Program Manager	Medtronic Inc.
Quentin Denzene	Analog Hardware Engineering Leader	Medtronic Inc.
George Rosar	Digital Hardware Engineering Leader	Medtronic Inc.
James Henry	Quality Leader	Medtronic Inc.

#### 5 References

Ref	Document #	Title
[1]	112631 v13	Mozart Requirement Specification (MDT Document #A17245); rev I + ECOs
[2]	125759 v20	Mozart DVT Plan
[3]	140098 v2	Mozart 70470 006 vs 008 ATE analysis for inductor change DVT confirmation
[4]	139706 v11	Mozart DVT Plan Deviations
[5]	139732 v1	Mozart Production DVT Devices
[6]	126599 v4	Mozart DVT Test Matrix
[7]	138069 v1	Mozart Proto 3 DVT data from ATE
[8]	138070 v1	Mozart Proto 3 DVT data from ATE (stdf file)
[9]	139681 v1	Measurement comparison of a CISPR Quasi peak detector method and an approximated CISPR peak detector method
[10]	139839 v9	Mozart DVT Test System
[11]	140498 v2	Mozart 70470 006 vs 008 ATE analysis for inductor change DVT confirmation RESULT
[12]	140579 v6	Mozart Module L1 & L2 Inductor Change Statistical Analysis

## 6 DVT Plan Deviations

If deviations to the DVT plan are needed during the execution of formal DVT, the following procedures shall be followed to ensure quality and correctness in the execution:

- 1) ZLK DVT lead will provide MDT DVT lead a formal request via email for a deviation including details of the issue, the cause, and the reason for why the deviation is needed and acceptable.
- 2) Detailed communication and discussion of the deviation will occur between MDT and ZLK. Persons participating in these discussions will be at the discretion of the DVT Leads and based on the nature of the issue.
- 3) The deviation and associated details will be reviewed and preliminarily approved by MDT DVT lead and communicated to ZLK DVT lead via email. All preliminary approved deviations will be communicated to the Program Managers. The Program Managers may at their discretion request a formal ECO for the deviation.
- 4) The details of the preliminary approved deviation (details defined by ZLK in a request email identified in step 1, or if needed, additional details defined by MDT in the preliminary approval email) will be documented in the DVT report and sent to MDT. MDT will then formally approve the deviation and this will be noted in the DVT report with an approval date and the document will then be released in eBinder. This process will be a formality but the formal approval from MDT will be described and stated explicitly as an approval, and acknowledged by as such, in an email communication or another written form of communication method deemed acceptable by both DVT Leads.
- 5) ZLK can (after they have received the formal approval) implement the agreed details of the deviation and execute the needed testing.
- 6) The new results (if any) will be documented in the DVT report, which is revision controlled in eBinder and is reviewed on a regular basis between ZLK and MDT.

Each deviation to the DVT plan has been assigned a dedicated number. This report only covers deviations related to Analog DVT. For a summary of all deviations to the “Mozart DVT plan [2], please see the spreadsheet Mozart DVT Plan Deviations [4].

Some deviations describe new or current text in the Mozart DVT plan. Note that references to references in such text may not match the reference table in this document since they are intended to match the reference table in the Mozart DVT plan document.

## 6.1 Deviation #1

**Reason:** The DVT Plan was not followed but results are OK to be used for a specific purpose.

**Formal Approval Date:** 9/23/2010

**Summary:**

The first run of formal DVT Tx Stability data (Section 6.3.5) incorrectly used 1MHz RBW setting for frequencies above 1GHz. This data was originally taken for Tx Stability review and cannot be used for this task but can be used to determine if it is okay to proceed with Regulatory testing or not. This additional task of reviewing Tx Stability data by Medtronic before proceeding with Regulatory testing is a requirement called out in section 6.3.5 of the Test Plan.

**Justification:**

TX Stability Testing requires a lower resolution bandwidth (RBW) than the 1 MHz resolution bandwidth used above 1 GHz to take the initial DVT TX Stability data. The lower bandwidth is required to effectively lower the noise floor of the measurement so that there is adequate dynamic range relative to the TX RF Output to allow the test to detect TX instabilities if present. Even though the incorrect resolution bandwidths were used for this initial TX Stability test data, it is still usable for performing the TX Emissions Regulatory Pre-screening Review (Pre-screen Review) also called out in the plan. This is allowed due to the lower dynamic range requirements for the Pre-screen Review relative to the TX Stability Testing (the Pre-screen Review requires only a -57 dBm or less measurement above 1 GHz). This initial TX Stability Data will therefore be used to perform the TX Emissions Regulatory Pre-screening Review as called out in the DVT Test Plan.

## 6.2 Deviation #2

**Reason:** The DVT Plan can be relieved since results will still be OK to verify specification.

**Formal Approval Date:** 9/28/2010

**Summary:**

The 10 KHz RBW setting in section 6.3.5 of the Test Plan for the frequencies both below and above 1GHz can be relieved to 30 KHz RBW. This will still give Medtronic the data dynamic range they need to verify the Tx Stability specification while improving the test time for the test duration. Additionally, this section for the TX Stability Test did not originally call out a maximum frequency step size for the spectrum data. It will be 300 KHz or less for the frequencies both below and above 1GHz. The use of a Peak detector with Max Hold for 10 sweep averages is now also explicitly identified. This deviation requires a full run of the Tx Stability tests over all the vectors using these new settings, in order to review the data for Tx Stability requirements.

**Justification:**

TX Stability Testing measurements rely on a minimum dynamic range to be able to discern TX instabilities, if present, from the Tel M RF Module. The resolution bandwidth (RBW) of the spectrum analyzer making this measurement directly affects the measurement noise floor. Choosing a narrower resolution bandwidth reduces the noise floor. Note that the narrower the resolution bandwidth, the slower the measurement, and the longer the test time. For very large frequency sweeps, the test time can be prohibitively long if too narrow a RBW is used. An equivalent spectrum analyzer noise floor of -63 dBm, referenced to the properly terminated DUT RF Port, was determined to be acceptable for making effective TX Stability assessments. This

level is based on: estimations of potential spurious oscillation level at the TX power amplifier output, the bandwidth of the potential oscillation, and the out-of-band SAW filter amplitude response. A RBW of 30 KHz meets the required noise-floor for this the TX Stability Test, while also allowing for practical test execution times. Thus 30 KHz RBW will be used for the 50 KHz to 1 GHz, and the 1 - 20 GHz measurement ranges for the TX Stability Test. A maximum frequency step size of 300 KHz is now being added to ensure that potential spurious oscillations, which are not generally frequency-locked, nor of such narrow bandwidth as to avoid detection in the 300 KHz frequency step size, will be detected. Additionally, the use of a Peak detector with Max Hold for 10 sweep averages is be added to capture any time varying spectrum sufficiently above the noise floor.

### 6.3 Deviation #3

**Reason:** An approved ECO modifies specification limits and is referenced in the Test Plan. The current DVT Plan does not reflect these changes and must be adjusted accordingly.

**Formal Approval Date:** 10/12/2010

#### Summary:

Section 6.3.2 Transmit Modulation Response in the DVT plan contains limits from the Mozart Requirement Specification (MDT Document #A17245); rev I but the applicable parts of the approved ECO #067 change these limits. ECO #067 is referenced in the Test Plan (see Reference section of the Test Plan) and so must properly be reflected in Section 6.3.2. See the Table below for a summary of the updated limits. The DVT Test has been modified to test to the limits in ECO #067 and the Formal DVT Report will report the results accordingly. Please see ECO #067 for more information. Here below is a new an updated table to replace table 12 in the DVT plan.

Measurement	min	max	Units	Note
Data Rate for Mode 1	48.71795 (-100ppm)	48.71795 (+100ppm)	kb/s	Should be within +/-12ppm over temperature/voltage
Data Rate for Mode 2	97.43590 (-100ppm)	97.43590 (+100ppm)	kb/s	
Data Rate for Mode 3	190 (-100ppm)	190 (+100ppm)	kb/s	
Data Rate for Mode 4	380 (-100ppm)	380 (+100ppm)	kb/s	
EVM modes 1-4	0	8.4	%	-4 to -30 dBm MICS band
EVM modes 1-4	0	12.6	%	< -30 dBm MICS band
EVM modes 1-4	0	8.4	%	-7 to -30 dBm MEDS band
EVM modes 1-4	0	12.6	%	< -30 dBm MEDS band

#### Justification:

An approved ECO is a specification change and the DVT plan needed to be adjusted for updates to the specification.



**Previous wording of Section 6.4.13.3 in the DVT Test Plan:**

Test Module: RSSI Response Test

Generator #1 shall generate a pulse of modulated RF 100us long. The pulse can be essentially a square pulse, meaning it does not have to have a sine squared or some other shape. The modulation type shall be FSK with 10kHz deviation and data rate of 4.7kbps. The data shall be alternating 1 and 0 (10101010). The level of the pulse shall be -97dBm.

Generator #2 shall output an FSK signal with 10kHz deviation and 9.5kbps data rate. The data pattern shall be alternating 1 and 0 (10101010). The level of the signal shall be -100dBm.

Procedure:

1. Set Generator #1 to the channel to be measured for an RSSI pulse.
2. Initiate CCA.
3. Wait for the dwell time plus 1ms.
4. Trigger Generator #1 to output one RF pulse on one channel as described in the set-up within 9ms of the start of the CCA. The pulse must occur within the 10ms CCA window.
5. Read reg\_wu\_rdf\_value and record the RSSI level.
6. Enable Generator #2 on all other channels one at a time.
7. Initiate CCA.
8. Wait for the dwell time plus 1ms.
9. Read reg\_wu\_rdf\_value and record the RSSI level.
10. Turn off Generator #2.
11. Repeat steps 1 – 11 for all channels and modes and any other condition in the vector Matrix [2], filling up a table of data.
12. Analyze the data and check that all the pulse results are higher than any results from Generator #2.

**Updated wording of Section 6.4.13.3 in the DVT Test Plan (Replacing the text above):**

Test Module: RSSI Response Test

RF Generator waveform #1 shall output a 2FSK RF signal with 20 kHz deviation and 2.0 kbps data rate. The data pattern shall be a 1010 data pattern as defined and made available by the Agilent E443x Series RF signal generators. The power level of this signal shall be -83.75 dBm for the narrowband mode, and -78.75 dBm when in the wideband mode. Power levels will be defined with all modulations off (CW).

Generator waveform #2 shall be defined as a repetitive 100us pulse of FM modulated RF with a 10 mS period. The Frequency Modulation of this waveform shall be identical to Generator waveform #1 indicated above. The RF pulse envelope can be essentially a square pulse, meaning it does not have to have a sine squared or some other shape. The power levels of the pulsed RF signals shall be -81 dBm for the narrowband mode, and -76 dBm when in the wideband mode. Power levels will be defined with all modulations off (CW).

Procedure:

1. Set Generator waveform #1 to the center frequency of the channel to be measured.
2. Enable Generator waveform #1 to output the defined 2FSK waveform.
3. Wait 10 mS.



4. Initiate a single channel CCA on the channel to be measured. The initiation of this CCA measurement is to be asynchronous with the enabled RF waveform.
5. Wait for the dwell time plus 1ms.
6. Read reg\_wu\_rdf\_value and record the RSSI level.
7. Turn off Generator waveform #1.
8. Enable Generator waveform #2 to output the defined 2FSK waveform gated with Pulse Modulation. Set this waveform on the center frequency of all other appropriate channels (based on the Generator waveform #1 channel, tested against all other appropriate channels specific to a MICS or MEDS band only CCA) testing one channel at a time.
9. Wait 10 mS.
10. Initiate a single channel CCA on the channel to be measured. The initiation of this CCA measurement is to be asynchronous with the enabled RF waveform.
11. Wait for the dwell time plus 1ms.
12. Read reg\_wu\_rdf\_value and record the RSSI level.
13. Repeat steps 8 – 12 until all other MICS or MEDS band appropriate channels have the reg\_wu\_rdf\_value measured.
14. Turn off Generator #2.
15. Analyze the data and check that all waveform #2 results are higher than the result from waveform #1. This comparison is based on channels specific to the MICS or MEDS only CCA.
16. Repeat steps 1 – 15, repeating the measurement so that Generator waveform #1 is applied to all channels using all combination of conditions identified in the vector Matrix [2], filling up a table of data.

**Justification:**

- 1) The DVT plan needs to be adjusted for updates to the specification per ECO 090.
- 2) The new RF modulation scheme is more representative of CCA use in the product application, and is better aligned with radio regulatory test methods.
- 3) The test should include the “real world” possibility that the CCA sample window starts somewhere within or outside the Generator #1 pulse and ends somewhere within or outside the pulse. This relative timing between the pulse and the CCA window can potentially produce different results and should be part of the test.
- 4) Vector updates to add channels were needed as this was more representative of the radio regulatory test methods while still meeting the intent of the test to show compliance to the requirement.
- 5) The update to the tester is to add a signal path that was not there before. This path is new and not a modification of a current Rx tester signal path. This feature and path is accessed for only this test and does not affect the function of the other tests run on this tester.

**6.5 Deviation #6**

**Reason:** An approved ECO modifies the specification from that referenced in the DVT Plan. The current DVT Plan does not reflect these changes and must be adjusted accordingly.

**Formal Approval Date:** 11/17/2010

**Summary:**

ECO 079 changes the measurement bandwidth and detector type for the measurement of emissions above 1 GHz in the Mozart Requirement Specification (MDT Document #A17245);

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rev I. The previously specified CISPR 16 / Quasi-Peak detector is changed to a 1 MHz bandwidth peak detector for emissions above 1 GHz in this specification.

It should be noted that Mozart Requirement Specification (MDT Document #A17245); rev I required the use of a CISPR 16 / Quasi-Peak Detector above 1 GHz, while the DVT Test Plan called out a 1 MHz bandwidth detector above 1 GHz (note: peak detection with the 1 MHz detector was not specified in the existing DVT Test Plan). The CISPR 16 detector called out by the Mozart Requirement Specification (MDT Document #A17245); rev I vs. the 1 MHz bandwidth detector called out by the DVT Test Plan was a discrepancy which would have required correction by itself. However, ECO 079 further added the requirements of not only using a 1 MHz bandwidth detector above 1 GHz, but that it also is a “peak detector”.

The update to the DVT Test Plan involves Section 6.4.14 Receiver Conducted Spurious Emissions. This will change the 1 MHz bandwidth detector used for measuring RX conducted spurious emissions above 1 GHz be a “peak detector”.

As part of this deviation, there are also corrections to the number of “points” measured, and the addition of “Peak Detection with 10 Trace Averaging” to Table 39.

Additionally, there are explanations/justifications referenced for alternate measurement techniques which are used in both the existing and proposed test methodology where they appear to disagree with the Mozart Requirement Specification (MDT Document #A17245); rev I.

The updated procedure will be as follows:

1. Connect RF input to Spectrum Analyzer.
2. Set the Spectrum Analyzer for Peak Detection, 0 dB attenuation and RBW and VBW ratio to 1:1 (auto), and turn on trace averaging over 10 sweeps
3. Set Center Frequency, Frequency Span, and number of measurement points in order to achieve the settings called out in Table 39.
4. Set up DUT for receive always with the setup file.
5. Start TeIM Rx.
6. If other modes are called for in the Test Vector Matrix [2], load setup files and start the reception the same way it is done in the Rx Sensitivity test for the required mode.
7. Measure powers across the spectrum specified in the Limits table and store all data. Record frequencies and power exceeding spec.
8. Repeat for all conditions in the test vector Matrix [2]

This table shall replace table 39 Limits - Rx Conducted Spurious Emissions in the DVT plan:

Measurement	min	max	Units	Note
Power from 9kHz to 2 MHz		-57	dBm	1kHz RBW (min of 2201 points)
Power from 2 MHz to 1 GHz		-57	dBm	100kHz RBW (min of 15201 points)
Power 1 GHz to 4.06 GHz		-57	dBm	1MHz RBW ( min of 6,001 points)

**Justification:**

- 1) Please note that a 100 KHz bandwidth peak detector was specified instead of the CISPR 16/quasi-peak detector for measurements at 1 GHz and below as called out in the Mozart Requirement Specification (MDT Document #A17245); rev I. This substitution was done to speed up test time by a factor of 2x to 3x, knowing that a 100 KHz bandwidth peak detector always provides measurements at an indicated level greater than, or equal to, a CISPR 16/quasi-peak detector. The 120 KHz bandwidth of the CISPR quasi-peak detector was also shown to be essentially equivalent to the 100 KHz peak detector. Section D1.0 of Agilent Application Note AN 1302: Making Radiated and Conducted Compliance Measurements with EMI Receivers specifically calls out using a peak detector as a valid approach to speeding up EMI measurements which call out a quasi-peak detector. This is not a change to test methodology as it's the same for both current/old and proposed/new test methodologies, but is merely mentioned here for completeness.
  - 2) As seen from Table 1 below, data acquired below 2 MHz does not use a CISPR 16 detector as called out in the Mozart Requirement Specification (MDT Document #A17245); rev I. This is because at very low frequencies, the spectrum analyzer has an issue with detecting its own DC component, which leads to erroneous data for some wider resolution bandwidths. A narrower, 1000 Hz resolution bandwidth was chosen at lower frequencies to eliminate this issue. This is not a change to test methodology as it's the same for both current/old and proposed/new test methodologies, but is merely mentioned here for completeness.
  - 3) The original test method was not specific enough to provide overlapping measurement bandwidths (e.g. the frequency span divided by the number of points was less than the RBW of the measurement system). This allowed frequency "gaps" in the data. This will be corrected per this deviation (e.g. the "span between steps" is less than the RBW of the measurement). See the update to Table 39 and the modified Test Procedure.
  - 4) The number of measurement "points" called out in Table 39 was changed in the updated Table 39 to reflect the number of points actually needing to be measured for the specific RBW used.
    - a) For frequencies from 9 kHz to 1 GHz, the original Table 39 called out 10000 points. The ECO updates to the requirements and also the need to have overlapping measurement bandwidth (See # 3 above) for complete test coverage. The Test Plan will be updated to call out a minimum of 2201 points from 9 KHz to 2 MHz, and minimum of 15201 points from 2 MHz to 1 GHz.
    - b) For frequencies from 1 GHz to 4.06 GHz, the original Table 39 called out 3060 points. The ECO updates to the requirements and also the need to have overlapping measurement bandwidth (See # 3 above) for complete test coverage. The Test Plan will be updated to call out a minimum of 6001 points from 1 GHz to 4.06 GHz.
  - 5) The "Max Hold" function was previously used to process acquired spectrum analyzer data for this measurement. "Max Hold" is not required and will therefore be removed.
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Peak Detection with 10-Trace Averaging will be applied instead per this deviation. See the updated Test Procedure above.

## 6.6 Deviation #7

**Reason:** The DVT Plan, section 6.3.4 calls out the Mozart Requirement Specification (MDT Document #A17245); rev I section 2.3.4.6.4 to be the guidance for detailed test methodology. When reviewing this section and comparing it to the test conditions outlined in the DVT test Matrix, it does not specify enough output power levels, using these methods, to fully cover the conditions required to test the module requirements in the Mozart Requirement Specification (MDT Document #A17245); rev I. This deviation details the missing vectors and justifies the need for them.

**Formal Approval Date:** 01/19/2011

### Summary:

To fully and accurately test the Mozart Requirement Specification (MDT Document #A17245); rev I regarding MEDS into MICS requirements, the DVT test matrix need 5 additional output power level vectors applied to the appropriate tests outlined below.

1. Under section 2.3.4.6.4.2.3.2 MEDS into MICS (FCC) in Mozart Requirement Specification (MDT Document #A17245); rev I (last row of table 18) it states TX output power set to at least -20dBm in channel 11-19 or 22-30 the module shall meet -57.2dBm maximum emission power in the neighboring MICS channel using Marker-Delta-Marker method. Higher powers are allowed (such as -15dBm in this example) to be used as an acceptable worst case substitute for lower powers as long as the requirement is met. This was done because it met the intent of the test and reduced the number of tests needed. In this case a power closer to -20 dBm is needed. By adding an additional trimmed output power level test vector at -19.4 dBm for a 50 ohm antenna match (with adjustments for different antenna match relaxations identified in table 13 of the Mozart Requirement Specification (MDT Document #A17245); rev I) we will be able to satisfy the conditions needed to test this requirement. This will create new DVT Test Matrix test conditions that will be similar to rows 800-806, 864-870, 914-920, 964-970 and 1014-1020 currently in the DVT Test Matrix.

Within that same section 2.3.4.6.4.2.3.2 it also states TX output power set to at least -51.8 dBm in channel 20 or 21 the module shall meet -52.2dBm maximum emission measured power in the neighboring MICS channel using Marker-Delta-Marker method. By adding a test vector at -52 dBm for a 50 ohm antenna match (with adjustments for different antenna match relaxations identified in table 13 of the Mozart Requirement Specification (MDT Document #A17245); rev I) we will be able to satisfy the conditions needed to test this requirement. This new test vector will be identical to the rows 821-827, 885-891, 935-941, 985-991 and 1035-1041 in the DVT test Matrix with the difference of used Tx power level.

For the changes in section 1, the difference is the use of the new -19.4 and -52 dBm Tx power levels. The rows indicated contain vectors for the *Regulatory\_TX\_Harmonics\_Spurious* test in the DVT software. The affected TE scripts that will need to have added updates for the additional power levels are Tx\_Sc15a, Tx\_Sc15b, Tx\_Sc16, Tx\_Sc17, Tx\_Sc18, Tx\_Sc19 and Tx\_Sc20.

2. Under section 2.3.4.6.4.2.3.3 MEDS into MICS (ETSI) in Mozart Requirement Specification (MDT Document #A17245); rev I (last row of table 20) it states TX output power set to at least -20dBm in channel 11-19 or 22-30 the module shall meet -59.85dBm maximum emission measured power in the neighboring MICS channel using a test methodology consistent with CEPT/ERC/RECOMMENDATION 74-01E. Higher powers are allowed (such as -15dBm in this example) to be used as an acceptable worst case substitute for lower powers as long as the requirement is met. This was done because it met the intent of the test and reduced the number of tests needed. In this case a power closer to -20 dBm is needed. By adding an additional trimmed output power level test vector at -19.4 dBm for a 50 ohm antenna match (with adjustments for different antenna match relaxations identified in table 13 of the Mozart Requirement Specification (MDT Document #A17245); rev I) we will be able to satisfy the conditions needed to test this requirement. This will create new DVT Test Matrix test conditions that will be similar to rows 800-806, 864-870, 914-920, 964-970 and 1014-1020 currently in the DVT Test Matrix.

Within that same section 2.3.4.6.4.2.3.3 it also states TX output power set to at least -15 dBm in channel 20 or 21 the module shall meet -34.85 dBm maximum emission measured power in the neighboring MICS channel using a test methodology consistent with CEPT/ERC/RECOMMENDATION 74-01E. By adding a test vector at -15 dBm for a 50 ohm antenna match (with adjustments for different antenna match relaxations identified in table 13 of the Mozart Requirement Specification (MDT Document #A17245); rev I) we will be able to satisfy the conditions needed to test this requirement. This new test vector will be identical to the rows 821-827, 885-891, 935-941, 985-991 and 1035-1041 in the DVT test Matrix with the difference of used Tx power level.

Also under this section 2.3.4.6.4.2.3.3 MEDS into MICS (ETSI) in Mozart Requirement Specification (MDT Document #A17245); rev I (including text just above table 21 and table 21 itself) we can extract the following requirements. With TX output power set to at least -25dBm in channel 20 or 21 we shall meet -54.85 dBm maximum emission measured power in the neighboring MICS channel using a test methodology consistent with CEPT/ERC/RECOMMENDATION 74-01E. By adding a test vector at -25 dBm (with adjustments for different antenna relaxations) we will be able to satisfy this requirement. This new test vector will be identical to the rows 821-827, 885-891, 935-941, 985-991 and 1035-1041 in the DVT test Matrix with the difference of used Tx power level.

For these changes, the difference is the use of the new -15, -19.4 and -25 dBm Tx power levels. The rows indicated contain vectors for the *Regulatory\_TX\_Harmonics\_Spurious* test in the DVT software. The affected TE scripts that will need to have added updates for the additional power levels are Tx\_Sc15a, Tx\_Sc15b, Tx\_Sc16, Tx\_Sc17, Tx\_Sc18, Tx\_Sc19 and Tx\_Sc20.

**Justification:**

Without these additional vectors to set the output power as it is required for each of these tests, we cannot fully demonstrate compliance to the requirements in the Mozart Requirement Specification (MDT Document #A17245); rev I section 2.3.4.6.4.

## 6.7 Deviation #12

**Reason:** The DVT Plan has several errors in the Wakeup Receptor Section 6.6. The DVT Tests related to this section have been written and run correctly. All Table References to the Mozart Requirement Specification (MDT Document #A17245); rev I in the Test Plan section 6.6 need to be updated to match the Mozart Requirement Specification (MDT Document #A17245); rev I.

**Formal Approval Date:** 02/23/2011

### Summary:

The following changes to the DVT Plan are necessary.

1. The sensitivity levels in DVT Plan sections 6.6.1 - 6.6.4 are incorrect in the Limits tables.

- a. Replace Table 46 and the Note below it in section 6.6.1 with the table and Note below.

MEASUREMENT	min	max	Units	Note
MDR		5	%	Sensitivity Requirement: Narrowband (center channel) @ -103dBm. Dynamic Range: Narrowband (center channel) @ measured sensitivity to measured sensitivity + 3dB
MDR		2	%	Dynamic Range: Narrowband (center channel) @ measured sensitivity + 3dB to -44dBm
MDR		5	%	Sensitivity Requirement: Narrowband (side channels) @ -101.5dBm Dynamic Range: Narrowband (side channels) @ measured sensitivity to measured sensitivity + 3dB
MDR		2	%	Dynamic Range: Narrowband (side channels) @ – measured sensitivity + 3dB to -44dBm
MDR		5	%	Sensitivity Requirement: Wideband (center channel) @ -97.5dBm Dynamic Range: wideband (center channel) @ measured sensitivity to measured sensitivity + 3dB
MDR		2	%	Dynamic Range: wideband (center channel) @ – measured sensitivity + 3dB to -44dBm
MDR		5	%	Sensitivity Requirement: Wideband (side channels) @ -96dBm Dynamic Range: wideband (side channels) @ measured sensitivity to measured sensitivity + 3dB
MDR		2	%	Dynamic Range: wideband (side channels) @ measured sensitivity + 3dB to -44dBm

Note: The signal levels that apply to the limits should be adjusted by the amount of attenuation in the Rx front-end. For example, the 5% MDR applies to Narrowband center channel from -101 dBm to -42 dBm when 2 dB of attenuation is used at the receiver front end.

- b. Replace Table 48 in section 6.6.2 with the table below.

MEASUREMENT	min	max	Units	Note
IMR	44		dB	5% MDR Narrowband (center channel) wanted signal @ measured sensitivity + 3dB
IMR	44		dB	5% MDR Narrowband (side channels) wanted signal @ measured sensitivity + 3dB
IMR	44		dB	5% MDR wideband (center channel) wanted signal @ measured sensitivity + 3dB
IMR	44		dB	5% MDR wideband (side channels) wanted signal @ measured sensitivity + 3dB

c. Replace Table 50 in section 6.6.3 with the table below.

MEASUREMENT	min	max	Units	Note
ACR	25		dB	5% MDR Narrowband (center channel) wanted signal @ measured sensitivity + 3dB
ACR	25		dB	5% MDR Narrowband (side channels) wanted signal @ measured sensitivity + 3dB
ACR	25		dB	5% MDR wideband (center channel) wanted signal @ measured sensitivity + 3dB
ACR	25		dB	5% MDR wideband (side channels) wanted signal @ measured sensitivity + 3dB

d. Replace Table 52 in section 6.6.4 with the table below.

Measurement	min	max	Units	Note
Image Rejection	25		dB	5% MDR Narrowband (side channels) wanted signal @ measured sensitivity + 6dB
Image Rejection	25		dB	5% MDR wideband (side channels) wanted signal @ measured sensitivity + 6dB

Note: This note is added to clarify the difference between Image Rejection and Alternate Channel Rejection (AltCR). For each desired side-channel there are two "alternate" channels, one that is two channels higher in frequency and one that is two channels lower in frequency. In the case of Wakeup Weaver Lower Channel (one below the center channel), the Image Rejection is the AltCR on the upper side. The Alternate Channel Rejection is the AltCR on the lower side and is included in the spurious specification. In the case of Wakeup Weaver Upper Channel (one above the center channel), the Image Rejection is the AltCR on the lower side. The Alternate Channel Rejection therefore is the AltCR on the upper side and is included in the spurious specification.

e. Replace Table 55 in section 6.6.5 with the table below.

Measurement	min	max	Units	Note
Interferer Level NB - Center Channel Center of Alternate channel through Alternate channel + 2	-60		dBm	5% MDR wanted signal @ specified sensitivity + 6dB
Interferer Level NB - Center Channel Alternate channel + 3 and beyond	-55		dBm	5% MDR wanted signal @ specified sensitivity + 6dB
Interferer Level WB - Center Channel Center of Alternate channel and beyond	-55		dBm	5% MDR wanted signal @ specified sensitivity + 6dB

Interferer Level relative to specified sensitivity	20		dB	5% MDR wanted signal @ specified sensitivity + 6dB
NB & WB - Side (Weaver) Channels				Includes Alternate channel for weaver side and alternate channel + 2 for image side.
<b>Channels including 3<sup>rd</sup> Harmonic of Weaver LO</b>				
Interferer Level relative to specified sensitivity	25		dB	5% MDR wanted signal @ specified sensitivity + 6dB
NB & WB - Side (Weaver) Channels				
<b>Alternate channel + 1 and beyond except channels including 3<sup>rd</sup> harmonic of Weaver LO</b>				

**Change section 6.6.5 “Test Executive Script:**

Spur\_Sc8” to “Test Executive Scripts: Spur\_Sc8, Spur\_Sc9, Spur\_Sc10”.

**Change section 6.5.5 External spurious response rejection procedure by adding a 4<sup>th</sup> step as follows:**

MEDS (Narrowband mode): Run a “Coarse Spurious” test for the frequency range of 400.1 MHz to 406.9 MHz, excluding the “wanted” channel and 200kHz above and below the center of the wanted channel. The “Coarse” test shall consist of a MDR measurement on the wanted channel with the wanted signal set 6dB above the specified sensitivity. The interferer signal shall be FM modulated with 10.7kHz sine wave and a deviation of 50kHz and set at -48dBm. The test shall take 100kHz steps across the frequency range and record as a spur any frequency that produces a MDR greater than 5%. A subsequent “Fine Spurious” test shall be run using the spur list generated by the “Coarse Spurious” test. The “Fine” test shall be the same as Step 3 in the section 6.5.5 procedures except using the Wakeup spur list generated by this Step 4. The spur list should be examined for spurs that are closer than the “inner” edge of the Alternate+1 channel. Any spur closer should be moved to be 250kHz from the center of the wanted channel so that the “Fine” test does not test closer than 200kHz from the center of the wanted channel. The results of the “Fine” spurious test must show that all 10 frequencies tested within the 100kHz span surrounding each spur at the specified level do not produce a spurious response greater than 5%.

**Change section 6.5.5 External spurious response rejection procedure by adding a 5<sup>th</sup> step as follows:**

MICS (wideband mode and narrowband mode): Run a “Coarse Spurious” test for the frequency range of 401.4 MHz to 405.6 MHz, excluding the “wanted” channel and 600kHz above and below the center of the wanted channel. The “Coarse” test shall consist of a MDR measurement on the wanted channel with the wanted signal set 6dB above the specified sensitivity. The interferer signal shall be FM modulated with 10.7kHz sine wave and a deviation of 150kHz and set at -48dBm. The test shall take 300kHz steps across the frequency range and record as a spur any frequency that produces a MDR greater than 5%. A subsequent “Fine Spurious” test shall be run using the spur list generated by the “Coarse Spurious” test. The “Fine” test shall use the Wakeup spur list generated by this Step 5. The spur list should be examined for spurs that are closer than the “inner” edge of the Alternate+1



channel. Any spur closer should be moved to be 750kHz from the center of the wanted channel so that the “Fine” test does not test closer than 600kHz from the center of the wanted channel. The results of the “Fine” spurious test must show that all 10 frequencies tested with 30kHz spacing within the 300kHz span surrounding each spur at the specified level do not produce a spurious response greater than 5%.

**Background Note:**

The WU External Spurious DVT testing was completed using the spur list developed from the Coarse Spurious Test on the Main Radio. This “coarse” testing skipped the desired channel and 950kHz on either side for narrowband and 750kHz on either side for wideband. The WU spurious testing therefore was not performed on the center WU channel from the Alternate channel out to the frequencies just mentioned. The side “Weaver” WU channels were partially tested in this frequency gap by virtue of the Weaver LO harmonics that were added to the spur list. The alternate channels of the Weaver side channels, however, were tested at the same time as the Image Rejections and therefore had the measured sensitivity as the reference level rather than the specified sensitivity level. Additionally, the alternate + 1 channel was not completely tested for the Weaver side channels. Additional testing for the Weaver side channels, as well as the center channel, is therefore required. Testing intended to cover this gap uncovered specification non-compliance that is now addressed by ECO 094. The tables above contain the specification changes.

2. DVT Plan section 6.6.2 Procedure step 3 incorrectly says to use the specified sensitivity level. Replace with the following: Start sending Wake-up packets from the generator at the measured sensitivity level + 3dB.
3. DVT Plan section 6.6.3 Procedure step 3 incorrectly says to use the specified sensitivity level. Replace with the following: Start sending Wake-up packets from the generator at the measured sensitivity level + 3dB.
4. DVT Plan section 6.6.4 Procedure step 3 incorrectly says to use the specified sensitivity level and does not state how much to raise the wanted signal. Replace with the following: Start sending Wake-up packets from the generator at the measured sensitivity level + 6dB.
5. DVT Plan section 6.6.4, in the paragraph for the Set-up, incorrectly says that “Generator #1 shall be the wanted signal on channel at 3 dB above sensitivity.” The 3dB should be 6dB.
6. DVT Plan section 6.6.5: The 10 kHz intervals should be 30 kHz and the range should be 150 kHz below to 150 kHz above the spur frequency in the spur list. In the paragraph entitled “External spurious response rejection procedure:”, replace step 3 with the following: “For every spur frequency found by the Main Radio external spurious response test, re-test Wakeup MDR at 30kHz intervals from 150kHz below the problem frequency to 150kHz above. The interferer should now be a CW without the 7dB overtest. When the actual spur is found to within 30kHz, find the interferer level at which the MDR passes the spec.” See the Justification section below for an explanation.  
Similarly, in the paragraph entitled “Side (Weaver) Channels Test”, replace step 2 with the following: “For each spur frequency in the spur file, re-test at 30kHz intervals from 150kHz below the spur frequency to 150kHz above. The interferer should now be a CW without the additional 7dB. When an actual spur frequency is found to within 30kHz, find the interferer level at which the MDR passes the spec.”
7. Change to section 6.6.1: Replace “Requirement paragraph: 2.3.4.8.4 Table 12 & 14” with “Requirement paragraph: 2.3.4.8.4 Table 26 & 28”.

8. Change to section 6.6.1: Remove procedure step 17. Attenuation vector is not required by the Test Matrix. Dynamic range with attenuation is tested by the main radio modes.
9. Change to section 6.6.2: Replace "Requirement paragraph: 2.3.4.8.4 Table 14" with "Requirement paragraph: 2.3.4.8.4 Table 28".
10. Change to section 6.6.4: Replace "Requirement paragraph: 2.3.4.8.4 Table 14" with "Requirement paragraph: 2.3.4.8.4 Table 28".
11. Change to section 6.6.4 Set-up paragraph: Replace "Generator #2 shall have a signal modulated according to the definition in section 6.4.5.1 with data uncorrelated and non-synchronous with the data on generator #1. It shall be 1 channel (200kHz for narrowband, 600kHz for wideband) above (and then below) the channel used by generator #1." with "Generator #2 shall have a signal modulated according to the definition in section 6.4.5.1 with data uncorrelated and non-synchronous with the data on generator #1. It shall be 2 channels (200kHz for MEDS, 600kHz for MICS) above (and then below) the channel used by generator #1."
12. Change to section 6.6.1 Procedure step 9: replace step 9 with "Change signal level and repeat MDR test until 5% MDR is reached with ½ dB resolution. Store level as measured sensitivity."
13. Change to section 6.6.1 Procedure step 16: replace step 16 with "Dynamic Range Test: For wideband and narrowband modes on the worst case channel, measure MDR with a wanted signal level at the measured sensitivity level up to -44dBm in 2dB steps."

**Justifications:** The following reasoning is behind the changes in the Summary section above:

1. **a)** The sensitivity levels are specified by the Mozart Requirement Specification (MDT Document #A17245); rev I Table 28.  
**b - c)** The 3dB increase, above measured sensitivity, to the wanted signal level at which the MDR spec is to be met is not stated in the Mozart Requirement Specification (MDT Document #A17245); rev I but comes from test methodology from TIA 603b section 2.1.6.2 Method of Measurement paragraph c). This standard is referenced in the Mozart Requirement Specification (MDT Document #A17245); rev I in section 2.3.4.5 Receiver Specifications.  
**d)** The 6dB increase, above measured sensitivity, to the wanted signal level is found in ECO 089.  
**e)** The DVT Plan is aligned with the Wakeup External Spurious Response requirement, which is defined in Mozart Requirement Specification (MDT Document #A17245); rev I and ECO 094. The procedure changes are needed to completely test the frequency band defined by the Mozart Requirement Specification (MDT Document #A17245); rev I.
2. The Mozart Requirement Specification (MDT Document #A17245); rev I does not state to use "specified sensitivity" as the reference so the default test methodology from TIA 603b applies. See TIA 603b section 2.1.6 paragraph b).
3. The Mozart Requirement Specification (MDT Document #A17245); rev I does not state to use "specified sensitivity" as the reference so the default test methodology from TIA 603b applies. See TIA 603b section 2.1.6 paragraph b).
4. The Mozart Requirement Specification (MDT Document #A17245); rev I does not state to use "specified sensitivity" as the reference so the default test methodology from TIA 603b applies. See TIA 603b section 2.1.6 paragraph b). This Alternate Channel Rejection test is

part of the External Spurious Response Rejection test covering the alternate channel. The wanted signal is therefore raised 6dB above the measured sensitivity. See note 10 below Table 28 in the Mozart Requirement Specification (MDT Document #A17245); rev I.

5. The information in the DVT Plan for setting up the generator should be consistent with the procedure addressed in item #4.
6. The approved DVT Plan section 6.4.8 External Spurious Response Rejection for TelM/TelC Modes was modified before approval by MDT to use 300 kHz coarse steps and 30kHz fine steps to reduce the test time. The deviation of the interferer was correspondingly increased. The DVT Plan section 6.4.8 "External Spurious Response Rejection for TelM/TelC Modes" procedure step 3 for coarse testing states "The interferer should be FM modulated with 10.3kHz and a deviation of 150kHz." The fine test, described in the same section procedure step 6, states "The interferer should now be a CW without the additional 6dB." [The approved DVT Plan section 6.6.5 Wakeup External Spurious and Blocking procedure step 3 states that the Wakeup Spurious Fine test will use the spurs found by the "main radio" spurious test. The Fine External Spurious Response Rejection for Wakeup must therefore check across the 300 kHz, not 100 kHz, to find the spur location more closely. The test was written for 10 steps so the step size must be 30 kHz rather than the 10 kHz stated in the DVT Plan. This was originally intended from the vector reduction effort.
7. The Mozart Requirement Specification (MDT Document #A17245); rev I was revised after the DVT Plan was written and the table numbers changed. The tables being referred to have not changed.
8. Attenuation vector is not required by the Test Matrix, which is considered the authority for vectors rather than the DVT Plan document. Dynamic range with attenuation is tested by the main radio modes. This was part of the vector reduction effort made by the combined Medtronic/ team.
9. The Mozart Requirement Specification (MDT Document #A17245); rev I was revised after the DVT Plan was written and the table numbers changed. The tables being referred to have not changed.
10. The Mozart Requirement Specification (MDT Document #A17245); rev I was revised after the DVT Plan was written and the table numbers changed. The tables being referred to have not changed.
11. This change is required because the Test Matrix requires a narrowband test in the MICS band where the offset needs to be 600kHz, not 200kHz. The 200kHz offset only applies in the MEDS band and 600kHz exclusively applies to the MICS band even if a narrowband mode is being tested.
12. This is clarification of what is stored and does not represent a change to the test. The purpose of the test is to measure the sensitivity level.
13. This is a clarification that measured sensitivity, not specified sensitivity, is used for the lowest level of the dynamic range test. The Mozart Requirement Specification (MDT Document #A17245); rev I Table 26 requirement description for the Missed Detect Rate states "The missed detect rate in the presence of AWGN and impulse noise at sensitivity shall be 5%. At levels 3dB above sensitivity the missed detect rate shall be 2%." The "sensitivity" in this description is taken to mean measured sensitivity although it is not

explicitly stated. The Table 28 entry in the Mozart Requirement Specification (MDT Document #A17245); rev I section “Wakeup Signal Dynamic Range” gives the “specified sensitivity” as the minimum of the range. The actual test software was written to use measured sensitivity as the reference. This part of the deviation provides alignment between the test plan and the test software. This alignment still meets the purpose and intent of the test. The required “specified sensitivity” can be substituted by “measured sensitivity” in the Test Plan, for in all cases, using measured sensitivity is more stringent test method to show compliance to the requirement.

## 6.8 Deviation #13

**Reason:** An approved ECO modifies specification limits and those are referenced in the DVT Plan. The current DVT Plan does not reflect these changes and must be adjusted accordingly

**Formal Approval Date:** 11/17/2010

### Summary:

In Section 6.4.13.2 RSSI Linearity Narrow and Wide Band, calls out a "differentiable level" of 2 dB. ECO 82 changes the "differentiable level" for MICS narrowband and wideband and for MEDS narrowband to 2.5dB. The RSSI step size for the test is changed from 1dB to 0.5dB and the limits table (Table 36) is changed from 2 to 2.5dB for the appropriate entries. Change Procedure Step 5 under DVT Plan section 6.4.13.2 to the following: "Increase the RF signal level by 0.5 dB". Change the Limits of Table 36 to the following:

Measurement	Min	Max	Units	Note
Absolute level (narrowband – MICS – 0dB atten.)	-108	-104	dBm	Absolute level at expected CCA output
Absolute level (narrowband – MEDS – 0dB atten.)	-108	-104	dBm	Absolute level at expected CCA output
Absolute level (narrowband – MICS – <b>with</b> atten.)	-112	-104	dBm	Absolute level at expected CCA output
Absolute level (narrowband – MEDS – <b>with</b> atten.)	-112	-104	dBm	Absolute level at expected CCA output
Absolute level (wideband – MICS – 0dB atten.)	-103	-99	dBm	Absolute level at expected CCA output
Absolute level (wideband – MICS – <b>with</b> atten.)	-107	-99	dBm	Absolute level at expected CCA output
Differentiable Level (MICS -106 to -68 dBm) (no atten.) NB		2.5	dB	
Differentiable Level (MICS -68 to -55 dBm) (no atten.) NB		4	dB	
Differentiable Level (MEDS -106 to -68 dBm) (no atten.) NB		2.5	dB	
Differentiable Level (MEDS -68 to -55 dBm) (no atten.) NB		4	dB	
Differentiable Level (MICS -106 to -68 dBm) ( <b>with</b> atten.) NB		4	dB	
Differentiable Level (MICS -68 to -55 dBm) ( <b>with</b> atten.) NB		6	dB	
Differentiable Level (MEDS -106 to -68 dBm) ( <b>with</b> atten.) NB		6	dB	
Differentiable Level (MEDS -68 to -55 dBm) ( <b>with</b> atten.) NB		8	dB	
Differentiable Level (MICS -101 to -68 dBm) (no atten.) <b>WB</b>		2.5	dB	
Differentiable Level (MICS -68 to -55 dBm) (no atten.) <b>WB</b>		4	dB	
Differentiable Level (MICS -101 to -68 dBm) ( <b>with</b> atten.) <b>WB</b>		4	dB	
Differentiable Level (MICS -68 to -55 dBm) ( <b>with</b> atten.) <b>WB</b>		6	dB	

### Justification:

An approved ECO is a specification change and the DVT plan needed to be adjusted for updates to the specification.

## 6.9 Deviation #14

**Reason:** To remove redundant, and therefore unnecessary, DVT testing related to the Wakeup External Spurious Response Rejection test, and also clarify alignment between the note made in the Test matrix for this test and the one formally stated in the DVT test plan, Table 54.

**Formal Approval Date:** 12/07/2010

### Summary:

The DVT plan under section 6.6.5 Wakeup External Spurious and Blocking, paragraph "Side (Weaver) Channels Test", indicates that 14 Weaver LO spurs shall be added to each side channel that is tested. In the DVT test Matrix (referenced from the DVT plan), the tests for Wakeup External Spurious Response Rejection (row 1390, 1391, 1393 and 1394 covered by script Spur\_Sc8) also indicate in column X, BW and BX that 14 Weaver LO spurs shall be added to each channel that is tested. This deviation shows that testing on all channels is redundant and so it reduces the DVT test requirement to test 14 weaver LO spurs on only one channel in the MEDS band for narrowband wakeup (tested with lower and upper Wakeup hardware channels) and one channel in the MICS band for wideband wakeup (tested with lower and upper Wakeup hardware channels). These channels are channel 5 for MICS Wide band and channel 19 for MEDS Narrow band. These channels were arbitrarily chosen with the one restriction that they could not be a channel at the edge of the band where either the upper or lower Wakeup Weaver channel could not be tested.

Table # 54 in section 6.6.5 of the Test Plan states the specific LO harmonics tested. These are to be centered on the center channel and have LO frequency steps of 100 KHz (MEDS) or 300 KHz (MICS) within a range starting at Alternate +1 channel (3rd harmonic of Weaver LO) and ending at +/-900 KHz for MEDS and +/-2700 KHz for MICS band. This creates a total of 14 extra spurs to add to the spur list for testing side channel performance. The Test Vector Matrix makes similar statements but limits the frequency range to +/-700 KHz for MEDS and +/-2100 KHz on MICS on either side of the side channel frequency. The values should be +/-900 KHz for MEDS and +/-2700 KHz for both documents. With this alignment it meets the intent of the test as already stated correctly in the DVT Test Plan.

### Justification:

1. Filtered Interference in the Rx Path - The Weaver mixer, where the Weaver LO is present, is separated from the RF front end by the Weaver Filter. The harmonics of the Weaver LO will only mix with what has already been downconverted and has made it through the filter. Any signal frequencies outside the filter cutoff will be attenuated to a level that removes any effect on spurious performance. This undesired mixing will be the same regardless of which RF channel frequency is used for the testing; therefore it is sufficient to test only one channel for spec compliance in the presence of weaver LO spurs.
2. Unintended Coupling - Other spurious responses that could be created, unrelated to the type of coupling identified in justification #1, requires that the Weaver LO signal couple into the RF mixer or the synthesizer via alternate paths specific to the physical layout of the IC. The revised wake-up side-channel receiver spurious response rejection requirement of 25 dB eliminates unintended coupling of noise on the IC as a cause for unanticipated receiver spurious responses at this level. Coupling of this nature is also

mitigated as the Weaver Receiver LO signal is a low frequency (100 KHz or 300 kHz and harmonics) signal located well away from the synthesizer and RF mixer and is electrically separated from the RF mixer by the Weaver filter. There are other higher frequency and higher power level digital signals associated with the channel select filter in the same physical area of the IC. The main radio spurious response DVT test did not show these digital signals levels to cause spurs.

3. Unintended Weaver LO harmonic coupling to the RF LO - Weaver LO or LO harmonics that do couple to the RF Mixer will cause mixing products at frequencies  $m \cdot \text{RFLO} \pm n \cdot \text{WeaverLO}$ . The largest products will be when  $m = 1$ . This case can be tested on any inband channel. The response to the 3rd harmonic frequency of the Weaver LO is tested as part of the Weaver Image Rejection test on 4 MEDS channels and 5 MICS channels. If  $m = 2$ , then the range of  $n$  when a narrowband Weaver LO (100 kHz) is used is 3961 to 4109 for the product to fall back in band. The range of  $n$  when a wideband Weaver LO (300 kHz) is used is 1328 to 1362.

### 6.10 Deviation #18

**Reason:** In the DVT plan, section 6.7.4 DVDD Supply Current, the wrong test module and test executive script is called out. There is also an incorrect comment in the notes column in the DVT test Matrix for the same test. Table 67 "Limits - DVDD Supply Current" needs updates to fully cover requirements in Table 3 from section 2.3.1.2 DVDD of the Mozart Requirement Specification (MDT Document #A17245); rev I.

**Formal Approval Date:** 02/01/2011

#### Summary:

- The DVT plan section 6.7.4 DVDD Supply Current shows that the test module "Wake Up Current Latency" will be used to take the measurements using test executive script "Rx\_Sc20". "Wake Up Current Latency" is to be replaced by the test module "Standby Current" for disabled static current measurements and the test module "RSSI linearity" for functional static current measurements. The test modules will be executed from the test executive script "Rx\_Sc22". This will change the Script Name column (column T) in the DVT Test Matrix for row 1432 -1436 to "Rx\_Sc22" instead of "Rx\_Sc20".
- The notes column (column X) in the Mozart DVT Test Matrix for row 1403 – 1414 indicates that the Wake Up Current Latency test will be updated so that it reports DVDD and BPFLT separately (as well as the sum of currents - as it already does). This was never done and is not needed since bullet 1 in this deviation replaces the need for this software change.
- Table 67 "Limits - DVDD Supply Current" in the Mozart DVT Plan under section 6.7.4 needs updates to fully cover the requirements on DVDD currents when  $\text{DVDD} = \text{BPFLT} + 200\text{mV}$  (when  $\text{BPFLT} = 1.85\text{V}$ ) in the Mozart Requirement Specification (MDT Document #A17245); rev I. Replace table 67 with the following table

	Min	Mean	Max	Note
Functional Static Current with BPFLT = 3.5V and DVDD = 3.5V			10 uA	55C
Functional Static Current with BPFLT = 2.0V and DVDD = 2.2V			10.1 uA	55C

Disabled Static Current @25C with BPFLT = 3.5V and DVDD = 3.5V			50 nA	
Disabled Static Current @37C with BPFLT = 3.5V and DVDD = 3.5V			100 nA	
Disabled Static Current over 0C to 55C with BPFLT = 3.5V and DVDD = 3.5V			500 nA	
Disabled Static Current @25C with BPFLT = 2.0V and DVDD = 2.2V			150 nA	
Disabled Static Current @37C with BPFLT = 2.0V and DVDD = 2.2V			200 nA	
Disabled Static Current over 0C to 55C with BPFLT = 2.0V and DVDD = 2.2V			600 nA	

Note: All tests, with the exception of Wake Up Current Latency and Standby Current, are run with a BPFLT voltage representative of the switching supply modelled in the Mozart Requirement Specification (MDT Document #A17245); rev I. The supply voltage waveform is generated by an arbitrary waveform generator and AC coupled into the actual supply circuit. Due to this configuration the BPFLT voltage is constrained to a minimum of 2.0V in the software to ensure that the arbitrary waveform generator never brings the BPFLT voltage below 1.85V. Because of this constraint it was chosen to use BPFLT = 2.0V and DVDD = 2.2V to cover this requirement.

#### Justification:

1. It was found that the test module "Standby Current" together with the test module "RSSI linearity" is available to take the measurements for DVDD Supply Currents which is equivalent to the planned Wake Up Current Latency test module. Using test executive script Rx\_Sc22 instead of the planned Rx\_Sc20 is equivalent.
2. Usage of the test module "Standby Current" together with the test module "RSSI linearity" replaces the indicated need for an update to the test module Wake Up Current Latency.
3. The measurements to cover the requirements on DVDD currents when DVDD = BPFLT+200mV (when BPFLT = 1.85V) is missing in Table 67 "Limits - DVDD Supply Current" and had to be added. Because of the constraint in software that BPFLT never can be lower than 2.0V, it was decided to use BPFLT = 2.0V and DVDD = 2.2V to cover this requirement. This is equivalent if not more conservative since higher voltage results in more leakage.

#### 6.11 Deviation #19

**Reason:** The DVT Plan, section 6.3.4 calls out the Mozart Requirement Specification (MDT Document #A17245); rev I section 2.3.4.6.4 to be the guidance for detailed test methodology. When reviewing this section and comparing it to the test conditions outlined in the DVT test Matrix, it does not specify enough vectors, using these methods, to fully cover the conditions required to test the module requirements in the Mozart Requirement Specification (MDT Document #A17245); rev I. This deviation details the missing vectors and justifies the need for them.

**Formal Approval Date:** 02/07/2011

#### Summary:

To fully and accurately test the Mozart Requirement Specification (MDT Document #A17245); rev I regarding Unwanted Emissions requirements (ETSI regulations), the DVT test matrix need



channel 30 added for 2 of the current tested output power levels applied to the appropriate test outlined below. In #3 and #4 immediately below and subsection Additional Background #1 and #2 below, higher power levels than the requirement may be tested with the same rationale as shown in the notes of section 8.5.3 in the DVT report.

1. Under section 2.3.4.6.4.2.4.2 Implant Mode (ETSI) in Mozart Requirement Specification (MDT Document #A17245); rev I it states TX output power between -7dBm and -15dBm in all MEDS channels shall meet -10.85dBm maximum power (or equal to the peak fundamental power output, whichever is less) in each emission across 25MHz to 401MHz and 406MHz to 4.06GHz.
2. Under section 2.3.4.6.4.2.4.5 External Mode (ETSI) in Mozart Requirement Specification (MDT Document #A17245); rev I (first row of table 23) it states TX output power between -15dBm and -20dBm in all MEDS channels shall meet -30.85dBm maximum unwanted emissions within the 400MHz to 401Mhz, 406MHz to 407MHz, and 800MHz to 814MHz region.
3. Under section 2.3.4.6.4.2.2 In-band Spectral Mask in Mozart Requirement Specification (MDT Document #A17245); rev I it states that for all MEDS channels with output power set to minimum -7dBm the emission bandwidth shall be < 100kHz.
4. Under section 2.3.4.6.4.2.3.1 General FCC (under section 2.3.4.6.4.2.3 Unwanted Radiation) in the Mozart Requirement Specification (MDT Document #A17245); rev I it states that for all MEDS channels with output power set to minimum -7dBm, the emissions in the immediate out-of-band shall be -21dB maximum with respect to the peak power in the emission bandwidth.
5. Under section 2.3.4.6.4.2.3.2 MEDS into MICS (FCC) in Mozart Requirement Specification (MDT Document #A17245); rev I it states that for all MEDS channels other than the two MEDS channels that neighbor the MICS band, the power in the MICS band shall be -32.2dBm for transmitter power levels between -7dBm and -15dBm. For transmitter output power levels between -15dBm and -20dBm the maximum measured unwanted emission within the MICS band shall be -52.2dBm.
6. Under section 2.3.4.6.4.2.3.3 MEDS into MICS (ETSI) in Mozart Requirement Specification (MDT Document #A17245); rev I it states that for all MEDS channels other than the two MEDS channels that neighbor the MICS band, the power in the MICS band shall be -34.85dBm for transmitter power levels between -7dBm and -15dBm. For transmitter output power levels between -15dBm and -20dBm the maximum measured unwanted emission within the MICS band shall be -54.85dBm.
7. Under section 2.3.4.6.4.2.4.3 External Mode in the Mozart Requirement Specification (MDT Document #A17245); rev I it states that for all MEDS channels and output power levels less than or equal to -15dBm the following list provides the maximum measured level of each emission as a function of frequency band:
  - 25MHz to 30MHz (ETSI): -35.9 dBm
  - 30MHz to 88MHz (FCC): -63.2 dBm
  - 88MHz to 216MHz (FCC): -59.7 dBm

- 216MHz to 400MHz(FCC): -57.2 dBm
- 407MHz to 800MHz:(FCC): -57.2 dBm
- 814MHz to 960MHz (FCC): -57.2 dBm
- 960MHz to 4.06GHz: -49.2 dBm

The DVT Test Matrix details these tests to be run at channel 11, 19, 22 and 29. These requirements state all MEDS channels so for full coverage of these requirements channel 30 must be considered and therefore channel 30 shall be added to the test vectors for these power levels. Note that this is different than for FCC regulations where channel 30 has a different requirement than other MEDS channels. This will create new DVT Test Matrix test conditions by filling column BJ (corresponds to channel 30) for rows 793-806, 857-870, 907-920, 957-970 and 1007-1020 currently in the DVT Test Matrix.

These changes add the testing of channel 30 at power levels -7dBm and -15dBm. The rows indicated above contain vectors for the *Regulatory\_TX\_Harmonics\_Spurious* test in the DVT software. The affected TE scripts that will need to have added updates for the additional channel are Tx\_Sc15a, Tx\_Sc15b, Tx\_Sc16, Tx\_Sc17, Tx\_Sc18, Tx\_Sc19 and Tx\_Sc20.

#### Additional Background

1. ECO 093 has changed section 2.3.4.6.4.2.4.1 Implant Mode (FCC) in Mozart Requirement Specification (MDT Document #A17245); rev I. It now states TX output power between -7.7dBm and -15.7dBm in channel 30 shall meet -32.2dBm maximum power in each emission across 25MHz to 401MHz and 406MHz to 4.06GHz.
2. ECO 093 has changed section 2.3.4.6.4.2.4.4 External Mode (FCC) in Mozart Requirement Specification (MDT Document #A17245); rev I. It now states TX output power between -27.1dBm and -29.1dBm in channel 30 shall meet -52.2dBm maximum power in each emission across 25MHz to 401MHz and 406MHz to 4.06GHz. Tx output power levels below -29.1dBm in channel 30 shall meet -53.7dBm maximum power in each emission across 25MHz to 401MHz and 406MHz to 4.06GHz.

#### **Justification:**

Without these additional vectors to test channel 30, as it is required for each of these tests, we cannot fully demonstrate compliance to the requirements in the Mozart Requirement Specification (MDT Document #A17245); rev I Section 2.3.4.6.4. and ECO 093.

## 6.12 Deviation #20

**Reason:** ECO 096 modifies specification limits which are referenced in the DVT Plan. The current DVT Plan does not reflect these changes and must be adjusted accordingly.

**Formal Approval Date:** 02/28/2011

### Summary:

DVT Plan section 6.4.5 Intermodulation Rejection for TelM/TelC Modes contains requirement limits from Mozart Requirement Specification (MDT Document #A17245); rev I section 2.3.4.5.4. ECO 096 changes one of these limits; specifically, Tel-M Mode 4 Intermodulation Rejection is reduced 2 dB to 42.3 dB. There is no impact to DVT test methodology. Below is an updated table to replace Table 27 "Limits - TelM/TelC IMR" in the DVT plan.

Measurement	min	max	Units	Note
Mode 1, 3 and 6	47		dB	Rejection
Mode 2	45.3		dB	
Mode 4	42.3		dB	Relaxed with 2dB by ECO 096
Mode 5 nominal deviation	41.6		dB	
Mode 5 low deviation (47 kHz)	40.6		dB	

### Justification:

An approved ECO is a specification change and the DVT plan needed to be adjusted for updates to the specification.

## 7 Data integrity and completeness

Data collected from DVT is formatted into pivot tables and plots to evaluate worst case results which are presented in the tables of this report. Along with the worst case results, the best case results are also plotted in the same pivot charts to confirm data integrity and make sure there are no rogue data points or abnormal looking data. Additionally, the number of tests for each script shown in the “Mozart DVT Test Matrix” [6] is compared against the actual number of tests completed in the script which is reported in the raw .XML file header. This methodology validates data integrity and confirms data completeness for all data presented in the tables of this report.

## 8 Transmit Test Results

### 8.1 Output Power

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.6.2

DVT Plan: 6.3.1.2

Test Parameter	Spec (min)	sn302	sn311	sn313	sn314	Compliance	Script
MICS, Implant, 50 Ohms	-4 dBm min	-3.70 dBm	-3.72 dBm	-3.71 dBm	-3.84 dBm	PASS	Tx_Sc2
MICS, Implant, 50-j60 Ohms	-4.6 dBm min	-4.18 dBm	-4.50 dBm	-4.33 dBm	-4.47 dBm	PASS	Tx_Sc3
MICS, Implant, 5+j0 Ohms	-5.9 dBm min	-5.41 dBm	-5.45 dBm	-5.12 dBm	-5.51 dBm	PASS	Tx_Sc4
MICS, Implant, 5-j20 Ohms	-6.8 dBm min	-6.39 dBm	-6.58 dBm	-6.41 dBm	-6.57 dBm	PASS	Tx_Sc6
MICS, Implant, 9-j20 Ohms	-5.7 dBm min	-5.16 dBm	-5.13 dBm	-5.08 dBm	-5.17 dBm	PASS	Tx_Sc7
MICS, Implant, 5-j60 Ohms	-8 dBm min	-6.72 dBm	-6.84 dBm	-6.76 dBm	-6.83 dBm	PASS	Tx_Sc5
MICS, Implant, 2:1VSWR, 50 Ohms	-6.1 dBm min	-4.91 dBm	-4.55 dBm	-4.52 dBm	-4.86 dBm	PASS	Tx_Sc1
MICS, Instrument, 50 Ohms	-12 dBm min	-11.76 dBm	-11.75 dBm	-11.67 dBm	-11.52 dBm	PASS	Tx_Sc2
MICS, Instrument, 50-j60 Ohms	-12.6 dBm min	-12.13 dBm	-12.29 dBm	-12.22 dBm	-12.48 dBm	PASS	Tx_Sc3
MICS, Instrument, 5+j0 Ohms	-13.9 dBm min	-13.38 dBm	-13.41 dBm	-13.18 dBm	-13.44 dBm	PASS	Tx_Sc4
MICS, Instrument, 5-j20 Ohms	-14.8 dBm min	-14.30 dBm	-14.42 dBm	-14.34 dBm	-14.51 dBm	PASS	Tx_Sc6

MICS, Instrument, 9-j20 Ohms	-13.7 dBm min	-13.14 dBm	-13.06 dBm	-13.00 dBm	-13.10 dBm	PASS	Tx_Sc7
MICS, Instrument, 5-j60 Ohms	-16 dBm min	-14.94 dBm	-14.81 dBm	-14.84 dBm	-14.69 dBm	PASS	Tx_Sc5
MICS, Instrument, 2:1VSWR, 50 Ohms	-14.1 dBm min	-12.97 dBm	-12.86 dBm	-12.70 dBm	-12.44 dBm	PASS	Tx_Sc1
MICS, Instr/Impl, 2:1VSWR, 50 Ohms	-32.1 dBm min	-30.10 dBm	-30.27 dBm	-28.82 dBm	-28.64 dBm	PASS	Tx_Sc1
MICS, Instr/Impl, 50 Ohms	-52 dBm min	-49.84 dBm	-50.57 dBm	-49.88 dBm	-49.96 dBm	PASS	Tx_Sc2
MICS, Instr/Impl, 50-j60 Ohms	-52.6 dBm min	-50.43 dBm	-50.44 dBm	-50.52 dBm	-50.64 dBm	PASS	Tx_Sc3
MICS, Instr/Impl, 5+j0 Ohms	-53.9 dBm min	-51.86 dBm	-52.51 dBm	-50.56 dBm	-50.73 dBm	PASS	Tx_Sc4
MICS, Instr/Impl, 5-j20 Ohms	-54.8 dBm min	-52.57 dBm	-52.69 dBm	-52.25 dBm	-52.14 dBm	PASS	Tx_Sc6
MICS, Instr/Impl, 9-j20 Ohms	-53.7 dBm min	-52.52 dBm	-53.26 dBm	-52.34 dBm	-50.92 dBm	PASS	Tx_Sc7
MICS, Instr/Impl, 5-j60 Ohms	-56 dBm min	-53.85 dBm	-53.34 dBm	-54.24 dBm	-54.44 dBm	PASS	Tx_Sc5
MICS, Instr/Impl, 2:1VSWR, 50 Ohms	-54.1 dBm min	-51.27 dBm	-52.08 dBm	-49.49 dBm	-50.37 dBm	PASS	Tx_Sc1
MEDS, Implant, 50 Ohms	-7 dBm min	-6.60 dBm	-6.85 dBm	-6.80 dBm	-6.83 dBm	PASS	Tx_Sc2
MEDS, Implant, 50-j60 Ohms	-7.6 dBm min	-7.24 dBm	-7.07 dBm	-7.06 dBm	-7.25 dBm	PASS	Tx_Sc3
MEDS, Implant, 5+j0 Ohms	-8.9 dBm min	-8.01 dBm	-8.09 dBm	-7.95 dBm	-8.09 dBm	PASS	Tx_Sc4
MEDS, Implant, 5-j20 Ohms	-9.8 dBm min	-9.45 dBm	-9.47 dBm	-9.24 dBm	-9.45 dBm	PASS	Tx_Sc6
MEDS, Implant, 9-j20 Ohms	-9.6 dBm min	-8.90 dBm	-8.88 dBm	-8.81 dBm	-8.88 dBm	PASS	Tx_Sc7
MEDS, Implant, 5-j60 Ohms	-11 dBm min	-9.84 dBm	-9.59 dBm	-9.75 dBm	-9.57 dBm	PASS	Tx_Sc5

MEDS, Implant, 2:1VSWR, 50 Ohms	-9.1 dBm min	-7.51 dBm	-7.64 dBm	-7.40 dBm	-7.77 dBm	PASS	Tx_Sc1
MEDS, Instrument, 50 Ohms	-15 dBm min	-14.90 dBm	-14.61 dBm	-14.45 dBm	-14.45 dBm	PASS	Tx_Sc2
MEDS, Instrument, 50-j60 Ohms	-15.6 dBm min	-15.01 dBm	-15.15 dBm	-14.98 dBm	-15.07 dBm	PASS	Tx_Sc3
MEDS, Instrument, 5+j0 Ohms	-16.9 dBm min	-15.79 dBm	-16.13 dBm	-15.64 dBm	-15.83 dBm	PASS	Tx_Sc4
MEDS, Instrument, 5-j20 Ohms	-17.8 dBm min	-17.22 dBm	-17.46 dBm	-17.08 dBm	-17.46 dBm	PASS	Tx_Sc6
MEDS, Instrument, 9-j20 Ohms	-17.6 dBm min	-16.66 dBm	-16.70 dBm	-16.50 dBm	-16.67 dBm	PASS	Tx_Sc7
MEDS, Instrument, 5-j60 Ohms	-19 dBm min	-17.80 dBm	-17.34 dBm	-17.76 dBm	-17.35 dBm	PASS	Tx_Sc5
MEDS, Instrument, 2:1VSWR, 50 Ohms	-17.1 dBm min	-15.34 dBm	-15.50 dBm	-15.45 dBm	-15.24 dBm	PASS	Tx_Sc1
MEDS, Instr/Impl, 50 Ohms	-30 dBm min	-29.38 dBm	-29.29 dBm	-29.30 dBm	-28.71 dBm	PASS	Tx_Sc2
MEDS, Instr/Impl, 50-j60 Ohms	-30.6 dBm min	-29.91 dBm	-30.25 dBm	-29.68 dBm	-29.47 dBm	PASS	Tx_Sc3
MEDS, Instr/Impl, 5+j0 Ohms	-31.9 dBm min	-30.77 dBm	-31.17 dBm	-30.45 dBm	-31.11 dBm	PASS	Tx_Sc4
MEDS, Instr/Impl, 5-j20 Ohms	-32.8 dBm min	-32.08 dBm	-32.77 dBm	-31.97 dBm	-32.38 dBm	PASS	Tx_Sc6
MEDS, Instr/Impl, 9-j20 Ohms	-32.6 dBm min	-31.32 dBm	-31.97 dBm	-31.30 dBm	-27.64 dBm	PASS	Tx_Sc7
MEDS, Instr/Impl, 5-j60 Ohms	-34 dBm min	-32.90 dBm	-33.11 dBm	-32.87 dBm	-30.19 dBm	PASS	Tx_Sc5
MEDS, Instr/Impl, 2:1VSWR, 50 Ohms	-32.1 dBm min	-29.87 dBm	-30.55 dBm	-29.42 dBm	-29.37 dBm	PASS	Tx_Sc1
MEDS, Instr/Impl, 50 Ohms	-52 dBm min	-50.05 dBm	-50.84 dBm	-49.84 dBm	-50.30 dBm	PASS	Tx_Sc2

MEDS, Instr/Impl, 50- j60 Ohms	-52.6 dBm min	-50.69 dBm	-51.43 dBm	-50.88 dBm	-51.20 dBm	PASS	Tx_Sc3
MEDS, Instr/Impl, 5+j0 Ohms	-53.9 dBm min	-52.74 dBm	-53.31 dBm	-50.93 dBm	-51.68 dBm	PASS	Tx_Sc4
MEDS, Instr/Impl, 5- j20 Ohms	-54.8 dBm min	-53.16 dBm	-53.99 dBm	-52.95 dBm	-53.29 dBm	PASS	Tx_Sc6
MEDS, Instr/Impl, 9- j20 Ohms	-54.6 dBm min	-52.70 dBm	-52.76 dBm	-52.86 dBm	-52.13 dBm	PASS	Tx_Sc7
MEDS, Instr/Impl, 5- j60 Ohms	-56 dBm min	-53.83 dBm	-53.01 dBm	-54.42 dBm	-54.28 dBm	PASS	Tx_Sc5
MEDS, Instr/Impl, 2:1VSWR, 50 Ohms	-54.1 dBm min	-50.87 dBm	-52.14 dBm	-50.03 dBm	-51.15 dBm	PASS	Tx_Sc1

Table 1 Output Power

Conclusion: All results from Output Power tests show compliance with the specification.

## 8.2 Transmit Modulation Response (EVM) and Data Rates

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.6.5 and 2.3.4.2 (data rate)

DVT Plan: 6.3.2

This test has a deviation (Deviation #3) from the DVT Plan. See Section 6 DVT plan Deviations for more information.

Test Executive Scripts: Tx\_Sc8 through Tx\_Sc14

Impedance: 50 Ohm

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Data Rate, Mode 1	48.72282 kb/s max 48.71308 kb/s min	48.720 kb/s	48.720 kb/s	48.720 kb/s	48.720 kb/s	PASS	
Data Rate, Mode 2	97.44564 kb/s max 97.42616 kb/s min	97.440 kb/s	97.440 kb/s	97.440 kb/s	97.440 kb/s	PASS	
Data Rate, Mode 3	190.019 kb/s max 189.981 kb/s min	190.000 kb/s	190.000 kb/s	190.000 kb/s	190.000 kb/s	PASS	
Data Rate, Mode 4	380.038 kb/s max 379.962 kb/s min	380.000 kb/s	380.000 kb/s	380.000 kb/s	380.000 kb/s	PASS	
EVM, Modes 1-4, Power Level -4 to -30dBm, MICS	8.4% (max)	3.89%	4.08%	4.46%	3.98%	PASS	
EVM, Modes 1-4, Power Level below -30dBm, MICS/MEDS	12.6% (max)	3.09%	3.48%	4.35%	4.30%	PASS	
EVM, Modes 1-2, Power Level -7 to -30dBm, MEDS	8.4% (max)	2.96%	3.62%	3.33%	2.75%	PASS	

Table 2 Transmit Modulation Response (EVM) and Data Rate



VSWR 2:1

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
EVM, Modes 1-4, Power Level -6.1 to -32.1 dBm, MICS	8.4% (max)	6.20%	6.13%	6.28%	5.08%	PASS	
EVM, Modes 1-4, Power Level below -32.1 dBm, MICS/MEDS	12.6% (max)	3.31%	3.52%	4.54%	4.38%	PASS	
EVM, Modes 1-2, Power Level -9.1 to -32.1 dBm, MEDS	8.4% (max)	4.63%	5.21%	4.94%	4.17%	PASS	

Table 3 Transmit Modulation Response (EVM) and Data Rates

Impedance 50 – j60

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
EVM, Modes 1-4, Power Level -4.6 to -30.6 dBm, MICS	8.4% (max)	3.85%	5.43%	5.16%	4.92%	PASS	
EVM, Modes 1-4, Power Level below -30.6 dBm, MICS/MEDS	12.6% (max)	3.13%	3.42%	4.43%	4.62%	PASS	
EVM, Modes 1-2, Power Level -7.6 to -30.6 dBm, MICS	8.4% (max)	2.96%	3.70%	3.13%	2.70%	PASS	

Table 4 Transmit Modulation Response (EVM) and Data Rates

Impedance 5 + j0

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
EVM, Modes 1-4, Power Level -5.9 to -31.9 dBm, MICS	8.4% (max)	4.32%	4.31%	4.72%	3.92%	PASS	
EVM, Modes 1-4, Power Level below -31.9 dBm, MICS/MEDS	12.6% (max)	3.36%	3.61%	4.42%	4.52%	PASS	

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
EVM, Modes 1-2, Power Level -8.9 to -31.9 dBm, MEDS	8.4% (max)	2.95%	3.65%	3.11%	2.70%	PASS	

Table 5 Transmit Modulation Response (EVM) and Data Rates

Impedance 5 – j60

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
EVM, Modes 1-4, Power Level -8 to -34dBm, MICS	8.4% (max)	5.25%	5.20%	5.88%	5.13%	PASS	
EVM, Modes 1-4, Power Level below -34dBm, MICS/MEDS	12.6% (max)	3.42%	3.46%	4.96%	5.05%	PASS	
EVM, Modes 1-2, Power Level -11 to -34dBm, MEDS	8.4% (max)	2.99%	4.56%	3.48%	3.36%	PASS	

Table 6 Transmit Modulation Response (EVM) and Data Rates

Impedance 5 – j20

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
EVM, Modes 1-4, Power Level -6.8 to -32.8 dBm, MICS	8.4% (max)	4.83%	5.06%	5.10%	4.65%	PASS	
EVM, Modes 1-4, Power Level below -32.8 dBm, MICS/MEDS	12.6% (max)	3.73%	3.66%	4.42%	4.81%	PASS	
EVM, Modes 1-2, Power Level -9.8 to -32.8 dBm, MICS	8.4% (max)	5.22%	3.76%	3.06%	2.75%	PASS	

Table 7 Transmit Modulation Response (EVM) and Data Rates

Impedance 9 – j20

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
EVM, Modes 1-4 Power Level -5.7 to -31.7 dBm, MICS	8.4% (max)	5.47%	5.24%	5.31%	4.50%	PASS	
EVM, Modes 1-4, Power Level below -31.7 dBm, MICS	12.6% (max)	3.36%	3.63%	4.71%	4.74%	PASS	
EVM, Modes 1-2, Power Level -9.6 to -32.6 dBm, MEDS	8.4% (max)	2.95%	3.65%	3.14%	2.76%	PASS	
EVM, Modes 1-2, Power Level below -32.6 dBm, MEDS	12.6% (max)	2.31%	2.93%	3.40%	2.37%	PASS	

Table 8 Transmit Modulation Response (EVM) and Data Rates

Conclusion: All results from Transmit Modulation Response (EVM) tests show compliance with the specification.

### 8.3 TelC Deviation and Data Rate

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.6.5 and 2.3.4.2

DVT Plan: 6.3.3

Test Executive Script: Tx\_Sc8

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Data Rate, Mode 5	14.84523 kb/s max 14.84227 kb/s min	14.8437 kb/s	14.8437 kb/s	14.8438 kb/s	14.8438 kb/s	PASS	
Data Rate, Mode 6	100.01 kb/s max 99.99 kb/s min	100.00 kb/s	100.00 kb/s	100.00 kb/s	100.00 kb/s	PASS	
Deviation Narrowband	14.67 kHz min, 17.93 kHz max	15.3629 KHz	15.3629 KHz	15.3684 KHz	15.3729 KHz	PASS	
Deviation Wideband	45 kHz min 55 kHz max	48.0649 KHz	48.1549 KHz	48.1633 KHz	48.2550 KHz	PASS	

Table 9 TelC Deviation and Data Rate

Note: The test signal used in the data rate test differs from the one identified in the DVT plan.

DVT Plan: acm\_mod\_clk\_en

Tx\_TelC\_continuous\_whitened: data\_clk\_en

**Conclusion: All results from TelC Deviation and Data Rate tests show compliance with the specification.**

### 8.4 Stability - Tx Spurious into 12:1 VSWR Load

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.6.4

DVT Plan: 6.3.5

Test Executive Script: Tx\_Sc22

Specification: The requirement is that there be no instability. As stated in the DVT Plan, during the performance of these tests, integer multiple harmonics of the operating frequency of the “DUT” (such as the second harmonic of the modulated carrier) will be present in the frequency sweeps. Synthesizer spurs at other frequencies may also be present but are not related to transmitter stability. The known transmitter spurious and integer multiple harmonics that are products of the design will be present at all reflection coefficient magnitudes and angles. Instabilities, if present, would only occur at specific or narrow ranges of reflection coefficient magnitudes and angles.

Medtronic Engineering is required to examine the data results from this test and confirm that there are no instabilities.

This test has a deviation (Deviation #1) from the DVT Plan. See Section 6 DVT plan Deviations for more information.

This test has a deviation (Deviation #2) from the DVT Plan. See Section 6 DVT plan Deviations for more information

#### 8.4.1 Stability Test with 1MHz RBW

**Stability Conclusion:** Data not appropriate for Stability review. See.

**Gate for Regulatory Testing:** Medtronic has processed and reviewed this data and has approved proceeding to Regulatory testing. See.

Pre and Post Test Results:

Test Parameter	Spec	sn327	sn331	sn334	sn336	Compliance	Notes
RSSI Mode 4 0 dB Attenuation	Absolute	-101.16 dBm min	-100.68 dBm min	-101 dBm min	-100.68 dBm min	PASS	Deltas and absolute numbers are worst case.
	-103 dBm min	-100.52 dBm max	-100.68 dBm max	-100.84 dBm max	-100.68 dBm max		
	-99 dBm max	Min code diff = 5	Min code diff = 5	Min code diff = 5	Min code diff = 5		
	Diff level -106 to -68: 2.5dB	Min code diff = 3	Min code diff = 4	Min code diff = 4	Min code diff = 4		
	Diff level -68 to -55: 4 dB						

<b>Sensitivity Mode 4 0dB Attenuation</b>	-95dBm	Delta = 0.25dB, -101.5 dBm worst case	Delta = 0 dB, -101.5 dBm worst case	Delta = 0.25 dB, -101.5 dBm worst case	Delta = 0.25 dB, -101 dBm worst case	<b>PASS</b>	
<b>Sensitivity Mode 4 2dB Attenuation</b>	-93dBm	Delta = 0.25dB, -100.5 dBm worst case	Delta = 0dB, -100.75 dBm worst case	Delta = 0.25 dB, -100.5 dBm worst case	Delta = 0dB, -100.25 dBm worst case	<b>PASS</b>	
<b>Sensitivity Mode 4 22dB Attenuation</b>	-73dBm	Delta = 0dB, -82 dBm worst case	Delta = 0.25dB, -81.75 dBm worst case	Delta = 0 dB, -82.25 dBm worst case	Delta = 0dB, -82 dBm worst case	<b>PASS</b>	
<b>AM Rejection Mode 4</b>	-58dBm	Delta = 0.25 dB, -52 dBm	Delta = 0.25 dB, -49 dBm	Delta = 0.75 dB, -48.25 dBm	Delta = 0.5 dB, -50.25 dBm	<b>PASS</b>	
<b>Standby Current (Disabled Static Current @25C)</b>	50nA	Delta = 0.147nA, 2.83nA	Delta = 0.092nA, 3.01nA	Delta = 0.030nA, 2.76nA	Delta = 0.082nA, 2.54nA	<b>PASS</b>	
<b>Tx Power</b>	-4dBm min for MICS band	Delta = 0.063dB, -3.52 dBm	Delta = 0.056dB, -3.55 dBm	Delta = 0.050dB, -3.55 dBm	Delta = 0.047dB, -3.58 dBm	<b>PASS</b>	

Table 10 Pre and Post Tests for Stability (1MHz RBW)

#### 8.4.2 Stability Test with 30kHz RBW

As stated in the Test Plan section 6.3.5, to fulfil the testing of this requirement, Medtronic has reviewed 264 screen capture plots representing the 264 vectors combinations across DUT's with serial numbers sn327, sn331, sn334 and sn336. It has been reviewed using the agreed upon criteria also called out in the same section of the Test Plan. See Figure 1 for an example screen capture.

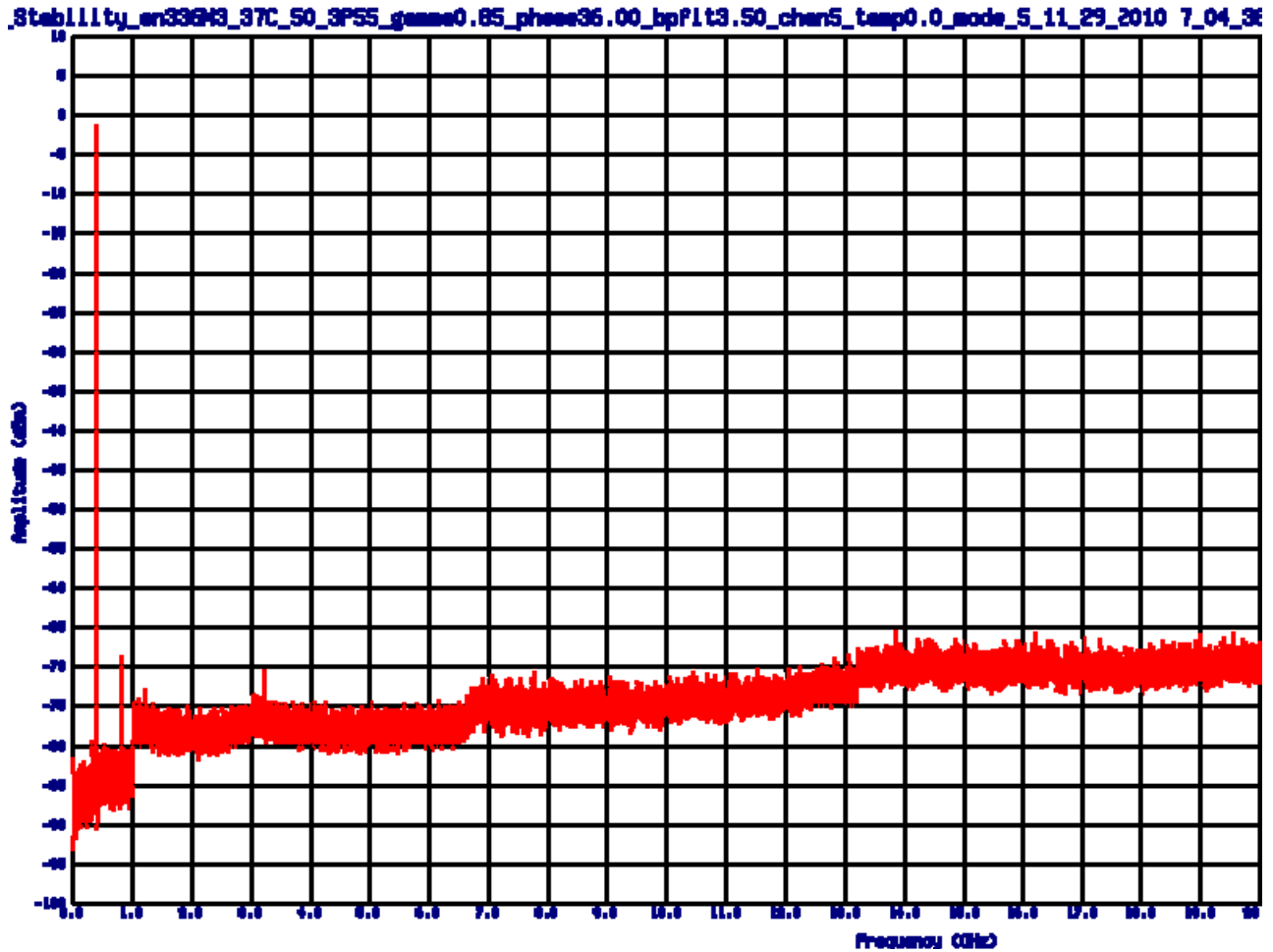


Figure 1 : Tx\_Sc22 Stability Test with 30KHz RBW

Post stability test results.

Test Parameter	Spec	sn327	sn331	sn334	sn336	Compliance	Notes
RSSI Mode 4 0 dB Attenuation	Absolute -103 dBm min -99 dBm max  Diff level -106 to -68 dBm: 2.5dB  Diff level -68 to -55 dBm: 4 dB	-100.84 dBm  Min code diff = 5  Min code diff = 7	-101.32 dBm  Min code diff = 5  Min code diff = 7	-101.00 dBm  Min code diff = 5  Min code diff = 6	-101.32 dBm  Min code diff = 5  Min code diff = 6	PASS	Deltas and absolute numbers are worst case.
Sensitivity Mode 4 0dB Attenuation	-95dBm max	-101.25 dBm	-101.5 dBm	-101.25 dBm	-101.50 dBm	PASS	

<b>Sensitivity Mode 4 2dB Attenuation</b>	-93dBm max	-101.00 dBm	-100.5 dBm	-100.75 dBm	-100.75 dBm	PASS	
<b>Sensitivity Mode 4 22dB Attenuation</b>	-73dBm max	-82.25 dBm	-81.75 dBm	-82.25 dBm	-82.00 dBm	PASS	
<b>AM Rejection Mode 4</b>	-58dBm min	-51.75 dBm	-48.75 dBm	-47.50 dBm	-50.50 dBm	PASS	
<b>Standby Current (Disabled Static Current @25C)</b>	50nA max	1.89 nA	2.63 nA	2.18 nA	1.81 nA	PASS	
<b>Tx Power</b>	-4dBm min for MICS band	-3.51 dBm	-3.59 dBm	-3.24 dBm	-3.30 dBm	PASS	

Table 11 Post Test for Stability (30KHz RBW)

Conclusion for Post Stability Test: It was found that all results from tests run after Stability (30KHz RBW) show compliance with the specification.

Conclusion for Stability Test: It was found that the Stability Test (30KHz RBW) shows compliance with the specification since no evidence of instabilities on the spectrum analyzer plots for each sweep has been found.



## 8.5 Regulatory Test Results

### Gate for Regulatory Testing:

The task of reviewing Tx Stability data by Medtronic before proceeding with Regulatory testing is a requirement called out in section 6.3.5 of the DVT Plan. Medtronic has for this purpose reviewed the first Tx Stability data taken with 1MHz RBW setting for frequencies above 1GHz with the justification of Deviation #1 to the DVT plan. Medtronic reviewed all four data sets representing the four Modules and Medtronic approve that DVT can move forward with the Regulatory testing.

This includes Tx Harmonic and Spurious, ACPR, AltCPR and Spectral Mask

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.6.4

DVT Plan: 6.3.4

Note: Regulatory tests in sections 4.5.2 through 4.5.4 are implemented in the test module ZRLNK\_Regulatory\_Tx\_Harmonics\_Spurious. This test module has 23 subtests. The subtest that covers a parameter in the results tables is shown in the Notes column.

Note on use of Peak Detector vs CISPR Detector: The Regulatory Tx Harmonics Spurious and Rx Conducted Spurious Emissions tests have requirements to test for unwanted emissions using a CISPR detector in the spectrum analyzer. The DVT tests use a peak detector instead in order to save time. Close to the MEDS/MICS bands the CISPR detector is used but it is slow. This substitution of a peak detector for the CISPR detector is justified by lab data reported in "Measurement comparison of a CISPR Quasi peak detector method and an approximated CISPR peak detector method" [9]. The conclusion of that document states: "The CISPR method measures a peak power that is 0.5dB lower than the approximation method. This means that the approximation method is conservative when measuring emissions and safe to use."

### 8.5.1 ACPR and AltCPR

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.6.4.1.1 (MICS) and 2.3.4.6.4.2.1 (MEDS)

Test Executive Scripts: Tx\_Sc1 through Tx\_Sc8

Note: The specification for ACPR and AltCPR in the DVT Plan are stated to be "maximum" with positive values. They should have been "minimum".

Note: Negative numbers in the raw data were adapted to positive numbers to match the Mozart Requirement Specification (MDT Document #A17245); rev I.

Impedance: 2:1 VSWR

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
ACPR, MICS, -6.1 to -14.1 dBm	22.7 dB min	27.62 dB	28.6 dB	26.67 dB	29.19dB	PASS	Tested power levels reflect relaxation from -4 to -12 dBm

ACPR, MICS, -14.1 dBm and below	34 dB min	40.89 dB	39.97 dB	40.44 dB	39.98 dB	PASS	
AltCPR, MICS, -6.1 to -14.1 dBm	28 dB min	51.79 dB	52.68 dB	50.51 dB	53.21 dB	PASS	
AltCPR, MICS, -14.1 dBm and below	40 dB min	54.35 dB	53.79 dB	53.72 dB	54.09 dB	PASS	
ACPR, MEDS, -9.1 to -17.1 dBm	26 dB min	31.43 dB	31.11 dB	30.9 dB	31.89 dB	PASS	Tested power levels reflect relaxation from -7 to -15 dBm
ACPR, MEDS, -17.1 dBm and below	35 dB min	40.60 dB	39.69 dB	40.52 dB	39.93 dB	PASS	
AltCPR, MEDS, -9.1 to -17.1 dBm	31 dB min	53.50 dB	53.33 dB	54.08 dB	54.14 dB	PASS	
AltCPR, MEDS, -17.1 dBm and below	40 dB min	53.70 dB	53.41 dB	53.69 dB	53.49 dB	PASS	

Table 12 Regulatory Tests – 2:1 VSWR :ACPR, AltCPR

Impedance: 50 +j0

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
ACPR, MICS, -4 to -12 dBm	22.7 dB min	30.96 dB	32.89 dB	29.94 dB	33.83 dB	PASS	Tested power levels reflect relaxation from -4 to -12 dBm
ACPR, MICS, -12 dBm and below	34 dB min	40.62 dB	39.94 dB	40.52 dB	40.27 dB	PASS	
AltCPR, MICS, -4 to -12 dBm	28 dB min	53.47 dB	53.70 dB	53.11 dB	53.16 dB	PASS	
AltCPR, MICS, -12 dBm and below	40 dB min	52.90 dB	52.37 dB	52.85 dB	52.22 dB	PASS	
ACPR, MEDS, -7 to -15 dBm	26 dB min	34.94 dB	35.20 dB	34.14 dB	35.68 dB	PASS	Tested power levels reflect relaxation from -7 to -15 dBm

ACPR, MEDS, -15 dBm and below	35 dB min	40.48 dB	39.63 dB	40.38 dB	39.94 dB	PASS	
AltCPR, MEDS, -7 to -15 dBm	31 dB min	54.71 dB	54.30 dB	54.74 dB	54.60 dB	PASS	
AltCPR, MEDS, -15 dBm and below	40 dB min	53.57 dB	53.18 dB	53.64 dB	53.66 dB	PASS	

Table 13 Regulatory Tests – 50+j0 :ACPR, AltCPR

Impedance: 50 -j60

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
ACPR, MICS, -4.6 to -12.6 dBm	22.7 dB min	31.76 dB	29.42 dB	29.41 dB	29.66 dB	PASS	Tested power levels reflect relaxation from -4 to -12 dBm
ACPR, MICS, -12.6 dBm and below	34 dB min	40.88 dB	40.21 dB	40.32 dB	40.30 dB	PASS	
AltCPR, MICS, -4.6 to -12.6 dBm	28 dB min	53.51 dB	53.57 dB	53.14 dB	53.43 dB	PASS	
AltCPR, MICS, -12.6 dBm and below	40 dB min	53.17 dB	53.02 dB	52.54 dB	52.72 dB	PASS	
ACPR, MEDS, -7.6 to -15.6 dBm	26 dB min	36.08 dB	36.13 dB	34.9 dB	36.35 dB	PASS	Tested power levels reflect relaxation from -7 to -15 dBm
ACPR, MEDS, -15.6 dBm and below	35 dB min	40.60 dB	39.99 dB	40.26 dB	40.09 dB	PASS	
AltCPR, MEDS, -7.6 to -15.6 dBm	31 dB min	54.42 dB	54.44 dB	55.05 dB	54.83 dB	PASS	
AltCPR, MEDS, -15.6 dBm and below	40 dB min	53.47 dB	53.14 dB	51.71 dB	52.18 dB	PASS	

Table 14 Regulatory Tests – 50-j60 :ACPR, AltCPR

Impedance: 5+ j0

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
ACPR, MICS, -5.9 to -13.9 dBm	22.7 dB min	29.35 dB	31.53 dB	29.84 dB	31.54 dB	PASS	Tested power levels reflect relaxation from -4 to -12 dBm
ACPR, MICS, -13.9 dBm and below	34 dB min	40.48 dB	39.79 dB	40.31 dB	39.88 dB	PASS	
AltCPR, MICS, -5.9 to -13.9 dBm	28 dB min	54.10 dB	53.65 dB	53.58 dB	53.67 dB	PASS	
AltCPR, MICS, -13.9 dBm and below	40 dB min	52.76 dB	52.88 dB	52.61 dB	52.88 dB	PASS	
ACPR, MEDS, -8.9 to -16.9 dBm	26 dB min	37.73 dB	37.29 dB	36.74 dB	37.59 dB	PASS	Tested power levels reflect relaxation from -7 to -15 dBm
ACPR, MEDS, -16.9 dBm and below	35 dB min	40.09 dB	39.37 dB	40.59 dB	39.77 dB	PASS	
AltCPR, MEDS, -8.9 to -16.9 dBm	31 dB min	54.70 dB	54.56 dB	55.04 dB	54.45 dB	PASS	
AltCPR, MEDS, -16.9 dBm and below	40 dB min	53.63 dB	53.16 dB	50.92 dB	51.16 dB	PASS	

Table 15 Regulatory Tests – 5+j0 :ACPR, AltCPR

Impedance: 5- j60

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
ACPR, MICS, -8 to -16 dBm	22.7 dB min	27.32 dB	27.81 dB	26.01 dB	28.37 dB	PASS	Tested power levels reflect relaxation from -4 to -12 dBm
ACPR, MICS, -16 dBm and below	34 dB min	40.23 dB	40.11 dB	39.88 dB	39.58 dB	PASS	
AltCPR, MICS, -8 to -16 dBm	28 dB min	51.64 dB	50.40 dB	49.05 dB	52.18 dB	PASS	

AltCPR, MICS, -16 dBm and below	40 dB min	53.05 dB	52.61 dB	52.88 dB	52.43 dB	PASS	
ACPR, MEDS, -11 to -19 dBm	26 dB min	35.17 dB	32.04 dB	33.58 dB	33.78 dB	PASS	Tested power levels reflect relaxation from -7 to -15 dBm
ACPR, MEDS, -19 dBm and below	35 dB min	40.39 dB	39.8 dB	39.52 dB	39.67 dB	PASS	
AltCPR, MEDS, -11 to -19 dBm	31 dB min	55.03 dB	53.79 dB	55.03 dB	54.39 dB	PASS	
AltCPR, MEDS, -19 dBm and below	40 dB min	53.60 dB	48.94 dB	48.71 dB	50.81 dB	PASS	

Table 16 Regulatory Tests – 5-j60 :ACPR, AltCPR

Impedance: 5- j20

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
ACPR, MICS, -6.8 to -14.8 dBm	22.7 dB min	29.93 dB	30.39 dB	28.69 dB	29.38 dB	PASS	Tested power levels reflect relaxation from -4 to -12 dBm
ACPR, MICS, -14.8 dBm and below	34 dB min	40.52 dB	39.57 dB	39.89 dB	39.61 dB	PASS	
AltCPR, MICS, -6.8 to -14.8 dBm	28 dB min	53.32 dB	53.11 dB	52.78 dB	53.12 dB	PASS	
AltCPR, MICS, -14.8 dBm and below	40 dB min	53.29 dB	52.70 dB	52.51 dB	52.91 dB	PASS	
ACPR, MEDS, -9.8 to -17.8 dBm	26 dB min	37.00 dB	37.18 dB	37.22 dB	37.84 dB	PASS	Tested power levels reflect relaxation from -7 to -15 dBm
ACPR, MEDS, -17.8 dBm and below	35 dB min	40.53 dB	39.14 dB	40.10 dB	39.53 dB	PASS	
AltCPR, MEDS, -9.8 to -17.8 dBm	31 dB min	55.06 dB	54.46 dB	55.08 dB	54.69 dB	PASS	

AltCPR, MEDS, -17.8 dBm and below	40 dB min	53.24 dB	53.24 dB	50.32 dB	50.15 dB	PASS	
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Table 17 Regulatory Tests – 5-j20 :ACPR, AltCPR

Impedance: 9- j20

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
ACPR, MICS, -5.7 to -13.7 dBm	22.7 dB min	28.59 dB	30.36 dB	29.49 dB	30.63 dB	PASS	Tested power levels reflect relaxation from -4 to -12 dBm
ACPR, MICS, -13.7 dBm and below	34 dB min	40.49 dB	39.44 dB	40.38 dB	39.69 dB	PASS	
AltCPR, MICS, -5.7 to -13.7 dBm	28 dB min	53.51 dB	53.39 dB	53.19 dB	53.29 dB	PASS	
AltCPR, MICS, -13.7 dBm and below	40 dB min	53.47 dB	52.83 dB	52.95 dB	52.80 dB	PASS	
ACPR, MEDS, -9.6 to -17.6 dBm	26 dB min	38.08 dB	37.66 dB	37.59 dB	37.55 dB	PASS	Tested power levels reflect relaxation from -7 to -15 dBm
ACPR, MEDS, -17.6 dBm and below	35 dB min	40.00 dB	38.95 dB	39.95 dB	39.61 dB	PASS	
AltCPR, MEDS, -9.6 to -17.6 dBm	31 dB min	55.20 dB	54.17 dB	54.87 dB	54.50 dB	PASS	
AltCPR, MEDS, -17.6 dBm and below	40 dB min	50.94 dB	50.63 dB	50.54 dB	51.35 dB	PASS	

Table 18 Regulatory Tests – 9-j20 :ACPR, AltCPR

**Conclusion: All results from TX Regulatory ACPR and AltCPR tests show compliance with the specification.**

## 8.5.2 In-band Spectral Mask

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.6.4.1.2 (MICS) and 2.3.4.6.4.2.2 (MEDS)

Test Executive Scripts: Tx\_Sc15 through Tx\_Sc20

This test has a deviation (Deviation #19) from the DVT Plan. See Section 6 DVT Plan Deviations for more information. Note that deviation #19 only specifies the need of data from missing vectors in the DVT plan. Data that aligns with all requirements in deviation #19, as well as requirements specified in ECO 093, was gathered before the deviation was approved. Data processing, review and incorporation of results into the DVT report occurred after ECO 093 and deviation #19 was approved.

Impedance: 50 Ohm

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Emission Bandwidth, -21 dB Wideband Mode 4(MICS)	300 kHz max	267.95 KHz	267.02 KHz	268.13 KHz	266.97 KHz	PASS	Regulatory subtest #1
Emission Bandwidth, -21 dB Narrowband Mode 2(MEDS)	100 kHz max	80.58 KHz	81.49 KHz	81.20 KHz	81.17 KHz	PASS	Regulatory subtest #1
Emission Bandwidth, -21 dB Mode 6	300KHz max	204.97 KHz	204.11 KHz	205.47 KHz	203.69 KHz	PASS	Regulatory subtest #1

Table 19 Regulatory Tests– In-band Spectral Mask – Emission Bandwidth

Impedance: 50 Ohm (2:1 VSWR)

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Emission Bandwidth, -21 dB Wideband Mode 4(MICS)	300 kHz max	268.15 KHz	271.65 KHz	274.88 KHz	268.35 KHz	PASS	Regulatory subtest #1
Emission Bandwidth, -21 dB Narrowband Mode 2(MEDS)	100 kHz max	80.98 KHz	81.8 KHz	82.1 KHz	81.64 KHz	PASS	Regulatory subtest #1

Emission Bandwidth, -21 dB Mode 6	300KHz max	204.84 KHz	205.05 KHz	205.54 KHz	204.08 KHz	PASS	Regulatory subtest #1
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Table 20 Regulatory Tests– In-band Spectral Mask – Emission Bandwidth

Impedance: 50-j60 Ohm

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Emission Bandwidth, -21 dB Wideband Mode 4(MICS)	300 kHz max	267.51 KHz	269.92 KHz	269.15 KHz	265.84 KHz	PASS	Regulatory subtest #1
Emission Bandwidth, -21 dB Narrowband Mode 2(MEDS)	100 kHz max	81.18 KHz	81.35 KHz	81.39 KHz	81.23 KHz	PASS	Regulatory subtest #1
Emission Bandwidth, -21 dB Mode 6	300KHz max	205.13 KHz	204.95 KHz	203.95 KHz	203.82 KHz	PASS	Regulatory subtest #1

Table 21 Regulatory Tests– In-band Spectral Mask – Emission Bandwidth

Impedance: 5-j0

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Emission Bandwidth, -21 dB Wideband Mode 4(MICS)	300 kHz max	268.22 KHz	266.74 KHz	266.55 KHz	266.45 KHz	PASS	Regulatory subtest #1
Emission Bandwidth, -21 dB Narrowband Mode 2(MEDS)	100 kHz max	81.56 KHz	81.27 KHz	81.26 KHz	81.45 KHz	PASS	Regulatory subtest #1
Emission Bandwidth, -21 dB Mode 6	300KHz max	204.89 KHz	204.14 KHz	204.36 KHz	202.87 KHz	PASS	Regulatory subtest #1

Table 22 Regulatory Tests– In-band Spectral Mask – Emission Bandwidth



Impedance: 5-j60

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Emission Bandwidth, -21 dB Wideband Mode 4(MICS)	300 kHz max	269.56 KHz	271.41 KHz	275.52 KHz	267.91 KHz	PASS	Regulatory subtest #1
Emission Bandwidth, -21 dB Narrowband Mode 2(MEDS)	100 kHz max	81.11 KHz	81.46 KHz	81.74 KHz	81.32 KHz	PASS	Regulatory subtest #1
Emission Bandwidth, -21 dB Mode 6	300KHz max	205.33 KHz	203.83 KHz	204.01 KHz	204.10 KHz	PASS	Regulatory subtest #1

Table 23 Regulatory Tests– In-band Spectral Mask – Emission Bandwidth

Impedance: 5-j20

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Emission Bandwidth, -21 dB Wideband Mode 4(MICS)	300 kHz max	267.3 KHz	266.24 KHz	266.84 KHz	268.48 KHz	PASS	Regulatory subtest #1
Emission Bandwidth, -21 dB Narrowband Mode 2(MEDS)	100 kHz max	81.16 KHz	81.27 KHz	81.42 KHz	81.55 KHz	PASS	Regulatory subtest #1
Emission Bandwidth, -21 dB Mode 6	300KHz max	204.79 KHz	204.38 KHz	204.69 KHz	203.25 KHz	PASS	Regulatory subtest #1

Table 24 Regulatory Tests– In-band Spectral Mask – Emission Bandwidth

Impedance: 9-j20

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Emission Bandwidth, -21 dB Wideband Mode 4(MICS)	300 kHz max	269.47 KHz	268.35 KHz	269.71 KHz	269.17 KHz	PASS	Regulatory subtest #1
Emission Bandwidth, -21 dB Narrowband Mode 2(MEDS)	100 kHz max	81.16 KHz	81.10 KHz	81.56 KHz	81.16 KHz	PASS	Regulatory subtest #1
Emission Bandwidth, -21 dB Mode 6	300KHz max	205.43 KHz	204.05 KHz	204.16 KHz	203.18 KHz	PASS	Regulatory subtest #1

Table 25 Regulatory Tests– In-band Spectral Mask – Emission Bandwidth

Conclusion: All results from TX Regulatory Emission Bandwidth tests show compliance with the specification.

### 8.5.3 Unwanted Emissions – Immediate Out-of-band and MEDS into MICS

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph:

2.3.4.6.4.1.3 (MICS immediate out-of-band),

2.3.4.6.4.2.3.1 (MEDS immediate out-of-band),

2.3.4.6.4.2.3.2 (MEDS into MICS FCC),

2.3.4.6.4.2.3.3 (MEDS into MICS ETSI)

This test has a deviation (Deviation #7) from the DVT Plan. See Section 6 DVT plan Deviations for more information.

This test has a deviation (Deviation #19) from the DVT Plan. See Section 6 DVT Plan Deviations for more information. Note that deviation #19 only specifies the need of data from missing vectors in the DVT plan. Data that aligns with all requirements in deviation #19, as well as requirements specified in ECO 093, was gathered before the deviation was approved. Data processing, review and incorporation of results into the DVT report occurred after ECO 093 and deviation #19 was approved.

Test Executive Scripts: Tx\_Sc15 through Tx\_Sc20

Impedance: 50 ohm

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Spurious Emissions, immediately out-of-band, MICS/MEDS  Tx power: -4 dBm MICS -7 dBm MEDS	-21 dB max	No spurs found above -26dB	No spurs found above -26dB	No spurs found above -26dB	No spurs found above -26dB	PASS	Regulatory subtest #11,12
MEDS into MICS (FCC), Ch11-19, 22-30  Tx power -7 to -15 dBm	-32.2 dBm max	-51.8 dBm	-50.7 dBm	-53.3 dBm	-55.0 dBm	PASS	Regulatory subtest #15,13
MEDS into MICS (FCC), Ch11-19, 22-30  Tx power -15 dBm	-52.2 dBm max	-60.8 dBm	-60.5 dBm	-61.1 dBm	-59.9 dBm	PASS	Regulatory subtest #15,13
MEDS into MICS (FCC), Ch11-19, 22-30  Tx power -20 dBm	-57.2 dBm max	-63.7 dBm	-65.3 dBm	-62.2 dBm	-64.0 dBm	PASS	Regulatory subtest #15,13  See Note (3)

MEDS into MICS (FCC), Ch20,21 Tx power -30.3 to -51.8 dBm	-32.2 dBm max	-38.1dBm	-39.8 dBm	-39.3 dBm	-39.4 dBm	PASS	Regulatory subtest #15,13  See Note (1),(2)
MEDS into MICS (FCC), Ch20,21 Tx power -51.8 dBm	-52.2 dBm max	-57.3 dBm	-60.9 dBm	-58.6 dBm	-59.8 dBm	PASS	Regulatory subtest #15,13  See Note (2)
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -7 to -15 dBm	-34.85 dBm max	-54.1 dBm	-52.8 dBm	-53.8 dBm	-53.5 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -15 dBm	-54.85 dBm max	-60.2 dBm	-59.5 dBm	-60.1 dBm	-60.4 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -20 dBm	-59.85 dBm max	-64.7 dBm	-64.2 dBm	-64.3 dBm	-64.5 dBm	PASS	Regulatory subtest #15,14  See Note (3)
MEDS into MICS (ETSI), Ch20,21 Tx power -15 to -25 dBm	-34.85 dBm max	-47.5 dBm	-47.1 dBm	-47.3 dBm	-46.6 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch20,21 Tx power -25 dBm	-54.85 dBm max	-58.1 dBm	-56.5 dBm	-57.1 dBm	-56.5 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch20,21 Tx power -30 dBm	-59.85 dBm max	-62.6dBm	-61.5 dBm	-62.0 dBm	-60.8 dBm	PASS	Regulatory subtest #15,14

Table 26 Unwanted Emissions – Immediate Out-of-band and MEDS into MICS

Impedance: 50 Ohm (2:1 VSWR)

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Spurious Emissions, immediately out-of-band, MICS/MEDS Tx power: -6.1dBm MICS -9.1dBm MEDS	-21 dB max	No spurs found above -26dB	No spurs found above -26dB	No spurs found above -26dB	No spurs found above -26dB	PASS	Regulatory subtest #11,12
MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -9.1 to -17.1 dBm	-32.2 dBm max	-51.1 dBm	-52.3 dBm	-54.7 dBm	-50.1 dBm	PASS	Regulatory subtest #15,13
MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -17.1 dBm	-52.2 dBm max	-58.4 dBm	-58.3 dBm	-61.6 dBm	-57.8 dBm	PASS	Regulatory subtest #15,13
MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -22.1 dBm	-57.2 dBm max	-64.4 dBm	-60.6 dBm	-66.1 dBm	-62.8 dBm	PASS	Regulatory subtest #15,13 See Note (3)
MEDS into MICS (FCC), Ch20,21 Tx power -32.4 to -53.9 dBm	-32.2 dBm max	-38.8 dBm	-37.8 dBm	-39.5 dBm	-37.1 dBm	PASS	Regulatory subtest #15,13 See Note (1),(2)
MEDS into MICS (FCC), Ch20,21 Tx power -53.9 dBm	-52.2 dBm max	-57.2 dBm	-59.0 dBm	-58.9 dBm	-58.8 dBm	PASS	Regulatory subtest #15,13 See Note (2)
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -9.1 to -17.1 dBm	-34.85 dBm max	-53.6 dBm	-53.1 dBm	-53.3 dBm	-53.4 dBm	PASS	Regulatory subtest #15,14

MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -17.1 dBm	-54.85 dBm max	-60.4 dBm	-59.8 dBm	-60.3 dBm	-60.4 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -22.1 dBm	-59.85 dBm max	-64.9 dBm	-64.2 dBm	-64.7 dBm	-64.3 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch20,21 Tx power -17.1 to -25 dBm	-34.85 dBm max	-48 dBm	-46.8 dBm	-47.4 dBm	-46.4 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch20,21 Tx power -27.1 dBm	-54.85 dBm max	-57.9 dBm	-57.3 dBm	-57.1 dBm	-56.2 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch20,21 Tx power -32.1 dBm	-59.85 dBm max	-62.6 dBm	-61.6 dBm	-61.9 dBm	-60.9 dBm	PASS	Regulatory subtest #15,14

Table 27 Unwanted Emissions – Immediate Out-of-band and MEDS into MICS

Impedance: 50-j60

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Spurious Emissions, immediately out-of-band, MICS/MEDS Tx power: -4.6dBm MICS -7.6dBm MEDS	-21 dB max	No spurs found above -26dB	No spurs found above -26dB	No spurs found above -26dB	No spurs found above -26dB	PASS	Regulatory subtest #11,12
MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -7.6 to -15.6 dBm	-32.2 dBm max	-53.0 dBm	-52.1 dBm	-54.1 dBm	-49.7 dBm	PASS	Regulatory subtest #15,13

MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -15.6 dBm	-52.2 dBm max	-62.2 dBm	-59.6 dBm	-60.7 dBm	-61.8 dBm	PASS	Regulatory subtest #15,13
MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -20.6 dBm	-57.2 dBm max	-67.1 dBm	-63.9 dBm	-66.4 dBm	-62.7 dBm	PASS	Regulatory subtest #15,13  See Note (3)
MEDS into MICS (FCC), Ch20,21 Tx power -30.9 to -52.4 dBm	-32.2 dBm max	-40.0 dBm	-40.0 dBm	-38.6 dBm	-37.9 dBm	PASS	Regulatory subtest #15,13  See Note (1),(2)
MEDS into MICS (FCC), Ch20,21 Tx power -52.4 dBm	-52.2 dBm max	-61.3 dBm	-59.2 dBm	-59.3 dBm	-58.9 dBm	PASS	Regulatory subtest #15,13  See Note (2)
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -7.6 to -15.6 dBm	-34.85 dBm max	-54.7 dBm	-53.9 dBm	-54.0 dBm	-54.1 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -15.6 dBm	-54.85 dBm max	-61.2 dBm	-60.3 dBm	-60.3 dBm	-60.5 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -20.6 dBm	-59.85 dBm max	-65.5 dBm	-64.4 dBm	-64.7 dBm	-64.8 dBm	PASS	Regulatory subtest #15,14  See Note (3)
MEDS into MICS (ETSI), Ch20,21 Tx power -15.6 to -25.6 dBm	-34.85 dBm max	-47.8 dBm	-47.4 dBm	-47.5 dBm	-46.9 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch20,21 Tx power -25.6 dBm	-54.85 dBm max	-58.5 dBm	-56.9 dBm	-57.0 dBm	-56.5 dBm	PASS	Regulatory subtest #15,14

MEDS into MICS (ETSI), Ch20,21 Tx power -30.6 dBm	-59.85 dBm max	-63.0 dBm	-61.9 dBm	-61.9 dBm	-61.3 dBm	PASS	Regulatory subtest #15,14
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Table 28 Unwanted Emissions – Immediate Out-of-band and MEDS into MICS

Impedance: 5+j0

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Spurious Emissions, immediately out-of-band, MICS/MEDS Tx power: -5.9dBm MICS -8.9dBm MEDS	-21 dB max	No spurs found above -26dB	No spurs found above -26dB	No spurs found above -26dB	No spurs found above -26dB	PASS	Regulatory subtest #11,12
MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -8.9 to -16.9 dBm	-32.2 dBm max	-53.4 dBm	-53.3 dBm	-53.8 dBm	-55.6 dBm	PASS	Regulatory subtest #15,13
MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -16.9 dBm	-52.2 dBm max	-62.0 dBm	-62.8 dBm	-62.6 dBm	-63.8 dBm	PASS	Regulatory subtest #15,13
MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -21.9 dBm	-57.2 dBm max	-64.9 dBm	-63.1 dBm	-64.6 dBm	-64.9 dBm	PASS	Regulatory subtest #15,13 See Note (3)
MEDS into MICS (FCC), Ch20,21 Tx power -32.2 to -53.7 dBm	-32.2 dBm max	-39.2 dBm	-40.7 dBm	-40.0 dBm	-40.2 dBm	PASS	Regulatory subtest #15,13 See Note (1),(2)
MEDS into MICS (FCC), Ch20,21 Tx power -53.7 dBm	-52.2 dBm max	-60.8 dBm	-62.3 dBm	-60.4 dBm	-59.6 dBm	PASS	Regulatory subtest #15,13 See Note (2)



MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -8.9 to -16.9 dBm	-34.85 dBm max	-55.6 dBm	-54.9 dBm	-54.7 dBm	-55.1 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -16.9 dBm	-54.85 dBm max	-61.8 dBm	-61.4 dBm	-61.4 dBm	-61.6 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -21.9 dBm	-59.85 dBm max	-65.9 dBm	-65.8 dBm	-65.7 dBm	-65.5 dBm	PASS	Regulatory subtest #15,14 See Note (3)
MEDS into MICS (ETSI), Ch20,21 Tx power -16.9 to -26.9 dBm	-34.85 dBm max	-48.2 dBm	-48.1 dBm	-48.2 dBm	-47.9 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch20,21 Tx power -26.9 dBm	-54.85 dBm max	-58.5 dBm	-57.5 dBm	-57.9 dBm	-56.7 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch20,21 Tx power -31.9 dBm	-59.85 dBm max	-63.4 dBm	-62.4 dBm	-62.5 dBm	-62.6 dBm	PASS	Regulatory subtest #15,14

Table 29 Unwanted Emissions – Immediate Out-of-band and MEDS into MICS

Impedance: 5-j60

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Spurious Emissions, immediately out-of-band, MICS/MEDS Tx power: -8 dBm MICS -11 dBm MEDS	-21 dB max	No spurs found above -26dB	No spurs found above -26dB	No spurs found above -26dB	No spurs found above -26dB	PASS	Regulatory subtest #11,12

MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -11 to -19 dBm	-32.2 dBm max	-57.1 dBm	-55.8 dBm	-57.9 dBm	-54.8 dBm	PASS	Regulatory subtest #15,13
MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -19 dBm	-52.2 dBm max	-62.7 dBm	-61.0 dBm	-60.7 dBm	-63.8 dBm	PASS	Regulatory subtest #15,13
MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -24 dBm	-57.2 dBm max	-68.1 dBm	-65.6 dBm	-68.1 dBm	-65.8 dBm	PASS	Regulatory subtest #15,13  See Note (3)
MEDS into MICS (FCC), Ch20,21 Tx power -34.3 to -55.8 dBm	-32.2 dBm max	-41.8 dBm	-41.4 dBm	-42.5 dBm	-39.4 dBm	PASS	Regulatory subtest #15,13  See Note (1),(2)
MEDS into MICS (FCC), Ch20,21 Tx power -55.8 dBm	-52.2 dBm max	-62.6 dBm	-60.1 dBm	-62.5 dBm	-61.8 dBm	PASS	Regulatory subtest #15,13  See Note (2)
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -11 to -19 dBm	-34.85 dBm max	-57.2 dBm	-57.0 dBm	-56.6 dBm	-56.0 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -19 dBm	-54.85 dBm max	-63.1 dBm	-62.4 dBm	-62.6 dBm	-63.0 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -24 dBm	-59.85 dBm max	-67.6 dBm	-66.9 dBm	-67.1 dBm	-66.3 dBm	PASS	Regulatory subtest #15,14  See Note (3)
MEDS into MICS (ETSI), Ch20,21 Tx power -19 to -29 dBm	-34.85 dBm max	-50.2 dBm	-48.7 dBm	-49.8 dBm	-48.5 dBm	PASS	Regulatory subtest #15,14

MEDS into MICS (ETSI), Ch20,21 Tx power -29 dBm	-54.85 dBm max	-60.7 dBm	-59.0 dBm	-60.2 dBm	-58.9 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch20,21 Tx power -34 dBm	-59.85 dBm max	-64.9 dBm	-63.9 dBm	-64.4 dBm	-61.7 dBm	PASS	Regulatory subtest #15,14

Table 30 Unwanted Emissions – Immediate Out-of-band and MEDS into MICS

Impedance: 5-j20

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Spurious Emissions, immediately out-of-band, MICS/MEDS Tx power: -6.8 dBm MICS -9.8dBm MEDS	-21 dB max	No spurs found above -26dB	No spurs found above -26dB	No spurs found above -26dB	No spurs found above -26dB	PASS	Regulatory subtest #11,12
MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -9.8 to -17.8 dBm	-32.2 dBm max	-54.4 dBm	-54.3 dBm	-55.0 dBm	-51.4 dBm	PASS	Regulatory subtest #15,13
MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -17.8 dBm	-52.2 dBm max	-62.0 dBm	-60.3 dBm	-61.1 dBm	-62.2 dBm	PASS	Regulatory subtest #15,13
MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -22.8 dBm	-57.2 dBm max	-66.7 dBm	-64.2 dBm	-66.6 dBm	-64.2 dBm	PASS	Regulatory subtest #15,13 See Note (3)
MEDS into MICS (FCC), Ch20,21 Tx power -33.1 to -54.6 dBm	-32.2 dBm max	-41.2 dBm	-41.0 dBm	-40.4 dBm	-39.8 dBm	PASS	Regulatory subtest #15,13 See Note (1),(2)

MEDS into MICS (FCC), Ch20,21 Tx power -54.6 dBm	-52.2 dBm max	-60.8 dBm	-61.0 dBm	-62.0 dBm	-60.7 dBm	PASS	Regulatory subtest #15,13  See Note (2)
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -9.8 to -17.8 dBm	-34.85 dBm max	-56.5 dBm	-55.9 dBm	-56.0 dBm	-56.1 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -17.8 dBm	-54.85 dBm max	-62.9 dBm	-62.7 dBm	-62.6 dBm	-63.0 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -22.8 dBm	-59.85 dBm max	-67.0 dBm	-66.5 dBm	-66.9 dBm	-66.8 dBm	PASS	Regulatory subtest #15,14  See Note (3)
MEDS into MICS (ETSI), Ch20,21 Tx power -17.8 to -27.8 dBm	-34.85 dBm max	-49.9 dBm	-49.1 dBm	-49.3 dBm	-49.3 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch20,21 Tx power -27.8 dBm	-54.85 dBm max	-60.1 dBm	-59.0 dBm	-59.0 dBm	-59.0 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch20,21 Tx power -32.8 dBm	-59.85 dBm max	-64.4 dBm	-63.8 dBm	-64.1 dBm	-63.4 dBm	PASS	Regulatory subtest #15,14

Table 31 Unwanted Emissions – Immediate Out-of-band and MEDS into MICS

Impedance: 9-j20

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Spurious Emissions, immediately out-of-band, MICS/MEDS Tx power: -5.7 dBm MICS -9.6dBm MEDS	-21 dB max	No spurs found above -26dB	No spurs found above -26dB	No spurs found above -26dB	No spurs found above -26dB	PASS	Regulatory subtest #11,12
MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -9.6 to -17.6 dBm	-32.2 dBm max	-52.7 dBm	-50.4 dBm	-57.0 dBm	-56.4 dBm	PASS	Regulatory subtest #15,13
MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -17.6dBm	-52.2 dBm max	-60.1 dBm	-63.1 dBm	-61.9 dBm	-63.0 dBm	PASS	Regulatory subtest #15,13
MEDS into MICS (FCC), Ch11-19, 22-30 Tx power -21.6 dBm	-57.2 dBm max	-67.1 dBm	-67.8 dBm	-65.0 dBm	-67.2 dBm	PASS	Regulatory subtest #15,13  See Note (3)
MEDS into MICS (FCC), Ch20,21 Tx power -32 to -53.7dBm	-32.2 dBm max	-40.0 dBm	-39.8 dBm	-40.8 dBm	-38.8 dBm	PASS	Regulatory subtest #15,13  See Note (1),(2)
MEDS into MICS (FCC), Ch20,21 Tx power -53.7 dBm	-52.2 dBm max	-62.6 dBm	-61.0 dBm	-62.9 dBm	-60.0 dBm	PASS	Regulatory subtest #15,13  See Note (2)
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -9.6 to -17.6 dBm	-34.85 dBm max	-56.3 dBm	-55.2 dBm	-55.7 dBm	-55.8 dBm	PASS	Regulatory subtest #15,14

MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -17.6dBm	-54.85 dBm max	-62.3 dBm	-62.0 dBm	-62.1 dBm	-62.1 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch11-19, 22-30 Tx power -21.7dBm	-59.85 dBm max	-66.7 dBm	-66.5 dBm	-66.4 dBm	-66.0 dBm	PASS	Regulatory subtest #15,14  See Note (3)
MEDS into MICS (ETSI), Ch20,21 Tx power -17.6 to -27.6dBm	-34.85 dBm max	-49.4 dBm	-48.0 dBm	-49.0 dBm	-47.9 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch20,21 Tx power -27.6dBm	-54.85 dBm max	-59.2 dBm	-58.2 dBm	-58.7 dBm	-57.4 dBm	PASS	Regulatory subtest #15,14
MEDS into MICS (ETSI), Ch20,21 Tx power -31.7dBm	-59.85 dBm max	-64.2 dBm	-63.2 dBm	-63.4 dBm	-62.3 dBm	PASS	Regulatory subtest #15,14

Table 32 Unwanted Emissions – Immediate Out-of-band and MEDS into MICS

- Notes: (1): Tests requiring a power level of -30.3 dBm plus relaxations depending on impedance are tested with a power level of -30.0 dBm plus relaxations depending on impedance.  
(2): Tests requiring a power level of -51.8 dBm plus relaxations depending on impedance are tested with a power level of -52.0 dBm plus relaxations depending on impedance.  
(3): Tests requiring a power level of -22.0 dBm plus relaxations depending on impedance are tested with a power level of -19.4dBm plus relaxations depending on impedance.

**Conclusion: All results from Unwanted Emissions – Immediate Out-of-band and MEDS into MICS tests show compliance with the specification.**

### 8.5.4 Unwanted Emissions Including Harmonics

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph:

2.3.4.6.4.1.4 (MICS) and sub-paragraphs,

2.3.4.6.4.2.4 (MEDS) and sub-paragraphs

Test Executive Scripts: Tx\_Sc15 through Tx\_Sc20

This test has a deviation (Deviation #19) from the DVT Plan. See Section 6 DVT Plan Deviations for more information. Note that deviation #19 only specifies the need of data from missing vectors in the DVT plan. Data that aligns with all requirements in deviation #19, as well as requirements specified in ECO 093, was gathered before the deviation was approved. Data processing, review and incorporation of results into the DVT report occurred after ECO 093 and deviation #19 was approved.

Impedance: 50 ohms

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Implant Mode (FCC) MICS, Power Level -4 to -12 dBm	-32.2 dBm max	-54.6 dBm	-51.5 dBm	-54.9 dBm	-55.3 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.1 Regulatory subtest 2-8, 16, 17-23
Implant Mode (FCC) MEDS ch11-20,21-29. Power Level -7 to -15 dBm	-32.2 dBm max	-53.8 dBm	-50.9 dBm	-55.2 dBm	-55.1 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.1 Regulatory subtest 2-5, 16, 17-23
Implant Mode (FCC) MEDS ch 30 Power Level -7.7 to -15.7 dBm	-32.2 dBm max	-37.3 dBm	-37.7 dBm	-38.0 dBm	-37.6 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.1 Regulatory subtest 2-5, 16, 17-23 See Note (7)
Implant Mode (ETSI) MICS, Power Level -4 to -12 dBm	-10.85 dBm max or equal to average fundamental output power (whichever is less)	-30.9 dBm	-33.2 dBm	-29.7 dBm	-33.7 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.2 Regulatory subtest 2-5, 9-10, 16, 17-23

Implant Mode (ETSI) MEDS, Power Level -7 to -15 dBm	-10.85 dBm max or equal to peak fundamental output power (whichever is less)	-38.9 dBm	-38.8 dBm	-38.3 dBm	-38.6 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.2 Regulatory subtest 2-5, 9-10, 16, 17-23
External Mode (MICS) Power Level -12 dBm and below. Frequency: A: 25-30MHz B: 30-88MHz C: 88-216MHz D: 216-401MHz E: 406-802MHz F: 812-960MHz G: 960MHz – 4.06GHz	A: -35.9 B: -63.2 C: -59.7 D: -57.2 E: -57.2 F: -57.2 G: -49.2 dBm max	A.-76.3 B.-73.2 C.-73.2 D.-64.9 E.-66.0 F.-73.2 G.-55.0 dBm	A.-77.1 B.-73.5 C.-73.5 D.-64.4 E.-65.2 F.-73.5 G.-55.6 dBm	A.-76.0 B.-73.6 C.-73.6 D.-64.0 E.-65.3 F.-72.4 G.-55.2 dBm	A.-77.0 B.-73.9 C.-73.9 D.-65.2 E.-66.4 F.-73.5 G.-55.5 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.3 Regulatory subtests A: subtest 2 B: subtest 3 C: subtest 3 D: subtest 3-4 E: subtest 18-19 F: subtest 21 G: subtest 21-23
External Mode (MEDS) Power Level -15 dBm and below. Frequency: A: 25-30MHz B: 30-88MHz C: 88-216MHz D: 216-400MHz E: 407-800MHz F: 814-960MHz G: 960MHz – 4.06GHz	A: -35.9 B: -63.2 C: -59.7 D: -57.2 E: -57.2 F: -57.2 G: -49.2 dBm max	A.-76.3 B.-72.7 C.-72.7 D.-65.5 E.-65.5 F.-72.9 G.-54.7 dBm	A.-76.0 B.-73.4 C.-73.4 D.-65.4 E.-64.8 F.-73.2 G.-55.4 dBm	A.-76.2 B.-73.4 C.-73.4 D.-64.8 E.-64.7 F.-72.3 G.-55.3 dBm	A.-76.5 B.-74.1 C.-74.1 D.-65.6 E.-66.8 F.-72.7 G.-55.4 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.3 Regulatory subtests A: subtest 2 B: subtest 3 C: subtest 3 D: subtest 3-4 E: subtest 18-19 F: subtest 21 G: subtest 21-23
External Mode (FCC) outside MICS band edges Power Levels: A: -12 dBm B: -17 dBm	A: -52.2 B: -57.2 dBm max	A.-63.0 dBm B.met at -12dBm	A.-61.6 dBm B.met at -12 dBm	A.-61.8 dBm B.met at -12 dBm	A.-62.7 dBm B.met at -12 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.4 Regulatory subtest 5-8, 17 For B see Note (1)



<b>External Mode (FCC) MICS Harmonics</b> <b>Power Levels:</b> <b>A: -12 dBm</b> <b>B: -17 dBm</b>	<b>A: -44.2</b> <b>B: -49.2</b> <b>dBm max</b>	<b>A. -76.4</b> <b>dBm</b> <b>B. met at</b> <b>-12dBm</b>	<b>A. -77.5</b> <b>dBm</b> <b>B. met at</b> <b>-12dBm</b>	<b>A. -76.6</b> <b>dBm</b> <b>B. met at</b> <b>-12dBm</b>	<b>A. -77.5</b> <b>dBm</b> <b>B. met at</b> <b>-12dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.4 Regulatory subtest 20 For B see Note (2)
<b>External Mode (FCC) outside MEDS band edges and Harmonics</b> <b>All MEDS channels except ch 30.</b> <b>Power Levels:</b> <b>A: -15 dBm</b> <b>B: -20 dBm</b>	<b>A: -52.2</b> <b>B: -57.2</b> <b>dBm max</b>	<b>A. -60.6</b> <b>dBm</b> <b>B. -64.8</b> <b>dBm</b>	<b>A. -61.3</b> <b>dBm</b> <b>B. -64.6</b> <b>dBm</b>	<b>A. -62.0</b> <b>dBm</b> <b>B. -65.3</b> <b>dBm</b>	<b>A. -58.6</b> <b>dBm</b> <b>B. -64.1</b> <b>dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.2.4.4 Regulatory subtest 5-8, 17,20  For B see Note (5)
<b>External Mode (FCC) outside MEDS band edges and Harmonics ch 30 only</b> <b>Power Level:</b> <b>A: -27.1 dBm</b> <b>B: -29.1 dBm</b>	<b>A. -52.2</b> <b>B. -53.7</b> <b>dBm max</b>	<b>A. -62.6</b> <b>dBm</b> <b>B. met at</b> <b>-27.1dBm</b>	<b>A. -59.6</b> <b>dBm</b> <b>B. met at</b> <b>-27.1dBm</b>	<b>A. -60.9</b> <b>dBm</b> <b>B. met at</b> <b>-27.1dBm</b>	<b>A. -57.8</b> <b>dBm</b> <b>B. met at</b> <b>-27.1dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.2.4.4 Regulatory subtest 5-8, 17,20  For B see Note (6)
<b>External Mode (ETSI) outside MICS band edges</b> <b>Power Levels:</b> <b>A: -12 dBm</b> <b>B: -17 dBm</b>	<b>A: -30.85</b> <b>B: -35.85</b> <b>dBm max</b>	<b>A. -48.2</b> <b>dBm</b> <b>B. met at</b> <b>-12dBm</b>	<b>A. -48.2</b> <b>dBm</b> <b>B. met at</b> <b>-12dBm</b>	<b>A. -48.0</b> <b>dBm</b> <b>B. met at</b> <b>-12dBm</b>	<b>A. -48.0</b> <b>dBm</b> <b>B. met at</b> <b>-12dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.5 Regulatory subtest 5, 9, 10, 17 For B see Note (3)
<b>External Mode (ETSI) MICS Harmonics</b> <b>Power Levels:</b> <b>A: -12 dBm</b> <b>B: -17 dBm</b>	<b>A: -22.85</b> <b>B: -27.85</b> <b>dBm max</b>	<b>A. -76.4</b> <b>dBm</b> <b>B. met at</b> <b>-12dBm</b>	<b>A. -77.5</b> <b>dBm</b> <b>B. met at</b> <b>-12dBm</b>	<b>A. -76.6</b> <b>dBm</b> <b>B. met at</b> <b>-12dBm</b>	<b>A. -77.5</b> <b>dBm</b> <b>B. met at</b> <b>-12dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.5 Regulatory subtest 20 For B see Note (4)

External Mode (ETSI) outside MEDS band edges and Harmonics  All MEDS channels  Power Levels: A: -15 dBm B: -20 dBm	A: -30.85 dBm max B: -35.85 dBm max	A. -49.6 dBm B. -65.1 dBm	A. -48.8 dBm B. -64.6 dBm	A. -48.6 dBm B. -64.8 dBm	A. -48.6 dBm B. -64.6 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.5  Regulatory subtest 5, 9,10, 17, 20  For B see Note (5)
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Table 33 Unwanted Emissions Including Harmonics

Impedance: 50 Ohms (2:1 VSWR)

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Implant Mode (FCC) MICS,  Power Level -6.1 to -14.1 dBm	-32.2 dBm max	-47.7 dBm	-51.3 dBm	-47.6 dBm	-50.9 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.1  Regulatory subtest 2-8,16, 17-23
Implant Mode (FCC) MEDS ch11-20,21-29.  Power Level -9.1 to -17.1 dBm	-32.2 dBm max	-52.4 dBm	-49.6 dBm	-50.3 dBm	-51.9 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.1  Regulatory subtest 2-5, 16, 17-23
Implant Mode (FCC) MEDS ch 30  Power Level -9.8 to -17.8 dBm	-32.2 dBm max	-38.6 dBm	-36.6 dBm	-36.4 dBm	-37.0 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.1  Regulatory subtest 2-5, 16, 17-23 See Note (7)
Implant Mode (ETSI) MICS,  Power Level -6.1 to -14.1 dBm	-10.85 dBm max or equal to average fundamental output power (whichever is less)	-27.6 dBm	-28.0 dBm	-26.4 dBm	-28.0 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.2  Regulatory subtest 2-5, 9-10, 16, 17-23

<b>Implant Mode (ETSI) MEDS, Power Level -9.1 to -17.1 dBm</b>	<b>-10.85 dBm max or equal to peak fundamental output power (whichever is less)</b>	-36.3 dBm	-37.9 dBm	-35.8 dBm	-37.2 dBm	<b>PASS</b>	A17245 section: 2.3.4.6.4.2.4.2 Regulatory subtest 2-5, 9-10, 16, 17-23
<b>External Mode (MICS) Power Level -14.1 dBm and below. Frequency:</b> <b>A: 25-30MHz</b> <b>B: 30-88MHz</b> <b>C: 88-216MHz</b> <b>D: 216-401MHz</b> <b>E: 406-802MHz</b> <b>F: 812-960MHz</b> <b>G: 960MHz – 4.06GHz</b>	<b>A: -35.9</b> <b>B: -63.2</b> <b>C: -59.7</b> <b>D: -57.2</b> <b>E: -57.2</b> <b>F: -57.2</b> <b>G: -49.2</b> <b>dBm</b> <b>max</b>	A.-76.7 B.-73.1 C.-73.1 D.-65.4 E.-66.8 F.-72.4 G.-54.4 dBm	A.-75.7 B.-73.8 C.-73.8 D.-64.4 E.-65.9 F.-73.1 G.-55.6 dBm	A.-76.2 B.-73.1 C.-73.1 D.-64.7 E.-64.9 F.-72.4 G.-55.0 dBm	A.-76.9 B.-74.3 C.-74.3 D.-65.4 E.-66.5 F.-73.4 G.-55.6 dBm	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.3 Regulatory subtests A: subtest 2 B: subtest 3 C: subtest 3 D: subtest 3-4 E: subtest 18-19 F: subtest 21 G: subtest 21-23
<b>External Mode (MEDS) Power Level -17.1 dBm and below. Frequency:</b> <b>A: 25-30MHz</b> <b>B: 30-88MHz</b> <b>C: 88-216MHz</b> <b>D: 216-400MHz</b> <b>E: 407-800MHz</b> <b>F: 814-960MHz</b> <b>G: 960MHz – 4.06GHz</b>	<b>A: -35.9</b> <b>B: -63.2</b> <b>C: -59.7</b> <b>D: -57.2</b> <b>E: -57.2</b> <b>F: -57.2</b> <b>G: -49.2</b> <b>dBm</b> <b>max</b>	A.-76.3 B.-73.2 C.-73.2 D.-64.0 E.-64.9 F.-72.9 G.-54.7 dBm	A.-75.7 B.-73.9 C.-73.9 D.-64.6 E.-65.8 F.-72.7 G.-54.4 dBm	A.-76.1 B.-73.1 C.-73.1 D.-66.3 E.-66.5 F.-72.4 G.-55.0 dBm	A.-76.2 B.-73.4 C.-73.4 D.-64.5 E.-67.3 F.-72.5 G.-54.5 dBm	<b>PASS</b>	A17245 section: 2.3.4.6.4.2.4.3 Regulatory subtests A: subtest 2 B: subtest 3 C: subtest 3 D: subtest 3-4 E: subtest 18-19 F: subtest 21 G: subtest 21-23
<b>External Mode (FCC) outside MICS band edges Power Levels:</b> <b>A: -14.1 dBm</b> <b>B: -19.1 dBm</b>	<b>A: -52.2</b> <b>B: -57.2</b> <b>dBm max</b>	A.-62.4 dBm B. met at -14.1dBm	A.-62.0 dBm B. met at -14.1dBm	A.-63.0 dBm B. met at -14.1dBm	A.-62.4 dBm B. met at -14.1dBm	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.4 Regulatory subtest 5-8, 17 For B see Note (1)

<b>External Mode (FCC) MICS Harmonics</b> <b>Power Levels:</b> <b>A: -14.1 dBm</b> <b>B: -19.1 dBm</b>	<b>A: -44.2</b> <b>B: -49.2</b> <b>dBm max</b>	<b>A.-75.0</b> <b>dBm</b>  <b>B. met at</b> <b>-14.1dBm</b>	<b>A.-75.8</b> <b>dBm</b>  <b>B. met at</b> <b>-14.1dBm</b>	<b>A.-74.9</b> <b>dBm</b>  <b>B. met at</b> <b>-14.1dBm</b>	<b>A.-75.9</b> <b>dBm</b>  <b>B. met at</b> <b>-14.1dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.4 Regulatory subtest 20 For B see Note (2)
<b>External Mode (FCC) outside MEDS band edges and Harmonics</b> <b>All MEDS channels except ch 30.</b> <b>Power Levels:</b> <b>A: -17.1 dBm</b> <b>B: -22.1 dBm</b>	<b>A: -52.2</b> <b>B: -57.2</b> <b>dBm max</b>	<b>A.-60.6</b> <b>B.-65.7</b> <b>dBm</b>	<b>A.-60.5</b> <b>B.-64.4</b> <b>dBm</b>	<b>A.-61</b> <b>B.-66.1</b> <b>dBm</b>	<b>A.-62.5</b> <b>B.-64.0</b> <b>dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.2.4.4 Regulatory subtest 5-8, 17,20  For B see Note (5)
<b>External Mode (FCC) outside MEDS band edges and Harmonics ch 30 only</b> <b>Power Levels:</b> <b>A: -29.2 dBm</b> <b>B: -31.2 dBm</b>	<b>A: -52.2</b> <b>B: -53.7</b> <b>dBm max</b>	<b>A.-59.2</b> <b>dBm</b>  <b>B.met at</b> <b>-29.2dBm</b>	<b>-60.9</b> <b>dBm</b>  <b>B.met at</b> <b>-29.2dBm</b>	<b>-60.4</b> <b>dBm</b>  <b>B.met at</b> <b>-29.2dBm</b>	<b>-58.1</b> <b>dBm</b>  <b>B.met at</b> <b>-29.2dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.2.4.4 Regulatory subtest 5-8, 17,20  For B see Note (6)
<b>External Mode (ETSI) outside MICS band edges</b> <b>Power Levels:</b> <b>A: -14.1 dBm</b> <b>B: -19.1 dBm</b>	<b>A: -30.85</b> <b>B: -35.85</b> <b>dBm max</b>	<b>A.-47.2</b> <b>dBm</b>  <b>B. met at</b> <b>-14.1dBm</b>	<b>A.-47.2</b> <b>dBm</b>  <b>B. met at -</b> <b>14.1dBm</b>	<b>A.-47.1</b> <b>dBm</b>  <b>B. met at -</b> <b>14.1dBm</b>	<b>A.-47.1</b> <b>dBm</b>  <b>B. met at -</b> <b>14.1dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.5 Regulatory subtest 5, 9, 10, 17 For B see Note (3)
<b>External Mode (ETSI) MICS Harmonics</b> <b>Power Levels:</b> <b>A: -14.1 dBm</b> <b>B: -19.1 dBm</b>	<b>A: -22.85</b> <b>B: -27.85</b> <b>dBm max</b>	<b>A.-75.0</b> <b>dBm</b>  <b>B. met at</b> <b>-14.1dBm</b>	<b>A.-75.8</b> <b>dBm</b>  <b>B. met at -</b> <b>14.1dBm</b>	<b>A.-74.9</b> <b>dBm</b>  <b>B. met at -</b> <b>14.1dBm</b>	<b>A.-75.9</b> <b>dBm</b>  <b>B. met at -</b> <b>14.1dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.5 Regulatory subtest 20 For B see Note (4)

External Mode (ETSI) outside MEDS band edges and Harmonics  All MEDS channels  Power Levels: A: -17.1 dBm B: -22.1 dBm	A: -30.85	A.-49.2	A.-48.7	A.-48.2	A.-47.9	PASS	A17245 section: 2.3.4.6.4.2.4.5  Regulatory subtest 5, 9,10, 17, 20  For B see Note (5)
	B: -35.85 dBm max	B.-54.2 dBm	B.-52.6 dBm	B.-52.9 dBm	B.-52.5 dBm		

Table 34 Unwanted Emissions Including Harmonics

Impedance: 50-j60

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Implant Mode (FCC) MICS,  Power Level -4.6 to -12.6 dBm	-32.2 dBm max	-55.1 dBm	-53.1 dBm	-51.8 dBm	-50.9 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.1  Regulatory subtest 2-8,16, 17-23
Implant Mode (FCC) MEDS ch11-20,21-29.  Power Level -7.6 to -15.6 dBm	-32.2 dBm max	-54.5 dBm	-53.6 dBm	-54.8 dBm	-54.9 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.1  Regulatory subtest 2-5, 16, 17-23
Implant Mode (FCC) MEDS ch 30  Power Level -8.3 to -16.3 dBm	-32.2 dBm max	-37.0 dBm	-39.2 dBm	-37.5 dBm	-38.7 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.1  Regulatory subtest 2-5, 16, 17-23  See Note (7)
Implant Mode (ETSI) MICS,  Power Level -4.6 to -12.6 dBm	-10.85 dBm max or equal to average fundamental output power (whichever is less)	-30.7 dBm	-29.7 dBm	-29.2 dBm	-29.5 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.2  Regulatory subtest 2-5, 9-10, 16, 17-23

Implant Mode (ETSI) MEDS, Power Level -7.6 to -15.6 dBm	-10.85 dBm max or equal to peak fundamental output power (whichever is less)	-38.8 dBm	-37.7 dBm	-38.2 dBm	-38.0 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.2 Regulatory subtest 2-5, 9-10, 16, 17-23
External Mode (MICS) Power Level -12.6 dBm and below. Frequency: A: 25-30MHz B: 30-88MHz C: 88-216MHz D: 216-401MHz E: 406-802MHz F: 812-960MHz G: 960MHz – 4.06GHz	A: -35.9 B: -63.2 C: -59.7 D: -57.2 E: -57.2 F: -57.2 G: -49.2 dBm max	A.-76.2 B.-72.2 C.-72.2 D.-64.8 E.-66.7 F.-73.0 G.-55.4 dBm	A.-76.8 B.-74.1 C.-74.1 D.-65.2 E.-66.5 F.-73.4 G.-55.7 dBm	A.-75.8 B.-73.3 C.-73.3 D.-64.8 E.-65.9 F.-72.9 G.-55.5 dBm	A.-76.7 B.-73.6 C.-73.6 D.-65.4 E.-66.4 F.-73.1 G.-55.7 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.3 Regulatory subtests A: subtest 2 B: subtest 3 C: subtest 3 D: subtest 3-4 E: subtest 18-19 F: subtest 21 G: subtest 21-23
External Mode (MEDS) Power Level -15.6 dBm and below. Frequency: A: 25-30MHz B: 30-88MHz C: 88-216MHz D: 216-400MHz E: 407-800MHz F: 814-960MHz G: 960MHz – 4.06GHz	A: -35.9 B: -63.2 C: -59.7 D: -57.2 E: -57.2 F: -57.2 G: -49.2 dBm max	A.-75.9 B.-72.7 C.-72.7 D.-66.3 E.-66.8 F.-72.7 G.-54.8 dBm	A.-76.4 B.-73.4 C.-73.4 D.-64.7 E.-66.5 F.-73.0 G.-55.2 dBm	A.-75.9 B.-72.3 C.-72.3 D.-65.9 E.-66.1 F.-72.6 G.-54.7 dBm	A.-75.8 B.-73.2 C.-73.2 D.-65.0 E.-67.1 F.-72.4 G.-55.6 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.3 Regulatory subtests A: subtest 2 B: subtest 3 C: subtest 3 D: subtest 3-4 E: subtest 18-19 F: subtest 21 G: subtest 21-23
External Mode (FCC) outside MICS band edges Power Levels: A: -12.6 dBm B: -17.6 dBm	A: -52.2 B: -57.2 dBm max	A.-62.5 dBm B.met at -12.6dBm	A.-62.6 dBm B.met at -12.6dBm	A.-62.9 dBm B.met at -12.6dBm	A.-63.1 dBm B.met at -12.6dBm	PASS	A17245 section: 2.3.4.6.4.1.4.4 Regulatory subtest 5-8, 17 For B see Note (1)

<b>External Mode (FCC) MICS Harmonics</b> <b>Power Levels:</b> <b>A: -12.6 dBm</b> <b>B: -17.6 dBm</b>	<b>A: -44.2</b> <b>B: -49.2</b> <b>dBm max</b>	<b>A.-75.9</b> <b>dBm</b> <b>B.met at</b> <b>-12.6dBm</b>	<b>A.-73.0</b> <b>dBm</b> <b>B.met at</b> <b>-12.6dBm</b>	<b>A.-73.6</b> <b>dBm</b> <b>B.met at</b> <b>-12.6dBm</b>	<b>A.-72.7</b> <b>dBm</b> <b>B.met at</b> <b>-12.6dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.4 Regulatory subtest 20 For B see Note (2)
<b>External Mode (FCC) outside MEDS band edges and Harmonics</b> <b>All MEDS channels except ch 30.</b> <b>Power Levels:</b> <b>A: -15.6 dBm</b> <b>B: -20.6 dBm</b>	<b>A: -52.2</b> <b>B: -57.2</b> <b>dBm max</b>	<b>A.-61.9</b> <b>dBm</b> <b>B.-66.5</b> <b>dBm</b>	<b>A.-63.1</b> <b>dBm</b> <b>B.-65.6</b> <b>dBm</b>	<b>A.-61.5</b> <b>dBm</b> <b>B.-66.2</b> <b>dBm</b>	<b>A.-61.4</b> <b>dBm</b> <b>B.-65.6</b> <b>dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.2.4.4 Regulatory subtest 5-8, 17,20  For B see Note (5)
<b>External Mode (FCC) outside MEDS band edges and Harmonics ch 30 only</b> <b>Power Levels:</b> <b>A: -27.7 dBm</b> <b>B: -29.7 dBm</b>	<b>A.-52.2</b> <b>B.-53.7</b> <b>dBm max</b>	<b>A.-62.7</b> <b>dBm</b> <b>B.met at</b> <b>-27.7dBm</b>	<b>A.-60.6</b> <b>dBm</b> <b>B.met at</b> <b>-27.7dBm</b>	<b>A.-61.9</b> <b>dBm</b> <b>B.met at</b> <b>-27.7dBm</b>	<b>A.-61.2</b> <b>dBm</b> <b>B.met at</b> <b>-27.7dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.2.4.4 Regulatory subtest 5-8, 17,20  For B see Note (6)
<b>External Mode (ETSI) outside MICS band edges</b> <b>Power Levels:</b> <b>A: -12.6 dBm</b> <b>B: -17.6 dBm</b>	<b>A: -30.85</b> <b>B: -35.85</b> <b>dBm max</b>	<b>A.-47.3</b> <b>dBm</b> <b>B.met at</b> <b>-12.6dBm</b>	<b>A.-46.7</b> <b>dBm</b> <b>B.met at</b> <b>-12.6dBm</b>	<b>A.-47.2</b> <b>dBm</b> <b>B.met at</b> <b>-12.6dBm</b>	<b>A.-46.6</b> <b>dBm</b> <b>B.met at</b> <b>-12.6dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.5 Regulatory subtest 5, 9, 10, 17 For B see Note (3)
<b>External Mode (ETSI) MICS Harmonics</b> <b>Power Levels:</b> <b>A: -12.6 dBm</b> <b>B: -17.6 dBm</b>	<b>A: -22.85</b> <b>B: -27.85</b> <b>dBm max</b>	<b>A.-75.9</b> <b>dBm</b> <b>B. met at</b> <b>-12.6dBm</b>	<b>A.-73.0</b> <b>dBm</b> <b>B.met at</b> <b>-12.6dBm</b>	<b>A.-73.6</b> <b>dBm</b> <b>B.met at</b> <b>-12.6dBm</b>	<b>A.-72.7</b> <b>dBm</b> <b>B.met at</b> <b>-12.6dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.5 Regulatory subtest 20 For B see Note (4)

External Mode (ETSI) outside MEDS band edges and Harmonics  All MEDS channels  Power Levels: A: -15.6 dBm B: -20.6 dBm	A: -30.85 dBm max B: -35.85 dBm max	A. -49.5 dBm B. -54.0 dBm	A. -48.2 dBm B. -52.9 dBm	A. -49.0 dBm B. -53.3 dBm	A. -48.3 dBm B. -52.6 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.5  Regulatory subtest 5, 9,10, 17, 20  For B see Note (5)
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Table 35 Unwanted Emissions Including Harmonics

Impedance: 5+j0

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Implant Mode (FCC) MICS,  Power Level -5.9 to -13.9 dBm	-32.2 dBm max	-51.8 dBm	-55.3 dBm	-51.5 dBm	-53.2 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.1  Regulatory subtest 2-8,16, 17-23
Implant Mode (FCC) MEDS ch11-20,21-29.  Power Level -8.9 to -16.9 dBm	-32.2 dBm max	-56.3 dBm	-55.1 dBm	-55.2 dBm	-55.1 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.1  Regulatory subtest 2-5, 16, 17-23
Implant Mode (FCC) MEDS ch 30  Power Level -9.6 to -17.6 dBm	-32.2 dBm max	-40.2 dBm	-39.7 dBm	-42.3 dBm	-39.4 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.1  Regulatory subtest 2-5, 16, 17-23  See Note (7)
Implant Mode (ETSI) MICS,  Power Level -5.9 to -13.9 dBm	-10.85 dBm max or equal to average fundamental output power (whichever is less)	-26.9 dBm	-29.5 dBm	-26.4 dBm	-29.2 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.2  Regulatory subtest 2-5, 9-10, 16, 17-23



Implant Mode (ETSI) MEDS, Power Level -8.9 to -16.9 dBm	-10.85 dBm max or equal to peak fundamental output power (whichever is less)	-35.4 dBm	-35.7 dBm	-35.5 dBm	-35.0 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.2 Regulatory subtest 2-5, 9-10, 16, 17-23
External Mode (MICS) Power Level -13.9 dBm and below. Frequency: A: 25-30MHz B: 30-88MHz C: 88-216MHz D: 216-401MHz E: 406-802MHz F: 812-960MHz G: 960MHz – 4.06GHz	A: -35.9 B: -63.2 C: -59.7 D: -57.2 E: -57.2 F: -57.2 G: -49.2 dBm max	A.-76.7 B.-72.5 C.-72.5 D.-67.0 E.-66.3 F.-72.5 G.-55.5 dBm	A.-76.0 B.-73.2 C.-73.2 D.-66.4 E.-67.2 F.-71.9 G.-55.5 dBm	A.-76.1 B.-72.4 C.-72.4 D.-65.9 E.-66.0 F.-72.2 G.-55.4 dBm	A.-76.0 B.-73.5 C.-73.5 D.-65.9 E.-68.0 F.-72.8 G.-55.3 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.3 Regulatory subtests A: subtest 2 B: subtest 3 C: subtest 3 D: subtest 3-4 E: subtest 18-19 F: subtest 21 G: subtest 21-23
External Mode (MEDS) Power Level -16.9 dBm and below. Frequency: A: 25-30MHz B: 30-88MHz C: 88-216MHz D: 216-400MHz E: 407-800MHz F: 814-960MHz G: 960MHz – 4.06GHz	A: -35.9 B: -63.2 C: -59.7 D: -57.2 E: -57.2 F: -57.2 G: -49.2 dBm max	A.-76.4 B.-72.6 C.-72.6 D.-64.6 E.-67.0 F.-71.9 G.-54.3 dBm	A.-77.4 B.-73.3 C.-73.3 D.-66.1 E.-68.4 F.-72.3 G.-55.7 dBm	A.-76.2 B.-72.4 C.-72.4 D.-66.6 E.-66.8 F.-72.5 G.-54.9 dBm	A.-76.5 B.-72.6 C.-72.6 D.-66.6 E.-67.9 F.-72.2 G.-55.6 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.3 Regulatory subtests A: subtest 2 B: subtest 3 C: subtest 3 D: subtest 3-4 E: subtest 18-19 F: subtest 21 G: subtest 21-23
External Mode (FCC) outside MICS band edges Power Levels: A: -13.9 dBm B: -18.9 dBm	A: -52.2 B: -57.2 dBm max	A.-65.2 dBm B.met at -13.9dBm	A.-64.3 dBm B.met at -13.9 dBm	A.-63.6 dBm B.met at -13.9 dBm	A.-65.2 dBm B.met at -13.9 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.4 Regulatory subtest 5-8, 17 For B see Note (1)

<b>External Mode (FCC) MICS Harmonics</b> <b>Power Levels:</b> <b>A: -13.9 dBm</b> <b>B: -18.9 dBm</b>	<b>A: -44.2</b> <b>B: -49.2</b> <b>dBm max</b>	<b>A.-77.0</b> <b>dBm</b> <b>B.met at</b> <b>-13.9dBm</b>	<b>A.-76.8</b> <b>dBm</b> <b>B.met at</b> <b>-13.9dBm</b>	<b>A.-77.0</b> <b>dBm</b> <b>B.met at</b> <b>-13.9dBm</b>	<b>A.-76.7</b> <b>dBm</b> <b>B.met at</b> <b>-13.9dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.4 Regulatory subtest 20 For B see Note (2)
<b>External Mode (FCC) outside MEDS band edges and Harmonics</b> <b>All MEDS channels except ch 30.</b> <b>Power Levels:</b> <b>A: -16.9 dBm</b> <b>B: -21.9 dBm</b>	<b>A: -52.2</b> <b>B: -57.2</b> <b>dBm max</b>	<b>A.-63.0</b> <b>dBm</b> <b>B.-66.5</b> <b>dBm</b>	<b>A.-60.4</b> <b>dBm</b> <b>B.-65.6</b> <b>dBm</b>	<b>A.-63.4</b> <b>dBm</b> <b>B.-66.2</b> <b>dBm</b>	<b>A.-62.4</b> <b>dBm</b> <b>B.-65.6</b> <b>dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.2.4.4 Regulatory subtest 5-8, 17,20  For B see Note (5)
<b>External Mode (FCC) outside MEDS band edges and Harmonics ch 30 only</b> <b>Power Levels:</b> <b>A.-29 dBm</b> <b>B.-32 dBm</b>	<b>A:-52.2</b> <b>B:-53.7</b> <b>dBm max</b>	<b>A.-62.4</b> <b>dBm</b> <b>B.met at</b> <b>-29dBm</b>	<b>A.-61.3</b> <b>dBm</b> <b>B.met at</b> <b>-29dBm</b>	<b>A.-61.0</b> <b>dBm</b> <b>B.met at</b> <b>-29dBm</b>	<b>A.-60.7</b> <b>dBm</b> <b>B.met at</b> <b>-29dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.2.4.4 Regulatory subtest 5-8, 17,20  For B see Note (6)
<b>External Mode (ETSI) outside MICS band edges</b> <b>Power Levels:</b> <b>A: -13.9 dBm</b> <b>B: -18.9 dBm</b>	<b>A: -30.85</b> <b>B: -35.85</b> <b>dBm max</b>	<b>A.-44.4</b> <b>dBm</b> <b>B.met at</b> <b>-13.9dBm</b>	<b>A.-45.0</b> <b>dBm</b> <b>B.met at</b> <b>-13.9dBm</b>	<b>A.-44.3</b> <b>dBm</b> <b>B.met at</b> <b>-13.9dBm</b>	<b>A.-44.4</b> <b>dBm</b> <b>B.met at</b> <b>-13.9dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.5 Regulatory subtest 5, 9, 10, 17 For B see Note (3)
<b>External Mode (ETSI) MICS Harmonics</b> <b>Power Levels:</b> <b>A: -13.9 dBm</b> <b>B: -18.9 dBm</b>	<b>A: -22.85</b> <b>B: -27.85</b> <b>dBm max</b>	<b>A.-77.0</b> <b>dBm</b> <b>B. met at</b> <b>-13.9dBm</b>	<b>A.-76.8</b> <b>dBm</b> <b>B.met at</b> <b>-13.9dBm</b>	<b>A.-77.0</b> <b>dBm</b> <b>B.met at</b> <b>-13.9dBm</b>	<b>A.-76.7</b> <b>dBm</b> <b>B.met at</b> <b>-13.9dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.5 Regulatory subtest 20 For B see Note (4)

External Mode (ETSI) outside MEDS band edges and Harmonics  All MEDS channels  Power Levels: A: -16.9 dBm B: -21.9 dBm	A: -30.85 dBm max B: -35.85 dBm max	A.-46.1 dBm B.-50.7 dBm	A.-45.2 dBm B.-50.1 dBm	A.-45.4 dBm B.-50.2 dBm	A.-45.3 dBm B.-49.7 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.5  Regulatory subtest 5, 9,10, 17, 20  For B see Note (5)
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Table 36 Unwanted Emissions Including Harmonics

Impedance: 5-j60

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Implant Mode (FCC) MICS,  Power Level -8 to -16 dBm	-32.2 dBm max	-53.0 dBm	-54.9 dBm	-46.5 dBm	-52.5 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.1  Regulatory subtest 2-8,16, 17-23
Implant Mode (FCC) MEDS ch11-20,21-29.  Power Level -11 to -19 dBm	-32.2 dBm max	-55.0 dBm	-55.8 dBm	-55.5 dBm	-56.0 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.1  Regulatory subtest 2-5, 16, 17-23
Implant Mode (FCC) MEDS ch 30  Power Level -11.7 to -19.7 dBm	-32.2 dBm max	-42.2 dBm	-39.2 dBm	-40.7 dBm	-40.7 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.1  Regulatory subtest 2-5, 16, 17-23  See Note (7)
Implant Mode (ETSI) MICS,  Power Level -8 to -16 dBm	-10.85 dBm max or equal to average fundamental output power (whichever is less)	-22.4 dBm	-22.9 dBm	-20.6 dBm	-22.1 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.2  Regulatory subtest 2-5, 9-10, 16, 17-23

Implant Mode (ETSI) MEDS, Power Level -11 to -19 dBm	-10.85 dBm max or equal to peak fundamental output power (whichever is less)	-34.3 dBm	-31.8 dBm	-33.5 dBm	-32.4 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.2 Regulatory subtest 2-5, 9-10, 16, 17-23
External Mode (MICS) Power Level -16 dBm and below. Frequency: A: 25-30MHz B: 30-88MHz C: 88-216MHz D: 216-401MHz E: 406-802MHz F: 812-960MHz G: 960MHz – 4.06GHz	A: -35.9 B: -63.2 C: -59.7 D: -57.2 E: -57.2 F: -57.2 G: -49.2 dBm max	A.-75.5 B.-71.9 C.-71.9 D.-66.6 E.-67.7 F.-71.6 G.-55.3 dBm	A.-77.0 B.-71.9 C.-71.9 D.-67.0 E.-67.7 F.-70.8 G.-55.8 dBm	A.-76.5 B.-70.6 C.-70.6 D.-66.4 E.-68.5 F.-71.5 G.-54.0 dBm	A.-76.5 B.-71.0 C.-71.0 D.-67.2 E.-69.0 F.-71.5 G.-55.4 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.3 Regulatory subtests A: subtest 2 B: subtest 3 C: subtest 3 D: subtest 3-4 E: subtest 18-19 F: subtest 21 G: subtest 21-23
External Mode (MEDS) Power Level -19 dBm and below. Frequency: A: 25-30MHz B: 30-88MHz C: 88-216MHz D: 216-400MHz E: 407-800MHz F: 814-960MHz G: 960MHz – 4.06GHz	A: -35.9 B: -63.2 C: -59.7 D: -57.2 E: -57.2 F: -57.2 G: -49.2 dBm max	A.-75.9 B.-70.8 C.-70.8 D.-69.5 E.-68.1 F.-71.5 G.-54.7 dBm	A.-76.2 B.-72.5 C.-72.5 D.-68.5 E.-69.5 F.-71.1 G.-55.7 dBm	A.-76.0 B.-71.2 C.-71.2 D.-68.5 E.-68.1 F.-71.0 G.-55.2 dBm	A.-75.9 B.-71.4 C.-71.4 D.-68.9 E.-69.0 F.-71.0 G.-54.2 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.3 Regulatory subtests A: subtest 2 B: subtest 3 C: subtest 3 D: subtest 3-4 E: subtest 18-19 F: subtest 21 G: subtest 21-23
External Mode (FCC) outside MICS band edges Power Levels: A: -16 dBm B: -21 dBm	A: -52.2 B: -57.2 dBm max	A.-63.9 dBm B. met at -16dBm	A.-64.1 dBm B. met at -16dBm	A.-65.8 dBm B. met at -16dBm	A.-65.5 dBm B. met at -16dBm	PASS	A17245 section: 2.3.4.6.4.1.4.4 Regulatory subtest 5-8, 17 For B see Note (1)

<b>External Mode (FCC) MICS Harmonics</b> <b>Power Levels:</b> <b>A: -16 dBm</b> <b>B: -21 dBm</b>	<b>A: -44.2</b> <b>B: -49.2</b> <b>dBm max</b>	<b>A.-76.7</b> <b>dBm</b>  <b>B. met at</b> <b>-16dBm</b>	<b>A.-76.9</b> <b>dBm</b>  <b>B. met at</b> <b>-16dBm</b>	<b>A.-76.6</b> <b>dBm</b>  <b>B. met at</b> <b>-16dBm</b>	<b>A.-76.9</b> <b>dBm</b>  <b>B. met at</b> <b>-16dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.4 Regulatory subtest 20 For B see Note (2)
<b>External Mode (FCC) outside MEDS band edges and Harmonics</b> <b>All MEDS channels except ch 30.</b> <b>Power Levels:</b> <b>A: -19 dBm</b> <b>B: -24 dBm</b>	<b>A: -52.2</b> <b>B: -57.2</b> <b>dBm max</b>	<b>A.-64.5</b> <b>dBm</b>  <b>B.-69.6</b> <b>dBm</b>	<b>A.-64.9</b> <b>dBm</b>  <b>B.-66.8</b> <b>dBm</b>	<b>A.-63.6</b> <b>dBm</b>  <b>B.-67.1</b> <b>dBm</b>	<b>A.-63.4</b> <b>dBm</b>  <b>B.-67.4</b> <b>dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.2.4.4 Regulatory subtest 5-8, 17,20  For B see Note (5)
<b>External Mode (FCC) outside MEDS band edges and Harmonics ch 30 only</b> <b>Power Levels:</b> <b>A: -31.1 dBm</b> <b>B: -33.5 dBm</b>	<b>A.-52.2</b> <b>B.-53.7</b> <b>dBm max</b>	<b>A.-64.3</b> <b>dBm</b>  <b>B.met at</b> <b>-31.1dBm</b>	<b>A.-62.1</b> <b>dBm</b>  <b>B.met at -</b> <b>31.1dBm</b>	<b>A.-62.2</b> <b>dBm</b>  <b>B.met at -</b> <b>31.1dBm</b>	<b>A.-59.0</b> <b>dBm</b>  <b>B.met at</b> <b>-31.1dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.2.4.4 Regulatory subtest 5-8, 17,20  For B see Note (6)
<b>External Mode (ETSI) outside MICS band edges</b> <b>Power Levels:</b> <b>A: -16 dBm</b> <b>B: -21 dBm</b>	<b>A: -30.85</b> <b>B: -35.85</b> <b>dBm max</b>	<b>A.-42.7</b> <b>dBm</b>  <b>B. met at</b> <b>-16dBm</b>	<b>A.-42.2</b> <b>dBm</b>  <b>B. met at</b> <b>-16dBm</b>	<b>A.-41.9</b> <b>dBm</b>  <b>B. met at</b> <b>-16dBm</b>	<b>A.-42.1</b> <b>dBm</b>  <b>B. met at</b> <b>-16dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.5 Regulatory subtest 5, 9, 10, 17 For B see Note (3)
<b>External Mode (ETSI) MICS Harmonics</b> <b>Power Levels:</b> <b>A: -16 dBm</b> <b>B: -21 dBm</b>	<b>A: -22.85</b> <b>B: -27.85</b> <b>dBm max</b>	<b>A.-76.7</b> <b>dBm</b>  <b>B. met at</b> <b>-16dBm</b>	<b>A.-76.9</b> <b>dBm</b>  <b>B. met at</b> <b>-16dBm</b>	<b>A.-76.6</b> <b>dBm</b>  <b>B. met at</b> <b>-16dBm</b>	<b>A.-76.9</b> <b>dBm</b>  <b>B. met at</b> <b>-16dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.5 Regulatory subtest 20 For B see Note (4)

External Mode (ETSI) outside MEDS band edges and Harmonics All MEDS channels Power Levels: A: -19 dBm B: -24 dBm	A: -30.85 B: -35.85 dBm max	A.-45.0 B.-49.6 dBm	A.-42.6 B.-47.3 dBm	A.-43.7 B.-48.3 dBm	A.-42.7 B.-46.7 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.5 Regulatory subtest 5, 9,10, 17, 20  For B see Note (5)
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Table 37 Unwanted Emissions Including Harmonics

Impedance: 5-j20

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Implant Mode (FCC) MICS, Power Level -6.8 to -14.8 dBm	-32.2 dBm max	-54.6 dBm	-55.7 dBm	-54.1 dBm	-56.1 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.1 Regulatory subtest 2-8,16, 17-23
Implant Mode (FCC) MEDS ch11-20,21-29. Power Level -9.8 to -17.8 dBm	-32.2 dBm max	-54.2 dBm	-55.8 dBm	-55.4 dBm	-55.4 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.1 Regulatory subtest 2-5, 16, 17-23
Implant Mode (FCC) MEDS ch 30 Power Level -10.5 to -18.5 dBm	-32.2 dBm max	-42.3 dBm	-40.0 dBm	-40.2 dBm	-39.7 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.1 Regulatory subtest 2-5, 16, 17-23 See Note (7)
Implant Mode (ETSI) MICS, Power Level -6.8 to -14.8 dBm	-10.85 dBm max or equal to average fundamen tal output power (which- ever is less)	-27.6 dBm	-28.7 dBm	-27.5 dBm	-27.9 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.2 Regulatory subtest 2-5, 9-10, 16, 17-23

Implant Mode (ETSI) MEDS, Power Level -9.8 to -17.8 dBm	-10.85 dBm max or equal to peak fundamental output power (whichever is less)	-36.1 dBm	-36.8 dBm	-36.6 dBm	-35.9 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.2 Regulatory subtest 2-5, 9-10, 16, 17-23
External Mode (MICS) Power Level -14.8 dBm and below. Frequency: A: 25-30MHz B: 30-88MHz C: 88-216MHz D: 216-401MHz E: 406-802MHz F: 812-960MHz G: 960MHz – 4.06GHz	A: -35.9 B: -63.2 C: -59.7 D: -57.2 E: -57.2 F: -57.2 G: -49.2 dBm max	A.-75.5 B.-71.9 C.-71.9 D.-67.0 E.-68.0 F.-71.8 G.-54.7 dBm	A.-76.6 B.-73.2 C.-73.2 D.-66.4 E.-67.6 F.-72.2 G.-54.8 dBm	A.-76.5 B.-72.5 C.-72.5 D.-67.0 E.-66.9 F.-71.9 G.-55.9 dBm	A.-77.0 B.-73.1 C.-73.1 D.-67.1 E.-69.2 F.-72.2 G.-56.0 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.3 Regulatory subtests A: subtest 2 B: subtest 3 C: subtest 3 D: subtest 3-4 E: subtest 18-19 F: subtest 21 G: subtest 21-23
External Mode (MEDS) Power Level -17.8 dBm and below. Frequency: A: 25-30MHz B: 30-88MHz C: 88-216MHz D: 216-400MHz E: 407-800MHz F: 814-960MHz G: 960MHz – 4.06GHz	A: -35.9 B: -63.2 C: -59.7 D: -57.2 E: -57.2 F: -57.2 G: -49.2 dBm max	A.-75.5 B.-72.3 C.-72.3 D.-67.3 E.-68.0 F.-71.8 G.-54.7 dBm	A.-75.4 B.-73.2 C.-73.2 D.-67.3 E.-67.9 F.-72.0 G.-54.2 dBm	A.-75.9 B.-72.1 C.-72.1 D.-66.5 E.-66.9 F.-71.4 G.-54.5 dBm	A.-76.3 B.-73.1 C.-73.0 D.-68.4 E.-69.2 F.-71.9 G.-55.2 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.3 Regulatory subtests A: subtest 2 B: subtest 3 C: subtest 3 D: subtest 3-4 E: subtest 18-19 F: subtest 21 G: subtest 21-23
External Mode (FCC) outside MICS band edges Power Levels: A: -14.8 dBm B: -19.8 dBm	A: -52.2 B: -57.2 dBm max	A.-63.6 dBm B. met at -14.8dBm	A.-64.4 dBm B. met at -14.8dBm	A.-65.1 dBm B. met at -14.8dBm	A.-62.2 dBm B. met at -14.8dBm	PASS	A17245 section: 2.3.4.6.4.1.4.4 Regulatory subtest 5-8, 17 For B see Note (1)

<b>External Mode (FCC) MICS Harmonics</b> <b>Power Levels:</b> <b>A: -14.8 dBm</b> <b>B: -19.8 dBm</b>	<b>A: -44.2</b> <b>B: -49.2</b> <b>dBm max</b>	<b>A.-76.5</b> <b>dBm</b>  <b>B. met at</b> <b>-14.8dBm</b>	<b>A.-76.5</b> <b>dBm</b>  <b>B. met at</b> <b>-14.8dBm</b>	<b>A.-76.3</b> <b>dBm</b>  <b>B. met at</b> <b>-14.8dBm</b>	<b>A.-76.4</b> <b>dBm</b>  <b>B. met at</b> <b>-14.8dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.4 Regulatory subtest 20 For B see Note (2)
<b>External Mode (FCC) outside MEDS band edges and Harmonics</b> <b>All MEDS channels except ch 30.</b> <b>Power Levels:</b> <b>A: -17.8 dBm</b> <b>B: -22.8 dBm</b>	<b>A: -52.2</b> <b>B: -57.2</b> <b>dBm max</b>	<b>A.-62.8</b> <b>dBm</b>  <b>B.-69.8</b> <b>dBm</b>	<b>A.-64.3</b> <b>dBm</b>  <b>B.-68.8</b> <b>dBm</b>	<b>A.-63.2</b> <b>dBm</b>  <b>B.-68.3</b> <b>dBm</b>	<b>A.-64.5</b> <b>dBm</b>  <b>B.-68.2</b> <b>dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.2.4.4 Regulatory subtest 5-8, 17,20  For B see Note (5)
<b>External Mode (FCC) outside MEDS band edges and Harmonics ch 30 only</b> <b>Power Levels:</b> <b>A.-29.9 dBm</b> <b>B.-31.9 dBm</b>	<b>A.-52.2</b> <b>B.-53.7</b> <b>dBm max</b>	<b>A.-62.0</b> <b>dBm</b>  <b>B.met at</b> <b>-29.9dBm</b>	<b>A.-60.0</b> <b>dBm</b>  <b>B.met at</b> <b>-29.9dBm</b>	<b>A.-62.9</b> <b>dBm</b>  <b>B.met at</b> <b>-29.9dBm</b>	<b>A.-59.0</b> <b>dBm</b>  <b>B.met at</b> <b>-29.9dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.2.4.4 Regulatory subtest 5-8, 17,20  For B see Note (6)
<b>External Mode (ETSI) outside MICS band edges</b> <b>Power Levels:</b> <b>A: -14.8 dBm</b> <b>B: -19.8 dBm</b>	<b>A: -30.85</b> <b>B: -35.85</b> <b>dBm max</b>	<b>A.-45.3</b> <b>dBm</b>  <b>B. met at</b> <b>-14.8dBm</b>	<b>A.-45.4</b> <b>dBm</b>  <b>B. met at</b> <b>-14.8dBm</b>	<b>A.-45.1</b> <b>dBm</b>  <b>B. met at</b> <b>-14.8dBm</b>	<b>A.-45.0</b> <b>dBm</b>  <b>B. met at</b> <b>-14.8dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.5 Regulatory subtest 5, 9, 10, 17 For B see Note (3)
<b>External Mode (ETSI) MICS Harmonics</b> <b>Power Levels:</b> <b>A: -14.8 dBm</b> <b>B: -19.8 dBm</b>	<b>A: -22.85</b> <b>B: -27.85</b> <b>dBm max</b>	<b>A.-76.5</b> <b>dBm</b>  <b>B. met at</b> <b>-14.8dBm</b>	<b>A.-76.5</b> <b>dBm</b>  <b>B. met at</b> <b>-14.8dBm</b>	<b>A.-76.3</b> <b>dBm</b>  <b>B. met at</b> <b>-14.8dBm</b>	<b>A.-76.4</b> <b>dBm</b>  <b>B. met at</b> <b>-14.8dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.5 Regulatory subtest 20 For B see Note (4)



External Mode (ETSI) outside MEDS band edges and Harmonics  All MEDS channels  Power Levels: A: -17.8 dBm B: -22.8 dBm	A: -30.85	A.-47.6	A.-46.0	A.-46.8	A.-46.0	PASS	A17245 section: 2.3.4.6.4.2.4.5  Regulatory subtest 5, 9,10, 17, 20  For B see Note (5)
	B: -35.85 dBm max	B.-52.3 dBm	B-50.3 dBm	B-50.8 dBm	B.-50.6 dBm		

Table 38 Unwanted Emissions Including Harmonics

Impedance: 9-j20

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Implant Mode (FCC) MICS,  Power Level -5.7 to -13.7 dBm	-32.2 dBm max	-51.8 dBm	-55.0 dBm	-53.5 dBm	-54.5 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.1  Regulatory subtest 2-8,16, 17-23
Implant Mode (FCC) MEDS ch11-20,21-29.  Power Level -9.6 to -17.6 dBm	-32.2 dBm max	-55.6 dBm	-54.8 dBm	-55.3 dBm	-56.2 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.1  Regulatory subtest 2-5, 16, 17-23
Implant Mode (FCC) MEDS ch 30  Power Level -10.3 to -18.3 dBm	-32.2 dBm max	-40.5 dBm	-41.6 dBm	-40.5 dBm	-38.9 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.1  Regulatory subtest 2-5, 16, 17-23  See Note (7)
Implant Mode (ETSI) MICS,  Power Level -5.7 to -13.7 dBm	-10.85 dBm max or equal to average fundamental output power (whichever is less)	-26.6 dBm	-29.1 dBm	-27.3 dBm	-29.5 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.2  Regulatory subtest 2-5, 9-10, 16, 17-23

Implant Mode (ETSI) MEDS, Power Level -9.6 to -17.6 dBm	-10.85 dBm max or equal to peak fundamental output power (whichever is less)	-38.7 dBm	-38.0 dBm	-38.1 dBm	-37.9 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.2 Regulatory subtest 2-5, 9-10, 16, 17-23
External Mode (MICS) Power Level -13.7 dBm and below. Frequency: A: 25-30MHz B: 30-88MHz C: 88-216MHz D: 216-401MHz E: 406-802MHz F: 812-960MHz G: 960MHz – 4.06GHz	A: -35.9 B: -63.2 C: -59.7 D: -57.2 E: -57.2 F: -57.2 G: -49.2 dBm max	A.-75.6 B.-72.8 C.-72.8 D.-67.0 E.-67.2 F.-72.5 G.-55.4 dBm	A.-77.4 B.-72.5 C.-72.5 D.-66.3 E.-67.2 F.-72.9 G.-56.2 dBm	A.-76.2 B.-73.4 C.-73.4 D.-65.2 E.-66.6 F.-72.0 G.-55.3 dBm	A.-76.9 B.-73.4 C.-73.4 D.-66.0 E.-67.1 F.-72.9 G.-56.1 dBm	PASS	A17245 section: 2.3.4.6.4.1.4.3 Regulatory subtests A: subtest 2 B: subtest 3 C: subtest 3 D: subtest 3-4 E: subtest 18-19 F: subtest 21 G: subtest 21-23
External Mode (MEDS) Power Level -17.6 dBm and below. Frequency: A: 25-30MHz B: 30-88MHz C: 88-216MHz D: 216-400MHz E: 407-800MHz F: 814-960MHz G: 960MHz – 4.06GHz	A: -35.9 B: -63.2 C: -59.7 D: -57.2 E: -57.2 F: -57.2 G: -49.2 dBm max	A.-75.8 B.-72.6 C.-72.6 D.-67.3 E.-67.0 F.-72.5 G.-55.0 dBm	A.-76.2 B.-73.3 C.-73.3 D.-66.5 E.-68.6 F.-73.1 G.-55.1 dBm	A.-75.2 B.-72.7 C.-72.7 D.-67.2 E.-68.0 F.-71.7 G.-54.8 dBm	A.-76.5 B.-72.3 C.-72.3 D.-67.3 E.-68.3 F.-72.4 G.-55.6 dBm	PASS	A17245 section: 2.3.4.6.4.2.4.3 Regulatory subtests A: subtest 2 B: subtest 3 C: subtest 3 D: subtest 3-4 E: subtest 18-19 F: subtest 21 G: subtest 21-23
External Mode (FCC) outside MICS band edges Power Levels: A: -13.7 dBm B: -18.7 dBm	A: -52.2 B: -57.2 dBm max	A.-63.4 dBm B. met at -13.7dBm	A.-63.5 dBm B. met at -13.7dBm	A.-62.2 dBm B. met at -13.7dBm	A.-63.4 dBm B. met at -13.7dBm	PASS	A17245 section: 2.3.4.6.4.1.4.4 Regulatory subtest 5-8, 17 For B see Note (1)

<b>External Mode (FCC) MICS Harmonics</b> <b>Power Levels:</b> <b>A: -13.7 dBm</b> <b>B: -18.7 dBm</b>	<b>A: -44.2</b> <b>B: -49.2</b> <b>dBm max</b>	<b>A.-76.5</b> <b>dBm</b>  <b>B. met at</b> <b>-13.7dBm</b>	<b>A.-76.9</b> <b>dBm</b>  <b>B. met at</b> <b>-13.7dBm</b>	<b>A.-76.7</b> <b>dBm</b>  <b>B. met at</b> <b>-13.7dBm</b>	<b>A.-77.0</b> <b>dBm</b>  <b>B. met at</b> <b>-13.7dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.4 Regulatory subtest 20 For B see Note (2)
<b>External Mode (FCC) outside MEDS band edges and Harmonics</b> <b>All MEDS channels except ch 30.</b> <b>Power Levels:</b> <b>A: -17.6 dBm</b> <b>B: -22.6 dBm</b>	<b>A: -52.2</b> <b>B: -57.2</b> <b>dBm max</b>	<b>A.-62.4</b> <b>dBm</b>  <b>B.-67.8</b> <b>dBm</b>	<b>A.-62.5</b> <b>dBm</b>  <b>B.-65.3</b> <b>dBm</b>	<b>A.-63.2</b> <b>dBm</b>  <b>B.-68.1</b> <b>dBm</b>	<b>A.-64.1</b> <b>dBm</b>  <b>B.-67.3</b> <b>dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.2.4.4 Regulatory subtest 5-8, 17,20  For B see Note (5)
<b>External Mode (FCC) outside MEDS band edges and Harmonics ch 30 only</b> <b>Power Levels:</b> <b>A.-29.7 dBm</b> <b>B.-31.7 dBm</b>	<b>A.-52.2</b> <b>B.-53.7</b> <b>dBm max</b>	<b>A.-62.7</b> <b>dBm</b>  <b>B.met at</b> <b>-29.7dBm</b>	<b>A.-60.7</b> <b>dBm</b>  <b>B.met at -</b> <b>29.7dBm</b>	<b>A.-61.1</b> <b>dBm</b>  <b>B.met at -</b> <b>29.7dBm</b>	<b>A.-61.0</b> <b>dBm</b>  <b>B.met at -</b> <b>29.7dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.2.4.4 Regulatory subtest 5-8, 17,20  For B see Note (6)
<b>External Mode (ETSI) outside MICS band edges</b> <b>Power Levels:</b> <b>A: -13.7 dBm</b> <b>B: -18.7 dBm</b>	<b>A: -30.85</b> <b>B: -35.85</b> <b>dBm max</b>	<b>A.-45.6</b> <b>dBm</b>  <b>B. met at</b> <b>-13.7dBm</b>	<b>A.-46.0</b> <b>dBm</b>  <b>B. met at</b> <b>-13.7dBm</b>	<b>A.-45.5</b> <b>dBm</b>  <b>B. met at</b> <b>-13.7dBm</b>	<b>A.-45.7</b> <b>dBm</b>  <b>B. met at</b> <b>-13.7dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.5 Regulatory subtest 5, 9, 10, 17 For B see Note (3)
<b>External Mode (ETSI) MICS Harmonics</b> <b>Power Levels:</b> <b>A: -13.7 dBm</b> <b>B: -18.7 dBm</b>	<b>A: -22.85</b> <b>B: -27.85</b> <b>dBm max</b>	<b>A.-76.5</b> <b>dBm</b>  <b>B. met at</b> <b>-13.7dBm</b>	<b>A.-76.9</b> <b>dBm</b>  <b>B. met at</b> <b>-13.7dBm</b>	<b>A.-76.7</b> <b>dBm</b>  <b>B. met at</b> <b>-13.7dBm</b>	<b>A.-77.0</b> <b>dBm</b>  <b>B. met at</b> <b>-13.7dBm</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.1.4.5 Regulatory subtest 20 For B see Note (4)

<b>External Mode (ETSI) outside MEDS band edges and Harmonics</b>  <b>All MEDS channels</b>  <b>Power Levels:</b> <b>A: -17.6 dBm</b> <b>B: -22.6 dBm</b>	<b>A: -30.85</b>	<b>A.-49.0</b>	<b>A.-47.5</b>	<b>A.-48.2</b>	<b>A.-47.5</b>	<b>PASS</b>	A17245 section: 2.3.4.6.4.2.4.5  Regulatory subtest 5, 9,10, 17, 20  For B see Note (5)
	<b>B: -35.85 dBm max</b>	<b>B.-53.0 dBm</b>	<b>B.-51.8 dBm</b>	<b>B.-52.2 dBm</b>	<b>B.-51.0 dBm</b>		

Table 39 Unwanted Emissions Including Harmonics

## Notes:

- (1) External Mode (FCC) outside MICS band edges - Must meet -57.2dBm with Tx Power set to min -17dBm plus relaxations depending on impedance. We are testing at -12dBm plus relaxations depending on impedance and are passing. TX ADJ/ALT-CPR, synthesizer SSB phase noise, harmonics, and general TX spurious RF outputs, will all decrease at a dB-per-dB basis or more. Therefore, testing at a 5 dB higher TX RF output power than specified, for a fixed output level TX emission is requirement, is significantly more worst-case than if tested at the originally specified TX RF output power level. This is the case with this requirement.
- (2) External Mode (FCC) MICS Harmonics - Must meet -49.2dBm with Tx Power set to min -17dBm plus relaxations depending on impedance. We are testing at -12dBm plus relaxations depending on impedance and are passing. TX ADJ/ALT-CPR, synthesizer SSB phase noise, harmonics, and general TX spurious RF outputs, will all decrease at a dB-per-dB basis or more. Therefore, testing at a 5 dB higher TX RF output power than specified, for a fixed output level TX emission is requirement, is significantly more worst-case than if tested at the originally specified TX RF output power level. This is the case with this requirement.
- (3) External Mode (ETSI) outside MICS band edges - Must meet -35.85dBm with Tx Power set to min -17dBm plus relaxations depending on impedance. We are testing at -12dBm plus relaxations depending on impedance and are passing. TX ADJ/ALT-CPR, synthesizer SSB phase noise, harmonics, and general TX spurious RF outputs, will all decrease at a dB-per-dB basis or more. Therefore, testing at a 5 dB higher TX RF output power than specified, for a fixed output level TX emission is requirement, is significantly more worst-case than if tested at the originally specified TX RF output power level. This is the case with this requirement.
- (4) External Mode (ETSI) MICS harmonics - Must meet -27.85dBm with Tx Power set to min -17dBm plus relaxations depending on impedance. We are testing at -12dBm plus relaxations depending on impedance and are passing. TX ADJ/ALT-CPR, synthesizer SSB phase noise, harmonics, and general TX spurious RF outputs, will all decrease at a dB-per-dB basis or more. Therefore, testing at a 5 dB higher TX RF output power than specified, for a fixed output level TX emission is requirement, is significantly more worst-case than if tested at the originally specified TX RF output power level. This is the case with this requirement.

- (5) External Mode (ETSI) outside MICS band edges and harmonics - Must meet -35.85dBm with Tx Power set to min -20dBm plus relaxations depending on impedance. We are testing at -19.4dBm plus relaxations depending on impedance and are passing. TX ADJ/ALT-CPR, synthesizer SSB phase noise, harmonics, and general TX spurious RF outputs, will all decrease at a dB-per-dB basis or more. Therefore, testing at a 5 dB higher TX RF output power than specified, for a fixed output level TX emission is requirement, is significantly more worst-case than if tested at the originally specified TX RF output power level. This is the case with this requirement.
- (6) External Mode (FCC) outside MEDS band edges and Harmonics ch 30 only - Must meet -53.7dBm with Tx Power set to min -29.1dBm plus relaxations depending on impedance. We are testing at -27.1dBm plus relaxations depending on impedance and are passing. TX ADJ/ALT-CPR, synthesizer SSB phase noise, harmonics, and general TX spurious RF outputs, will all decrease at a dB-per-dB basis or more. Therefore, testing at a 5 dB higher TX RF output power than specified, for a fixed output level TX emission is requirement, is significantly more worst-case than if tested at the originally specified TX RF output power level. This is the case with this requirement.
- (7) Implant Mode (FCC) MEDS ch 30- Must meet -32.2dBm with Tx Power set to -7.7dBm and -15.7dBm plus relaxations depending on impedance. We are testing at -7dBm and -15dBm plus relaxations depending on impedance. TX ADJ/ALT-CPR, synthesizer SSB phase noise, harmonics, and general TX spurious RF outputs, will all decrease at a dB-per-dB basis or more. Therefore, testing at a 5 dB higher TX RF output power than specified, for a fixed output level TX emission is requirement, is significantly more worst-case than if tested at the originally specified TX RF output power level. This is the case with this requirement.

**Conclusion: All results from TX Regulatory Unwanted Emissions Including Harmonics tests show compliance with the specification.**

### 8.6 Transmitter Settling Time

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.6.6

DVT Plan: 6.3.6

Test Executive Scripts: Tx\_Sc21

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Tx Power Settling Time TelM	500 us max	131 us	131us	131us	131us	PASS	Start-up sequence based on digital control.
Tx Frequency Settling Time TelM	500 us max	101 us	97us	97us	93us	PASS	
Tx Power Settling Time TelC	2000 us max	131 us	131us	127us	131us	PASS	
Tx Frequency Settling Time TelC	2000 us max	97 us	97us	97us	93us	PASS	

Table 40 Transmitter Settling Time

**Conclusion: All results from Transmitter Settling Time tests show compliance with the specification.**

## 9 Receiver Test Results

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.5

### 9.1 Rx Filter -3dB Bandwidth

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.5.3

DVT Plan: 6.4.3

Test Executive Script: Rx\_Sc1

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Frequency (-3dB) TelC Narrowband	26 kHz min	34KHz	34KHz	34KHz	33KHz	PASS	Measured using baseband, not at carrier frequency. (Spec is 52 kHz at carrier frequency)
Frequency (-3dB) TelC Wideband	110 kHz min	134KHz	135KHz	129KHz	134KHz	PASS	Measured using baseband, not at carrier frequency. (Spec is 220 kHz at carrier frequency)

Table 41 Rx Filter -3dB Bandwidth (TelC)

**Conclusion:** All results from Rx Filter -3dB Bandwidth (TelC) tests show compliance with the specification.

## 9.2 Sensitivity (TelM and TelC)

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.5.2

DVT Plan: 6.4.4

Test Executive Script: Rx\_Sc2 through Rx\_Sc8

Impedance: 50 Ohm

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Sensitivity Level (0.01 PER) Mode 1	-106 dBm max	-108.50 dBm	-108.50 dBm	-108.50 dBm	-108.50 dBm	PASS	Test step resolution is .25dB but different seed levels yield results that don't fall on .25 increments.
Sensitivity Level (0.01 PER) Mode 2	-99.5 dBm max	-103.50 dBm	-104.00 dBm	-104.00 dBm	-103.75 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 2 12.6%EVM	-98.6 dBm max	-102.85 dBm	-103.60 dBm	-103.60 dBm	-103.35 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 3	-100.5 dBm max	-101.75 dBm	-102.00 dBm	-102.00 dBm	-102.00 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 4	-95 dBm max	-100.25 dBm	-100.50 dBm	-100.25 dBm	-100.25 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 4 12.6%EVM	-94.1 dBm max	-99.85 dBm	-100.10 dBm	-99.85 dBm	-100.35 dBm	PASS	
Sensitivity Level (0.0292 PER) Mode 5 Nominal Deviation Freeze Off	-94.5 dBm max	-98.25 dBm	-98.75 dBm	-98.50 dBm	-98.50 dBm	PASS	



<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>47 kHz Deviation</b> <b>Freeze Off</b>	-91.9 dBm max	-97.90 dBm	-98.15 dBm	-97.90 dBm	-98.40 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>Nominal Deviation</b> <b>Freeze On</b>	-95.4 dBm max	-98.90 dBm	-99.40 dBm	-98.90 dBm	-99.15 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>47 kHz Deviation</b> <b>Freeze On</b>	-93.3 dBm max	-98.80 dBm	-99.05 dBm	-98.80 dBm	-99.05 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 6</b>	-103 dBm max	-106.50 dBm	-106.75 dBm	-106.50 dBm	-106.50 dBm	<b>PASS</b>	

Table 42 Sensitivity (TelM and TelC) for 50 Ohm

Impedance: 2:1 VSWR

<b>Test Parameter</b>	<b>Spec</b>	<b>sn316</b>	<b>sn317</b>	<b>sn318</b>	<b>sn320</b>	<b>Compliance</b>	<b>Notes</b>
<b>Sensitivity Level (0.01 PER)</b> <b>Mode 1</b>	-103.9dBm max	-107.75 dBm	-107.50 dBm	-107.75 dBm	-107.50 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.01 PER)</b> <b>Mode 2</b>	-97.4 dBm max	-102.50 dBm	-103.00 dBm	-103.25 dBm	-103.00 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.01 PER)</b> <b>Mode 2</b> <b>12.6%EVM</b>	-97.4 dBm max	-102.10 dBm	-102.85 dBm	-102.10 dBm	-102.60 dBm	<b>PASS</b>	

<b>Sensitivity Level (0.01 PER)</b> <b>Mode 3</b>	-98.4 dBm max	-100.25 dBm	-100.50 dBm	-100.75 dBm	-100.50 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.01 PER)</b> <b>Mode 4</b>	-92.9 dBm max	-99.25 dBm	-99.50 dBm	-99.25 dBm	-99.50 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.01 PER)</b> <b>Mode 4</b> <b>12.6%EVM</b>	-92.9 dBm max	-98.85 dBm	-99.10 dBm	-98.85 dBm	-99.10 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>Nominal Deviation</b> <b>Freeze Off</b>	-92.4 dBm max	-97.25 dBm	-97.50 dBm	-97.50 dBm	-97.50 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>47 kHz Deviation</b> <b>Freeze Off</b>	-89.8 dBm max	-96.90 dBm	-97.40 dBm	-97.15 dBm	-97.15 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>Nominal Deviation</b> <b>Freeze On</b>	-93.3 dBm max	-97.90 dBm	-98.15 dBm	-98.15 dBm	-97.90 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>47 kHz Deviation</b> <b>Freeze On</b>	-91.2 dBm max	-98.05 dBm	-98.05 dBm	-97.80 dBm	-97.80 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 6</b>	-100.9 dBm max	-105.50 dBm	-105.75 dBm	-105.50 dBm	-105.50 dBm	<b>PASS</b>	

Table 43 Sensitivity (TelM and TelC) for 2:1 VSWR

Impedance: 50– j60

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Sensitivity Level (0.01 PER) Mode 1	-105.4 dBm max	-107.90 dBm	-107.90 dBm	-107.90 dBm	-108.15 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 2	-98.9 dBm max	-103.15 dBm	-102.90 dBm	-103.15 dBm	-103.65 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 2 12.6%EVM	-98 dBm max	-102.25 dBm	-103.00 dBm	-102.75 dBm	-103.25 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 3	-99.9 dBm max	-101.65 dBm	-101.40 dBm	-101.65 dBm	-101.40 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 4	-94.4 dBm max	-99.40 dBm	-99.65 dBm	-99.65 dBm	-99.65 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 4 12.6%EVM	-93.5 dBm max	-98.75 dBm	-99.50 dBm	-99.00 dBm	-99.50 dBm	PASS	
Sensitivity Level (0.0292 PER) Mode 5 Nominal Deviation Freeze Off	-93.9 dBm max	-97.40 dBm	-97.65 dBm	-97.65 dBm	-97.65 dBm	PASS	
Sensitivity Level (0.0292 PER) Mode 5 47 kHz Deviation Freeze Off	-91.3 dBm max	-97.05 dBm	-97.30 dBm	-97.05 dBm	-97.80 dBm	PASS	

<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>Nominal Deviation</b> <b>Freeze On</b>	-94.8 dBm max	-98.05 dBm	-98.30 dBm	-98.05 dBm	-98.30 dBm	PASS	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>47 kHz Deviation</b> <b>Freeze On</b>	-92.7 dBm max	-97.95 dBm	-98.20 dBm	-97.70 dBm	-98.20 dBm	PASS	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 6</b>	-102.4 dBm max	-105.65 dBm	-105.65 dBm	-105.40 dBm	-105.65 dBm	PASS	

Table 44 Sensitivity (TelM and TelC) for 50-j60 Load Impedance

Impedance: 5 + j0

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
<b>Sensitivity Level (0.01 PER)</b> <b>Mode 1</b>	-104.1 dBm max	-107.35 dBm	-107.60 dBm	-107.35 dBm	-107.60 dBm	PASS	
<b>Sensitivity Level (0.01 PER)</b> <b>Mode 2</b>	-97.6 dBm max	-102.35 dBm	-102.85 dBm	-102.85 dBm	-103.10 dBm	PASS	
<b>Sensitivity Level (0.01 PER)</b> <b>Mode 2</b> <b>12.6%EVM</b>	-96.7 dBm max	-102.20 dBm	-102.45 dBm	-102.45 dBm	-102.70 dBm	PASS	
<b>Sensitivity Level (0.01 PER)</b> <b>Mode 3</b>	-98.6 dBm max	-102.60 dBm	-102.60 dBm	-102.85 dBm	-102.85 dBm	PASS	
<b>Sensitivity Level (0.01 PER)</b> <b>Mode 4</b>	-93.1 dBm max	-98.60 dBm	-99.10 dBm	-98.85 dBm	-99.10 dBm	PASS	

<b>Sensitivity Level (0.01 PER)</b> <b>Mode 4</b> <b>12.6%EVM</b>	-92.2 dBm max	-98.45 dBm	-98.70 dBm	-97.95 dBm	-99.20 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>Nominal Deviation</b> <b>Freeze Off</b>	-92.6 dBm max	-96.85 dBm	-96.85 dBm	-97.10 dBm	-97.35 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>47 kHz Deviation</b> <b>Freeze Off</b>	-90 dBm max	-96.50 dBm	-96.75 dBm	-96.75 dBm	-97.00 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>Nominal Deviation</b> <b>Freeze On</b>	-93.5 dBm max	-97.25 dBm	-97.50 dBm	-97.50 dBm	-97.50 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>47 kHz Deviation</b> <b>Freeze On</b>	-91.4 dBm max	-97.40 dBm	-97.40 dBm	-97.40 dBm	-97.65 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 6</b>	-101.1 dBm max	-104.85 dBm	-105.10 dBm	-104.85 dBm	-105.10 dBm	<b>PASS</b>	

Table 45 Sensitivity (TelM and TelC) for 5+j0 Load Impedance

Impedance: 5 – j60

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Sensitivity Level (0.01 PER) Mode 1	-102 dBm max	-103.00 dBm	-104.75 dBm	-104.75 dBm	-105.25 dBm	PASS	sn316, Ch.30, 55C affected by SAW filter roll off
Sensitivity Level (0.01 PER) Mode 2	-95.5 dBm max	-98.25 dBm	-100.00 dBm	-100.50 dBm	-101.00 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 2 12.6%EVM	-94.6 dBm max	-97.85 dBm	-99.85 dBm	-99.85 dBm	-100.10 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 3	-96.5 dBm max	-98.75 dBm	-101.00 dBm	-101.00 dBm	-101.00 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 4	-91 dBm max	-95.00 dBm	-96.50 dBm	-96.75 dBm	-97.00 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 4 12.6%EVM	-90.1 dBm max	-95.10 dBm	-96.35 dBm	-96.35 dBm	-96.35 dBm	PASS	
Sensitivity Level (0.0292 PER) Mode 5 Nominal Deviation Freeze Off	-90.5 dBm max	-93.50 dBm	-95.00 dBm	-95.25 dBm	-95.25 dBm	PASS	
Sensitivity Level (0.0292 PER) Mode 5 47 kHz Deviation Freeze Off	-87.9 dBm max	-93.15 dBm	-94.90 dBm	-94.65 dBm	-95.15 dBm	PASS	

<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>Nominal Deviation</b> <b>Freeze On</b>	-91.4 dBm max	-93.90 dBm	-95.40 dBm	-95.65 dBm	-95.65 dBm	PASS	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>47 kHz Deviation</b> <b>Freeze On</b>	-89.3 dBm max	-94.05 dBm	-95.30 dBm	-95.55 dBm	-95.55 dBm	PASS	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 6</b>	-99 dBm max	-101.50 dBm	-102.75 dBm	-103.00 dBm	-103.25 dBm	PASS	

Table 46 Sensitivity (TelM and TelC) for 5-j60 Load Impedance

Impedance: 5 – j20

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
<b>Sensitivity Level (0.01 PER)</b> <b>Mode 1</b>	-103.2 dBm max	-105.95 dBm	-106.20 dBm	-105.95 dBm	-106.45 dBm	PASS	
<b>Sensitivity Level (0.01 PER)</b> <b>Mode 2</b>	-96.7 dBm max	-100.70 dBm	-101.45 dBm	-101.20 dBm	-101.95 dBm	PASS	
<b>Sensitivity Level (0.01 PER)</b> <b>Mode 2</b> <b>12.6%EVM</b>	-95.8 dBm max	-100.55 dBm	-101.05 dBm	-100.80 dBm	-101.55 dBm	PASS	
<b>Sensitivity Level (0.01 PER)</b> <b>Mode 3</b>	-97.7 dBm max	-101.70 dBm	-102.20 dBm	-101.70 dBm	-102.45 dBm	PASS	
<b>Sensitivity Level (0.01 PER)</b> <b>Mode 4</b>	-92.2 dBm max	-97.45 dBm	-97.95 dBm	-97.45 dBm	-97.95 dBm	PASS	

<b>Sensitivity Level (0.01 PER)</b> <b>Mode 4</b> <b>12.6%EVM</b>	-91.3 dBm max	-97.05 dBm	-97.30 dBm	-97.05 dBm	-97.80 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>Nominal Deviation</b> <b>Freeze Off</b>	-91.7 dBm max	-95.20 dBm	-95.70 dBm	-95.20 dBm	-96.20 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>47 kHz Deviation</b> <b>Freeze Off</b>	-89.1 dBm max	-94.85 dBm	-95.35 dBm	-94.85 dBm	-95.85 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>Nominal Deviation</b> <b>Freeze On</b>	-92.6 dBm max	-96.10 dBm	-96.35 dBm	-95.85 dBm	-96.60 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 5</b> <b>47 kHz Deviation</b> <b>Freeze On</b>	-90.5 dBm max	-96.00 dBm	-96.25 dBm	-95.75 dBm	-96.50 dBm	<b>PASS</b>	
<b>Sensitivity Level (0.0292 PER)</b> <b>Mode 6</b>	-100.2 dBm max	-103.45 dBm	-103.70 dBm	-103.20 dBm	-103.95 dBm	<b>PASS</b>	

Table 47 Sensitivity (TelM and TelC) for 5-j20 Load Impedance



Impedance: 9 – j20

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Sensitivity Level (0.01 PER) Mode 1 MICS	-104.3 dBm max	-107.55 dBm	-107.55 dBm	-107.05 dBm	-108.05 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 1 MEDS	-103.4 dBm max	-107.15 dBm	-107.15 dBm	-106.65 dBm	-107.40 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 2 MICS	-97.8 dBm max	-102.80 dBm	-102.80 dBm	-102.55 dBm	-103.55 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 2 MICS 12.6%EVM	-96.9 dBm max	-102.4 dBm	-102.65 dBm	-102.15 dBm	-102.90 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 2 MEDS	-96.9 dBm max	-101.90 dBm	-102.40 dBm	-101.90 dBm	-102.40 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 2 MEDS 12.6% EVM	-96.0 dBm max	-101.75 dBm	-101.75 dBm	-101.75 dBm	-102.25 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 3	-98.8 dBm max	-102.30 dBm	-102.30 dBm	-102.55 dBm	-102.80 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 4	-93.3 dBm max	-98.05 dBm	-98.55 dBm	-97.80 dBm	-98.80 dBm	PASS	
Sensitivity Level (0.01 PER) Mode 4 12.6%EVM	-92.4 dBm max	-98.15 dBm	-98.40 dBm	-98.15 dBm	-98.90 dBm	PASS	

Sensitivity Level (0.0292 PER) Mode 5 Nominal Deviation Freeze Off	-92.8 dBm max	-96.80 dBm	-96.80 dBm	-96.30 dBm	-97.05 dBm	PASS	
Sensitivity Level (0.0292 PER) Mode 5 47 kHz Deviation Freeze Off	-90.2 dBm max	-96.20 dBm	-96.45 dBm	-95.95 dBm	-96.70 dBm	PASS	
Sensitivity Level (0.0292 PER) Mode 5 Nominal Deviation Freeze On	-93.7 dBm max	-97.20 dBm	-97.20 dBm	-96.95 dBm	-97.45 dBm	PASS	
Sensitivity Level (0.0292 PER) Mode 5 47 kHz Deviation Freeze On	-91.6 dBm max	-97.35 dBm	-97.35 dBm	-96.85 dBm	-97.60 dBm	PASS	
Sensitivity Level (0.0292 PER) Mode 6	-101.3 dBm max	-104.80 dBm	-104.88 dBm	-104.00 dBm	-104.80 dBm	PASS	

Table 48 Sensitivity (TelM and TelC) for 9-j20 Load Impedance

Conclusion: All results from Sensitivity (TelM and TelC) tests show compliance with the specification.

### 9.3 Intermodulation Rejection (TeIM and TeIC)

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.5.4

DVT Plan: 6.4.5

Test Executive Script: Rx\_Sc2 and Rx\_Sc9

This test has a deviation (Deviation #20) from the DVT Plan. See Section 6 DVT plan Deviations for more information.

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
IM Rejection Mode 1, 3, 6	47 dB min	51.75 dB	51.75 dB	51.75 dB	51.75 dB	PASS	
IM Rejection Mode 2	45.3 dB min	49.75 dB	50.75 dB	50.75 dB	50.75 dB	PASS	
IM Rejection Mode 4 0dB attn.	42.3 dB min	47.75 dB	47.75 dB	47.75 dB	47.75 dB	PASS	ECO 096 reduced the specification requirement with 2dB
IM Rejection Mode 4 0-22dB attn.	42.3 dB min	47.05 dB	47.05 dB	47.05 dB	47.05 dB	PASS	ECO 096 reduced the specification requirement with 2dB
IM Rejection Mode 5 Nominal Deviation Freeze Off	41.6 dB min	45.75 dB	45.75 dB	46.75 dB	46.75 dB	PASS	
IM Rejection Mode 5 47 kHz Deviation Freeze Off	40.6 dB min	46.25 dB	45.75 dB	46.75 dB	46.5 dB	PASS	

Table 49 Intermodulation Rejection (TeIM and TeIC)

**Conclusion: All results from Intermodulation Rejection (TeIM and TeIC) tests show compliance with the specification.**

#### 9.4 Adjacent Channel Rejection (TelM and TelC)

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.5.5

DVT Plan: 6.4.6

Test Executive Script: Rx\_Sc2

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Adjacent Channel Rejection Mode 1, 2	35 dB min	37.50 dB	38.00 dB	36.75 dB	37.75 dB	PASS	
Adjacent Channel Rejection Mode 3-10 except 5	40 dB min	43.75 dB	44.75 dB	45.75 dB	45.00 dB	PASS	
Adjacent Channel Rejection Mode 5 Nominal Deviation Freeze Off	34.5 dB min	40.75 dB	40.75 dB	43.00 dB	41.00 dB	PASS	
Adjacent Channel Rejection Mode 5 47 kHz Deviation Freeze Off	34 dB min	40.00 dB	40.50 dB	42.25 dB	40.75 dB	PASS	

Table 50 Adjacent Channel Rejection (TelM and TelC)

**Conclusion: All results from Adjacent Channel Rejection (TelM and TelC) tests show compliance with the specification.**

9.5 Alternate Channel Rejection (TeIM and TeIC)

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.5.6

DVT Plan: 6.4.7

Test Executive Script: Rx\_Sc2

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Alternate Channel Rejection Mode 1, 2	44 dB min	50.25 dB	50.50 dB	50.00 dB	50.25 dB	PASS	
Alternate Channel Rejection Mode 3, 6-10	50 dB min	58.25 dB	58.00 dB	57.50 dB	56.75 dB	PASS	
Alternate Channel Rejection Mode 4	48.5 dB min	53.50 dB	53.50 dB	52.75 dB	53.25 dB	PASS	
Alternate Channel Rejection Mode 5 Nominal Deviation Freeze Off	45.5 dB min	51.75 dB	51.25 dB	51.25 dB	51.50 dB	PASS	
Alternate Channel Rejection Mode 5 47 kHz Deviation Freeze Off	42 dB min	50.75 dB	50.25 dB	50.75 dB	51.00 dB	PASS	

Table 51 Alternate Channel Rejection (TeIM and TeIC)

Conclusion: All results from Alternate Channel Rejection (TeIM and TeIC) tests show compliance with the specification.

### 9.6 External Spurious Response Rejection (TelM and TelC)

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.5.7  
DVT Plan: 6.4.8

Beyond Alternate + X:

Test Executive Script: Spur\_Sc2, Spur\_Sc3, Spur\_Sc4 and Spur\_Sc5

Note: The DVT Plan calls for performing the coarse spurious testing (covered by Spur\_Sc2, Spur\_Sc3 and Spur\_Sc4) at an interferer level 6dB above the specification and the fine spurious test at a level 3dB above the specification. The coarse spurious testing was actually run with an interferer level 18dB higher than specification for frequencies above 409MHz and below 398MHz, making it a much more conservative test. This “overtesting”, as it is referred to, is more than sufficient to cover the extra loss (on the Spur racks) of 2.54dB at 3GHz that is above the loss at 403.5MHz, which is calibrated out. The coarse spurious testing within the frequency range of 398 to 409MHz was overtested by 5.5dB for narrowband and 2dB for wideband as agreed with Medtronic. This “inband” range is close to 403.5MHz where the calibration was performed and therefore needs no additional overtesting.

The fine spurious test was actually performed with 7dB overtesting on the spur locations discovered in the coarse spurious test below 398MHz or above 409MHz. This is more conservative than the 3dB overtest in the DVT Plan. No spurious responses were found between 1GHz and 3GHz so the fine test did not require overtesting to cover the loss at 3GHz. Within the 398 to 409MHz range the fine test was run at the spec level since the loss calibration is valid in this range and the fine test uses a CW rather than a modulated interferer.

Test Parameter	Spec	sn337	sn338	sn343	Compliance	Notes
Interferer Level	-42 dBm min	-35.25 dBm	-35.25 dBm	-27.00 dBm	PASS	.

Table 52 External Spurious Response Rejection (TelM and TelC) beyond alternate + X

Within Alternate + X:

Test Executive Script: Rx\_Sc10 and Spur\_Sc1

The requirements for alternate + X are to be tested on both the spurious bench and the Rx bench. The spurious bench is used at one temperature and across many channels. The Rx bench tests a few channels at the temperature extremes. (DVT Plan Section 6.4.8 Step 8).

Test Parameter	Spec	sn316 (1)	sn317 (1)	sn318 (1)	sn320 (1)	sn337 (2)	sn338 (2)	sn343 (2)	Co mpli anc e
Alternate plus X channel Rejection Mode 1	A: -51.5	A.-47.00	A.-46.75	A.-46.50	A.-46.25	A.-47.75	A.-47.50	A.-48.00	P A S S
	B: -50	B.-44.50	B.-44.00	B.-44.00	B.-44.00	B.-45.00	B.-44.75	B.-45.00	
	C: -49.5	C.-42.75	C.-42.50	C.-42.25	C.-42.25	C.-42.75	C.-43.25	C.-42.75	
	D: -48	D.-42.50	D.-41.75	D.-41.25	D.-42.25	D.-40.75	D.-41.75	D.-40.75	
	E: -46.5	E.-40.25	E.-39.75	E.-40.00	E.-39.50	E.-39.75	E.-40.75	E.-39.75	
	F: -45.5	F.-38.75	F.-38.50	F.-38.25	F.-38.25	F.-38.75	F.-39.25	F.-38.50	
	G: -45	G.-38.00	G.-37.50	G.-37.50	G.-37.50	G.-37.50	G.-38.00	G.-36.75	
	H: -44	H.-37.00	H.-36.75	H.-36.75	H.-36.25	H.-36.00	H.-37.75	H.-36.25	
	I: -43.5	I.-36.25	I.-36.25	I.-36.00	I.-35.50	I.-35.00	I.-35.75	I.-35.50	
	J: -43	J.-35.50	J.-35.00	J.-35.00	J.-34.75	J.-34.25	J.-35.00	J.-34.00	
	K: -42.5	K.-34.75	K.-34.75	K.-35.25	K.-34.00	K.-33.50	K.-34.00	K.-33.25	
	K: Alt+11	dBm min	dBm	dBm	dBm	dBm	dBm	dBm	
	Alternate plus X channel Rejection Mode 2	A: -49	A.-44.75	A.-44.75	A.-44.75	A.-44.25	A.-45.25	A.-45.00	
B: -48		B.-42.25	B.-42.25	B.-42.00	B.-41.75	B.-42.50	B.-42.75	B.-43.25	
C: -48		C.-40.75	C.-40.5	C.-40.00	C.-40.25	C.-40.75	C.-41.00	C.-40.75	
D: -46.5		D.-40.00	D.-39.25	D.-39.50	D.-40.25	D.-38.75	D.-39.00	D.-39.25	
E: -44		E.-38.00	E.-37.25	E.-37.75	E.-37.00	E.-37.25	E.-37.75	E.-37.75	
F: -43.5		F.-37.00	F.-36.25	F.-36.25	F.-36.00	F.-37.00	F.-37.50	F.-36.75	
G: -43		G.-35.75	G.-35.00	G.-35.00	G.-34.75	G.-35.00	G.-35.50	G.-34.75	
F: Alt+6	dBm min	dBm	dBm	dBm	dBm	dBm	dBm		

Alternate plus 1 channel Rejection Mode 3, 7	-44 dBm min	-38.25 dBm	-38.00 dBm	-38.00 dBm	-38.00 dBm	-37.75 dBm	-38.25 dBm	-38.50 dBm	PASS
Alternate plus X channel Rejection Mode 5 nominal deviation A: Alt+1 B: Alt+2	A: -45.5 dBm min B: -42.5 dBm min	A.-38.50 dBm B.-35.75 dBm	A.-38.50 dBm B.-35.25 dBm	A.-38.25 dBm B.-35.50 dBm	A.-38.50 dBm B-35.25 dBm	A.-38.75 dBm B.-35.00 dBm	A.-38.75 dBm B.-36.50 dBm	A.-39.00 dBm B.-34.50 dBm	PASS
Alternate plus X channel Rejection Mode 5 nominal deviation FREEZE A: Alt+1 B: Alt+2	A: -45.5 dBm min B: -42.5 dBm min	A.-39.25 dBm B.-36.50 dBm	A.-39.00 dBm B.-36.25 dBm	A.-39.25 dBm B.-36.00 dBm	A.-38.75 dBm B-36.00 dBm	A.-39.50 dBm B.-35.75 dBm	A.-39.50 dBm B.-35.75 dBm	A.-39.50 dBm B.-35.50 dBm	PASS
Alternate plus X channel Rejection Mode 5 47kHz deviation A: Alt+1 B: Alt+2 C: Alt+3 D: Alt+4	A: -48.5 dBm min B: -45 dBm min C: -44 dBm min D: -43 dBm min	A.-35.50 dBm B.-32.50 dBm C.-31.00 dBm D.-30.00 dBm	A.-35.25 dBm B.-32.00 dBm C.-30.75 dBm D.-29.75 dBm	A.-35.00 dBm B.-32.25 dBm C.-30.50 dBm D.-29.75 dBm	A.-35.00 dBm B.-32.00 dBm C.-30.50 dBm D.-29.25 dBm	A.-35.50 dBm B-32.25 dBm C.-30.00 dBm D.-29.25 dBm	A.-43.25 dBm B.-38.50 dBm C.-37.50 dBm D.-36.25 dBm	A.-35.50 dBm B.-31.25 dBm C.-29.75 dBm D.-28.75 dBm	PASS



Alternate plus X channel Rejection Mode 5 47kHz deviation FREEZE A: Alt+1 B: Alt+2 C: Alt+3 D: Alt+4	A: -48.5	A.-36.75	A.-36.75	A.-36.00	A.-36.50	A.-36.50	A.-42.00	A.-36.75	P A S S
	B: -45	B.-33.25	B.-33.25	B.-33.00	B.-33.25	B.-32.75	B.-37.50	B.-32.50	
	C: -44	C.-31.25	C.-31.50	C.-31.25	C.-31.00	C.-30.50	C.-37.25	C.-30.50	
	D: -43	D.-30.50	D.-30.25	D.-30.00	D.-30.00	D.-29.25	D.-36.00	D.-29.25	
	dBm min	dBm	dBm	dBm	dBm	dBm	dBm	dBm	
Alternate plus 1 channel Rejection Mode 6	-42.5 dBm min	-37.75 dBm	-38.00 dBm	-37.75 dBm	-37.50 dBm	-38.25 dBm	-38.50 dBm	-37.75 dBm	P A S S

Table 53 External Spurious Response Rejection (TelM and TelC) within alternate + X

Note (1) : Rx bench tests a few channels at the temperature extremes.

Note (2) : The spurious bench is used at one temperature and across all channels.

**Conclusion:** All results from External Spurious Response Rejection for TelM and TelC, covering within and beyond alternate + X, shows compliance with the specification.

## 9.7 Blocking (TelM and TelC)

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.5.7

DVT Plan: 6.4.9

Test Executive Script: Rx\_Sc9

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Blocker Level Mode 1 Attn = 0	-42 dBm min	-29.00 dBm	-29.00 dBm	-28.50 dBm	-28.50 dBm	PASS	
Blocker Level Mode 1 Attn = 22	-20 dBm min	-15.00 dBm (1)	-15.00 dBm (1)	-15.00 dBm (1)	-15.00 dBm (1)	PASS	
Blocker Level Mode 5 Attn = 0	-42 dBm min	-29.25 dBm	-28.75 dBm	-29.25 dBm	-28.50 dBm	PASS	
Blocker Level Mode 5 Attn = 22	-20 dBm min	-15.00 dBm (1)	-15.00 dBm (1)	-15.00 dBm (1)	-15.00 dBm (1)	PASS	

Note: (1) The 22dB Attn results show that the spec is met but the margin from the spec is limited by the maximum signal level available from the lab equipment.

Table 54 Blocking (TelM and TelC)

**Conclusion: All results from Blocking (TelM and TelC) tests show compliance with the specification.**

## 9.8 AM Rejection (TelM and TelC)

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.5.8

DVT Plan: 6.4.10

Test Executive Script: Rx\_Sc2

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
AM Rejection	-58 dBm min	-50.25 dBm	-48.25 dBm	-51.50 dBm	-52.50 dBm	PASS	

Table 55 AM Rejection (TelM and TelC)

**Conclusion: All results from AM Rejection (TelM and TelC) tests show compliance with the specification.**

### 9.9 Dynamic Range (TelM and TelC)

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.5.12

DVT Plan: 6.4.12

Test Executive Script: Rx\_Sc9

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
PER Mode 2	0.01 PER max	.00833 PER	.00833 PER	.0083 PER	.0083 PER	PASS	PER = packet errors/total packets
PER Mode 4	0.01 PER max	.00317 PER	.0033 PER	.0017 PER	.0017 PER	PASS	
PER Mode 5 Nominal Deviation Freeze Off	0.0292 PER max	.00625 PER	.00825 PER	.004 PER	.0058 PER	PASS	
PER Mode 5 Nominal Deviation Freeze On	0.0292 PER max	.00325 PER	.00625 PER	.0035 PER	.0058 PER	PASS	

Table 56 Dynamic Range (TelM and TelC)

Conclusion: All results from Dynamic Range (TelM and TelC) tests show compliance with the specification.

### 9.10 RSSI Pre-Calibration Accuracy

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.5.15.2

DVT Plan: 6.4.13.1

Test Executive Script: Rx\_Sc11

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Mid-scale Offset	+/-16 dB	2.56 dB	2.24 dB	2.56 dB	2.56 dB	PASS	+/-16 dB from trimmed value

Table 57 RSSI Pre-Calibration Accuracy

Conclusion: All results from RSSI Pre-Calibration Accuracy tests show compliance with the specification.

## 9.11 RSSI Linearity

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.5.15.2

DVT Plan: 6.4.13.2

Test Executive Script: Rx\_Sc11

This test has a deviation (Deviation #13) from the DVT Plan. See Section 6 DVT plan Deviations for more information.

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Absolute Level (narrowband, MICS, 0dB Attenuation)	-108 dBm min	-106.64 min	-106.64 min	-106.64 min	-106.96 min	PASS	
	-104 dBm max	-105.36 max dBm	-105.36 max dBm	-105.36 max dBm	-105.36 max dBm		
Absolute Level (narrowband, MEDS, 0dB Attenuation)	-108 dBm min	-106.96 min	-106.96 min	-107.28 min	-106.96 min	PASS	
	-104 dBm max	-104.72 max dBm	-104.72 max dBm	-105.04 max dBm	-105.04 max dBm		
Absolute Level (narrowband, MICS, 22dB Attenuation)	-112 dBm min	-107.60 min	-106.96 min	-106.96 min	-107.28 min	PASS	
	-104 dBm max	-106.32 max dBm	-106.00 max dBm	-106.00 max dBm	-105.68 max dBm		
Absolute Level (narrowband, MEDS, 22dB Attenuation)	-112 dBm min	-108.56 min	-108.88 min	-108.24 min	-108.56 min	PASS	
	-104 dBm max	-105.68 max dBm	-105.68 max dBm	-105.68 max dBm	-105.36 max dBm		
Absolute Level (wideband, MICS, 0dB Attenuation)	-103 dBm min	-101.64 min	-101.64 min	-101.64 min	-101.96 min	PASS	
	-99 dBm max	-100.36 max dBm	-100.36 max dBm	-100.36 max dBm	-100.68 max dBm		
Absolute Level (wideband, MICS, 22dB Attenuation)	-107 dBm min	-101.96 min	-101.96 min	-101.96 min	-102.28 min	PASS	
	-99 dBm max	-101.00 max dBm	-101.00 max dBm	-101.00 max dBm	-101.00 max dBm		
Differentiable Level (MICS, -106 to -68 dBm, 0dB Attenuation, Narrowband)	2.5 dB (Delta of 1 code or more for every 2.5dB difference in level.)	Min Code Delta=6	Min Code Delta=4	Min Code Delta=6	Min Code Delta=6	PASS	

Differentiable Level (MICS, -68 to -55 dBm, 0dB Attenuation, Narrowband)	4 dB (Delta of 1 code or more for every 4 dB difference in level.)	Min Code Delta=5	Min Code Delta=5	Min Code Delta=5	Min Code Delta=5	PASS	
Differentiable Level (MEDS, -106 to -68 dBm, 0dB Attenuation, Narrowband)	2.5 dB (Delta of 1 code or more for every 2.5dB difference in level.)	Min Code Delta=5	Min Code Delta=3	Min Code Delta=4	Min Code Delta=5	PASS	
Differentiable Level (MEDS, -68 to -55 dBm, 0dB Attenuation, Narrowband)	4 dB	Min Code Delta=4	Min Code Delta=2	Min Code Delta=4	Min Code Delta=3	PASS	
Differentiable Level (MICS, -106 to -68 dBm, 22dB Attenuation, Narrowband)	4 dB	Min Code Delta=8	Min Code Delta=3	Min Code Delta=8	Min Code Delta=8	PASS	
Differentiable Level (MICS, -68 to -55 dBm, 22dB Attenuation, Narrowband)	6 dB	Min Code Delta=8	Min Code Delta=7	Min Code Delta=7	Min Code Delta=7	PASS	
Differentiable Level (MEDS, -106 to -68 dBm, 22dB Attenuation, Narrowband)	6 dB	Min Code Delta=10	Min Code Delta=7	Min Code Delta=11	Min Code Delta=9	PASS	
Differentiable Level (MEDS, -68 to -55 dBm, 22dB Attenuation, Narrowband)	8 dB	Min Code Delta=8	Min Code Delta=5	Min Code Delta=7	Min Code Delta=6	PASS	
Differentiable Level (MICS, -101 to -68 dBm, 0dB Attenuation, wideband)	2.5 dB	Min Code Delta=6	Min Code Delta=3	Min Code Delta=5	Min Code Delta=6	PASS	

Differentiable Level (MICS, -68 to -55 dBm, 0dB Attenuation, wideband)	4 dB	Min Code Delta=7	Min Code Delta=6	Min Code Delta=6	Min Code Delta=6	PASS	
Differentiable Level (MICS, -101 to -68 dBm, 22dB Attenuation, wideband)	4 dB	Min Code Delta=8	Min Code Delta=6	Min Code Delta=9	Min Code Delta=7	PASS	
Differentiable Level (MICS, -68 to -55 dBm, 22dB Attenuation, wideband)	6 dB	Min Code Delta=10	Min Code Delta=9	Min Code Delta=8	Min Code Delta=10	PASS	

Table 58 RSSI Linearity

Conclusion: All results from RSSI Linearity tests show compliance with the specification.

### 9.12 RSSI Pulse Response

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.5.15.4  
DVT Plan: 6.4.13.3

This test has a deviation (Deviation #4) from the DVT Plan. See Section 6 DVT plan Deviations for more information.

Test Executive Script: Rx\_Sc12

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
RSSI Pulse Response	CCA Codes of margin Greater than 0	11	10	10	10	PASS	

Table 59 RSSI Pulse Response

**Conclusion: All results from RSSI Pulse Response tests show compliance with the specification.**

### 9.13 RSSI Monotonicity and Saturation without Foldback

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.5.15.1 and 2.3.4.5.15.3

DVT Plan: 6.4.13.4

Test Executive Script: Rx\_Sc11

Note: Monotonicity and Foldback are evaluated by comparing values 2dB apart and this is done at all levels that are 0.5dB apart. For Foldback, negative steps can occur but they are all isolated from each other and all occur above -55dBm.

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Monotonicity -109 to -50 dBm	Monotonic	PASS	PASS	PASS	PASS	PASS	Pass/Fail
Foldback -112 to -44 dBm	No Foldback	PASS	PASS	PASS	PASS	PASS	Pass/Fail

Table 60 RSSI Monotonicity and Saturation without Foldback

**Conclusion: All results from RSSI Monotonicity and Saturation without Foldback tests show compliance with the specification.**

### 9.14 Rx Conducted Spurious Emissions

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.5.16

DVT Plan: 6.4.14.1

Test Executive Script: Tx\_Sc23 (test is run on the Tx DVT system)

This test has a deviation (Deviation #6) from the DVT Plan. See Section 6 DVT plan Deviations for more information.

Note on use of Peak Detector vs CISPR Detector: The Regulatory Tx Harmonics Spurious and Rx Conducted Spurious Emissions tests have requirements to test for unwanted emissions using a CISPR detector in the spectrum analyzer. The DVT tests use a peak detector instead in order to save time. Close to the MEDS/MICS bands the CISPR detector is used but it is slow. This substitution of a peak detector for the CISPR detector is justified by lab data reported in eBinder document #139681 version 1 dated January 19, 2011. The conclusion of that document states: "The CISPR method measures a peak power that is 0.5dB lower than the approximation method. This means that the approximation method is conservative when measuring emissions and safe to use." See Deviation #6.

Test Parameter	Spec	sn302	sn311	sn313	sn314	Compliance	Notes
Power Level from 9 kHz to 1 GHz	-57 dBm max	-81.6	-82.0	-81.2	-81.3	PASS	
Power Level from 1 GHz to 4.06 GHz	-57 dBm max	-64.7	-65.0	-64.6	-64.6	PASS	

Table 61 Rx Conducted Spurious Emissions

**Conclusion: All results from Rx Conducted Spurious Emissions tests show compliance with the specification.**



## 10 Maximum Signal Power at Antenna Test Results

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.2.1

DVT Plan: 6.4.15

Test Executive Script: Spur\_Sc6 and Spur\_Sc7

Test Parameter	Spec	sn346	sn347	sn348	sn352	Compliance	Notes
<b>RSSI Mode 4 0 dB Attenuation</b>	Abs level: -103 dBm min -99 dBm max Diff level: -106 to -68 dBm: 2.5dB Diff level: -68 to -55 dBm: 4 dB	-100.84 dBm min -100.84 dBm max Min code diff = 5 Min code diff = 3	-100.52 dBm min -100.52 dBm max Min code diff = 5 Min code diff = 2	-101.16 dBm min -100.84 dBm max Min code diff = 5 Min code diff = 3	-100.68 dBm min -100.68 dBm max Min code diff = 5 Min code diff = 3	<b>PASS</b>	Comparison was performed. Absolute numbers are worst case of both pre and post results.
<b>Sensitivity Mode 4 0dB Attenuation</b>	-95dBm	Delta = 0 dB, -101.25 dBm worst case	Delta = 0.25 dB, -101.5 dBm worst case	Delta = 0.25 dB, -101.25 dBm worst case	Delta = 0 dB, -101.5 dBm worst case	<b>PASS</b>	Deltas and absolute numbers are worst case.
<b>Sensitivity Mode 4 2dB Attenuation</b>	-93dBm	Delta = 0.25 dB, -100.5 dBm worst case	Delta = 0.5 dB, -100.5 dBm worst case	Delta = 0 dB, -100.75 dBm worst case	Delta = 0 dB, -100.75 dBm worst case	<b>PASS</b>	
<b>Sensitivity Mode 4 22dB Attenuation</b>	-73dBm	Delta = 0.25 dB, -81 dBm worst case	Delta = 0.5 dB, -81.5 dBm worst case	Delta = 0 dB, -81.75 dBm worst case	Delta = 0.25 dB, -81.5 dBm worst case	<b>PASS</b>	
<b>AM Rejection Mode 4</b>	-58dBm	Delta = 0.25 dB, -50 dBm	Delta = 0.75 dB, -48.25 dBm	Delta = 0.5 dB, -49.75 dBm	Delta = 0.25 dB, -49.75 dBm	<b>PASS</b>	
<b>Standby Current (Disabled Static Current @25C)</b>	50nA	Delta = 0.30 nA, 2.74 nA	Delta = 0.24 nA, 2.74 nA	Delta = 0.30nA, 2.73 nA	Delta = 0.06nA, 2.64 nA	<b>PASS</b>	
<b>Tx Power</b>	-4dBm min for MICS band	Delta = 0.08 dB, -3.58 dBm	Delta = 0.10 dB, -3.57 dBm	Delta = 0.08dB, -3.58 dBm	Delta = 0.106dB, -3.57 dBm	<b>PASS</b>	

Table 62 Max Power at Antenna – First four modules (tested at 64 MHz)

Test Parameter	Spec	sn353	sn354	sn355	sn356	Compliance	Notes
<b>RSSI Mode 4 0 dB Attenuation</b>	Abs level: -103 dBm min -99 dBm max Diff level: -106 to -68 dBm: 2.5dB Diff level: -68 to -55 dBm: 4 dB	-101 dBm max -101 dBm min Min code diff = 5 Min code diff = 2	-100.68 dBm max -100.68 dBm min Min code diff = 5 Min code diff = 4	-100.68 dBm max -100.68 dBm min Min code diff = 5 Min code diff = 4	-100.84 dBm max -100.84 dBm min Min code diff = 5 Min code diff = 3	<b>PASS</b>	Absolute numbers are worst case of both pre and post results.
<b>Sensitivity Mode 4 0dB Attenuation</b>	-95dBm	Delta = 0 dB, -101.25 dBm worst case	Delta = 0.25 dB, -101.25 dBm worst case	Delta = 0 dB, -101 dBm worst case	Delta = 0.25 dB, -101.25 dBm worst case	<b>PASS</b>	Deltas and absolute numbers are worst case.
<b>Sensitivity Mode 4 2dB Attenuation</b>	-93dBm	Delta = 0 dB, -100.5 dBm worst case	Delta = 0 dB, -100.5 dBm worst case	Delta = 0.25 dB, -100 dBm worst case	Delta = 0.25 dB, -100.5 dBm worst case	<b>PASS</b>	
<b>Sensitivity Mode 4 22dB Attenuation</b>	-73dBm	Delta = 0 dB, -81.75 dBm worst case	Delta = 0 dB, -81.25 dBm worst case	Delta = 0.25 dB, -81.25 dBm worst case	Delta = 0 dB, -81 dBm worst case	<b>PASS</b>	
<b>AM Rejection Mode 4</b>	-58dBm	Delta = 0.25 dB, -47.75 dBm	Delta = 0.25 dB, -46.25 dBm	Delta = 1.75 dB, -49 dBm	Delta = 0.5 dB, -49.75 dBm	<b>PASS</b>	
<b>Standby Current (Disabled Static Current @25C)</b>	50nA	Delta = 0.13 nA, 2.86 nA	Delta = 0.13 nA, 2.91 nA	Delta = 0.25 nA, 2.96 nA	Delta = 0.21 nA, 2.93 nA	<b>PASS</b>	
<b>Tx Power</b>	-4dBm min for MICS band	Delta = 0.12 dB, -3.54 dBm	Delta = 0.09 dB, -3.55 dBm	Delta = 0.10dB, -3.55 dBm	Delta = 0.10 dB, -3.58 dBm	<b>PASS</b>	

Table 63 Max Power at Antenna – second four modules (tested at 128 MHz)

Test Parameter	Spec	sn357	sn358	sn359	sn360	Compliance	Notes
<b>RSSI Mode 4 0 dB Attenuation</b>	Abs level: -103 dBm min -99 dBm max Diff level: -106 to -68 dBm: 2.5dB Diff level: -68 to -55 dBm: 4 dB	-100.84 dBm max -100.84 dBm min Min code diff = 5 Min code diff = 4	-100.68 dBm max -100.68 dBm min Min code diff = 5 Min code diff = 4	-100.68 dBm max -100.84 dBm min Min code diff = 5 Min code diff = 3	-100.84 dBm max -100.dBm min Min code diff = 5 Min code diff = 3	<b>PASS</b>	Absolute numbers are worst case of both pre and post results.
<b>Sensitivity Mode 4 0dB Attenuation</b>	-95dBm	Delta = 0 dB, -101.5 dBm worst case	Delta = 0.25 dB, -101.25 dBm worst case	Delta = 0.5 dB, -101.25 dBm worst case	Delta = 0.25 dB, -101.25 dBm worst case	<b>PASS</b>	Deltas and absolute numbers are worst case.
<b>Sensitivity Mode 4 2dB Attenuation</b>	-93dBm	Delta = 0.25 dB, -100.5 dBm worst case	Delta = 0.5 dB, -100.25 dBm worst case	Delta = 0.25 dB, -100 dBm worst case	Delta = 0 dB, -100.75 dBm worst case	<b>PASS</b>	
<b>Sensitivity Mode 4 22dB Attenuation</b>	-73dBm	Delta = 0.25 dB, -81.5 dBm worst case	Delta = 0.25 dB, -82.25 dBm worst case	Delta = 0 dB, -81.5 dBm worst case	Delta = 0.25 dB, -81.5 dBm worst case	<b>PASS</b>	
<b>AM Rejection Mode 4</b>	-58dBm	Delta = 0.25 dB, -47.25 dBm	Delta = 0.5 dB, -50.5 dBm	Delta = 0.75 dB, -48 dBm	Delta = 0.75 dB, -45.25 dBm	<b>PASS</b>	
<b>Standby Current (Disabled Static Current @25C)</b>	50nA	Delta = 0.12 nA, 2.78 nA	Delta = 0.12 nA, 2.92 nA	Delta = 0.14 nA, 2.66 nA	Delta = 0.22 nA, 2.74 nA	<b>PASS</b>	
<b>Tx Power</b>	-4dBm min for MICS band	Delta = 0.08 dB, -3.54 dBm	Delta = 0.09 dB, -3.56 dBm	Delta = 0.09 dB, -3.58 dBm	Delta = 0.07dB, -3.52 dBm	<b>PASS</b>	

Table 64 Max Power at Antenna – Third four modules (tested at 403.5 MHz)

Test Parameter	Spec	sn362	sn363	sn366	sn368	Compliance	Notes
<b>RSSI Mode 4 0 dB Attenuation</b>	Abs level: -103 dBm min -99 dBm max Diff level: -106 to -68 dBm: 2.5dB Diff level: -68 to -55 dBm: 4 dB	-100.84 dBm min -100.84 dBm max Min code diff = 5 Min code diff = 3	-101.16 dBm min -101.16 dBm max Min code diff = 5 Min code diff = 2	-100.84 dBm min -100.84 dBm max Min code diff = 5 Min code diff = 3	-101.16 dBm min -100.52 dBm max Min code diff = 5 Min code diff = 4	<b>PASS</b>	Absolute numbers are worst case of both pre and post results.
<b>Sensitivity Mode 4 0dB Attenuation</b>	-95dBm	Delta = 0.5 dB, -101 dBm worst case	Delta = 0.25 dB, -101.25 dBm worst case	Delta = 0.25 dB, -101 dBm worst case	Delta = 0.25 dB, -101.25 dBm worst case	<b>PASS</b>	Deltas and absolute numbers are worst case.
<b>Sensitivity Mode 4 2dB Attenuation</b>	-93dBm	Delta = 0.25 dB, -100.5 dBm worst case	Delta = 0.25 dB, -100.5 dBm worst case	Delta = 0.25 dB, -100.25 dBm worst case	Delta = 0.25 dB, -100.5 dBm worst case	<b>PASS</b>	
<b>Sensitivity Mode 4 22dB Attenuation</b>	-73dBm	Delta = 0 dB, -81.75 dBm worst case	Delta = 0 dB, -82 dBm worst case	Delta = 0 dB, -81.75 dBm worst case	Delta = 0.25 dB, -81.75 dBm worst case	<b>PASS</b>	
<b>AM Rejection Mode 4</b>	-58dBm	Delta = 0.5 dB, -48 dBm	Delta = 0.5 dB, -47 dBm	Delta = 0.25 dB, -48.75 dBm	Delta = 0.25 dB, -49.75 dBm	<b>PASS</b>	
<b>Standby Current (Disabled Static Current @25C)</b>	50nA	Delta = 0.25 nA, 2.77 nA	Delta = 0.19 nA, 2.75 nA	Delta = 0.27 nA, 2.75 nA	Delta = 0.14 nA, 2.65 nA	<b>PASS</b>	
<b>Tx Power</b>	-4dBm min for MICS band	Delta = 0.11 dB, -3.60 dBm	Delta = 0.09 dB, -3.56 dBm	Delta = 0.12 dB, -3.57 dBm	Delta = 0.12 dB, -3.57 dBm	<b>PASS</b>	

Table 65 Max Power at Antenna – Fourth four modules (tested at 450 MHz)

**Conclusion:** All results from Max Power at Antenna tests show compliance with the specification.

## 11 Wakeup Test Results

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.8.4

DVT Plan: 6.5 and 6.6

This test has a deviation (Deviation #12) from the DVT Plan. See Section 6 DVT plan Deviations for more information.

### 11.1 Clear Channel Assessment Dwell Times

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.10

DVT Plan: 6.5.1.1

Test Executive Script: Rx\_Sc12

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Dwell Times	Nominal	A: 0.630	A: 0.630	A: 0.630	A: 0.630	PASS	No Tolerances were given in the specification.
	A: 0.606 ms	B: 1.27	B: 1.27	B: 1.27	B: 1.27		
	B: 1.25 ms	C: 2.52	C: 2.52	C: 2.52	C: 2.52		
	C: 2.5 ms	D: 5.03	D: 5.03	D: 5.03	D: 5.03		
	D: 5 ms	E: 10.03	E: 10.03	E: 10.03	E: 10.03		
	E: 10 ms	F: 20.03	F: 20.03	F: 20.03	F: 20.03		
	F: 20 ms	G: 40.04	G: 40.04	G: 40.04	G: 40.04		
	G: 40 ms	H: 80.06	H: 80.06	H: 80.06	H: 80.06		
	H: 80 ms	ms	ms	ms	ms		

Table 66 Clear Channel Assessment Dwell Times

**Conclusion: All results from Clear Channel Assessment Dwell Times tests show compliance with the specification.**

### 11.2 Wakeup Transmit Time

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.8.1

DVT Plan: 6.5.2.1

Test Executive Script: Rx\_Sc12

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Wakeup Transmit Time Wide	5 seconds max.	4.98 s	4.98 s	4.98 s	4.98 s	PASS	Time should be close to 5 seconds without going over.
Wakeup Transmit Time Narrow	5 seconds max.	4.95 s	4.95 s	4.95 s	4.95 s	PASS	

Table 67 Wakeup Transmit Times

Conclusion: All results from Wakeup Transmit Times tests show compliance with the specification.

### 11.3 Wakeup Sensitivity

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.8.4

DVT Plan: 6.6.1

Test Executive Script: Rx\_Sc13 through Rx\_Sc19 and Rx\_Sc21

Impedance: 50+j0

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
WU Sensitivity Narrowband Center Hardware Channel	-103 dBm max	-105.75 dBm	-105.50 dBm	-105.50 dBm	-105.75 dBm	PASS	
WU Sensitivity Narrowband Lower Hardware Channel	-101.5 dBm max	-105.00 dBm	-104.75 dBm	-104.75 dBm	-105.50 dBm	PASS	

<b>WU Sensitivity Narrowband Upper Hardware Channel</b>	-101.5 dBm max	-104.50 dBm	-104.25 dBm	-104.00 dBm	-104.75 dBm	<b>PASS</b>	
<b>WU Sensitivity Wideband Center Hardware Channel</b>	-97.5 dBm max	-104.00 dBm	-104.25 dBm	-104.00 dBm	-104.00 dBm	<b>PASS</b>	
<b>WU Sensitivity Wideband Lower Hardware Channel</b>	-96 dBm max	-104.00 dBm	-103.50 dBm	-103.75 dBm	-103.00 dBm	<b>PASS</b>	
<b>WU Sensitivity Wideband Upper Hardware Channel</b>	-96 dBm max	-103.00 dBm	-102.50 dBm	-102.25 dBm	-101.75 dBm	<b>PASS</b>	Variation between Low, Upp, & Centr is within expected range. Asymmetry between Upp and Low due to Weaver filter roll off

Table 68 Wakeup Sensitivity

Impedance: VSWR 2:1

<b>Test Parameter</b>	<b>Spec</b>	<b>sn316</b>	<b>sn317</b>	<b>sn318</b>	<b>sn320</b>	<b>Compl iance</b>	<b>Notes</b>
<b>WU Sensitivity Narrowband Center Hardware Channel</b>	-101.5 dBm max	-104.75 dBm	-104.50 dBm	-104.75 dBm	-105.00 dBm	<b>PASS</b>	
<b>WU Sensitivity Narrowband Lower Hardware Channel</b>	-100 dBm max	-105.75 dBm	-105.50 dBm	-105.25 dBm	-106.00 dBm	<b>PASS</b>	
<b>WU Sensitivity Narrowband Upper Hardware Channel</b>	-100 dBm max	-103.50 dBm	-103.50 dBm	-103.25 dBm	-103.75 dBm	<b>PASS</b>	

<b>WU Sensitivity Wideband Center Hardware Channel</b>	-96 dBm max	-103.00 dBm	-103.25 dBm	-102.75 dBm	-102.75 dBm	<b>PASS</b>	
<b>WU Sensitivity Wideband Lower Hardware Channel</b>	-94.5 dBm max	-102.25 dBm	-102.25 dBm	-102.75 dBm	-102.00 dBm	<b>PASS</b>	
<b>WU Sensitivity Wideband Upper Hardware Channel</b>	-94.5 dBm max	-101.50 dBm	-101.00 dBm	-101.00 dBm	-100.50 dBm	<b>PASS</b>	Variation between Low, Upp, & Centr is within expected range. Asymmetry between Upp and Low due to Weaver filter roll off

Table 69 Wakeup Sensitivity

Impedance: 50 -j60

<b>Test Parameter</b>	<b>Spec</b>	<b>sn316</b>	<b>sn317</b>	<b>sn318</b>	<b>sn320</b>	<b>Compli ance</b>	<b>Notes</b>
<b>WU Sensitivity Narrowband Center Hardware Channel</b>	-102.4 dBm max	-104.90 dBm	-104.90 dBm	-104.40 dBm	-105.15 dBm	<b>PASS</b>	
<b>WU Sensitivity Narrowband Lower Hardware Channel</b>	-100.9 dBm max	-104.15 dBm	-104.15 dBm	-103.90 dBm	-104.65 dBm	<b>PASS</b>	
<b>WU Sensitivity Narrowband Upper Hardware Channel</b>	-100.9 dBm max	-103.90 dBm	-103.90 dBm	-103.40 dBm	-104.40 dBm	<b>PASS</b>	
<b>WU Sensitivity Wideband Center Hardware Channel</b>	-96.9 dBm max	-102.65 dBm	-103.65 dBm	-103.40 dBm	-103.90 dBm	<b>PASS</b>	



<b>WU Sensitivity Wideband Lower Hardware Channel</b>	-95.4 dBm max	-103.40 dBm	-102.90 dBm	-102.90 dBm	-102.90 dBm	PASS	
<b>WU Sensitivity Wideband Upper Hardware Channel</b>	-95.4 dBm max	-101.90 dBm	-100.65 dBm	-100.65 dBm	-101.65 dBm	PASS	Variation between Low, Upp, & Centr is within expected range. Asymmetry between Upp and Low due to Weaver filter roll off

Table 70 Wakeup Sensitivity

Impedance: 5 + j0

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
<b>WU Sensitivity Narrowband Center Hardware Channel</b>	-102.4 dBm max	-104.60 dBm	-104.35 dBm	-104.35 dBm	-104.85 dBm	PASS	
<b>WU Sensitivity Narrowband Lower Hardware Channel</b>	-100.9 dBm max	-104.10 dBm	-103.85 dBm	-103.60 dBm	-104.10 dBm	PASS	
<b>WU Sensitivity Narrowband Upper Hardware Channel</b>	-100.9 dBm max	-103.60 dBm	-103.35 dBm	-103.10 dBm	-103.85 dBm	PASS	
<b>WU Sensitivity Wideband Center Hardware Channel</b>	-96.9 dBm max	-103.35 dBm	-103.10 dBm	-102.85 dBm	-102.85 dBm	PASS	
<b>WU Sensitivity Wideband Lower Hardware Channel</b>	-95.4 dBm max	-102.85 dBm	-102.60 dBm	-102.85 dBm	-102.35 dBm	PASS	

<b>WU Sensitivity Wideband Upper Hardware Channel</b>	-95.4 dBm max	-101.60 dBm	-100.10 dBm	-101.35 dBm	-100.60 dBm	PASS	Variation between Low, Upp, & Centr is within expected range. Asymmetry between Upp and Low due to Weaver filter roll off
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Table 71 Wakeup Sensitivity

Impedance: 5 -j60

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
<b>WU Sensitivity Narrowband Center Hardware Channel</b>	-99 dBm max	-101.75 dBm	-102.00 dBm	-101.50 dBm	-102.00 dBm	PASS	
<b>WU Sensitivity Narrowband Lower Hardware Channel</b>	-97.5 dBm max	-101.50 dBm	-101.50 dBm	-101.25 dBm	-101.75 dBm	PASS	
<b>WU Sensitivity Narrowband Upper Hardware Channel</b>	-97.5 dBm max	-100.75 dBm	-101.00 dBm	-100.75 dBm	-100.75 dBm	PASS	
<b>WU Sensitivity Wideband Center Hardware Channel</b>	-93.5 dBm max	-101.50 dBm	-100.50 dBm	-100.50 dBm	-100.75 dBm	PASS	
<b>WU Sensitivity Wideband Lower Hardware Channel</b>	-92 dBm max	-100.25 dBm	-99.75 dBm	-100.50 dBm	-99.25 dBm	PASS	
<b>WU Sensitivity Wideband Upper Hardware Channel</b>	-92 dBm max	-99.00 dBm	-98.00 dBm	-99.00 dBm	-98.50 dBm	PASS	Variation between Low, Upp, & Centr is within expected range. Asymmetry between Upp and Low due to Weaver filter roll off

Table 72 Wakeup Sensitivity

Impedance: 5 – j20

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
WU Sensitivity Narrowband Center Hardware Channel	-100.2 dBm max	-102.70 dBm	-103.20 dBm	-102.70 dBm	-103.45 dBm	PASS	
WU Sensitivity Narrowband Lower Hardware Channel	-98.7 dBm max	-102.20 dBm	-102.45 dBm	-101.95 dBm	-103.20 dBm	PASS	
WU Sensitivity Narrowband Upper Hardware Channel	-98.7 dBm max	-101.70 dBm	-101.95 dBm	-101.45 dBm	-102.45 dBm	PASS	
WU Sensitivity Wideband Center Hardware Channel	-94.7 dBm max	-101.95 dBm	-101.45 dBm	-101.20 dBm	-101.95 dBm	PASS	
WU Sensitivity Wideband Lower Hardware Channel	-93.2 dBm max	-101.20 dBm	-100.70 dBm	-100.45 dBm	-101.20 dBm	PASS	
WU Sensitivity Wideband Upper Hardware Channel	-93.2 dBm max	-99.20 dBm	-99.20 dBm	-98.95 dBm	-99.95 dBm	PASS	Variation between Low, Upp, & Centr is within expected range. Asymmetry between Upp and Low due to Weaver filter roll off

Table 73 Wakeup Sensitivity

Impedance: 9 – j20

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
WU Sensitivity Narrowband MICS Center Hardware Channel	-101.3 dBm max	-104.05 dBm	-104.05 dBm	-103.80 dBm	-105.05 dBm	PASS	
WU Sensitivity Narrowband MICS Lower Hardware Channel	-99.8 dBm max	-104.55 dBm	-104.30 dBm	-104.30 dBm	-105.30 dBm	PASS	
WU Sensitivity Narrowband MICS Upper Hardware Channel	-99.8 dBm max	-104.30 dBm	-103.80 dBm	-103.30 dBm	-104.80 dBm	PASS	
WU Sensitivity Narrowband MEDS Center Hardware Channel	-100.4 dBm max	-103.90 dBm	-103.90 dBm	-103.65 dBm	-104.65 dBm	PASS	
WU Sensitivity Narrowband MEDS Lower Hardware Channel	-98.9 dBm max	-103.40 dBm	-103.15 dBm	-102.90 dBm	-103.65 dBm	PASS	
WU Sensitivity Narrowband MEDS Upper Hardware Channel	-98.9 dBm max	-102.90 dBm	-102.65 dBm	-102.40 dBm	-103.40 dBm	PASS	
WU Sensitivity Wideband Center Hardware Channel	-95.8 dBm max	-102.45 dBm	-101.95 dBm	-101.95 dBm	-102.70 dBm	PASS	

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
WU Sensitivity Wideband Lower Hardware Channel	-94.3 dBm max	-102.30 dBm	-102.05 dBm	-102.30 dBm	-101.30 dBm	PASS	
WU Sensitivity Wideband Upper Hardware Channel	-94.3 dBm max	-101.05 dBm	-100.80 dBm	-99.55 dBm	-100.55 dBm	PASS	Variation between Low, Upp, & Centr is within expected range. Asymmetry between Upp and Low due to Weaver filter roll off

Table 74 Wakeup Sensitivity

Conclusion: All results from Wakeup Sensitivity tests show compliance with the specification.

### 11.4 Wakeup Dynamic Range

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.8.4

DVT Plan: 6.6.1

Test Executive Script: Rx\_Sc13 through Rx\_Sc19 and Rx\_Sc21

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Missed Detect Rate (MDR) Narrowband Center Hardware Channel	5% MDR max	0.33% MDR	0.67% MDR	0.00% MDR	1.00% MDR	PASS	From sensitivity to sensitivity +3 dB.
Missed Detect Rate (MDR) Narrowband Center Hardware Channel	2% MDR max	0% MDR	0% MDR	0% MDR	0% MDR	PASS	From sensitivity +3 dB to top of range.

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Missed Detect Rate (MDR) Narrowband Side (Weaver) Hardware Channel	5% MDR max	0.67% MDR	1.00% MDR	0.67% MDR	0.67% MDR	PASS	From sensitivity to sensitivity +3 dB.
Missed Detect Rate (MDR) Narrowband Side (Weaver) Hardware Channel	2% MDR max	0% MDR	0% MDR	0% MDR	0% MDR	PASS	From sensitivity +3 dB to top of range.
Missed Detect Rate (MDR) Wideband Center Hardware Channel	5% MDR max	1.33% MDR	2.67% MDR	1.00% MDR	1.33% MDR	PASS	From sensitivity to sensitivity +3 dB.
Missed Detect Rate (MDR) Wideband Center Hardware Channel	2% MDR max	0.67% MDR	0.67% MDR	0.67% MDR	1.0% MDR	PASS	From sensitivity +3 dB to top of range.
Missed Detect Rate (MDR) Wideband Side (Weaver) Hardware Channel	5% MDR max	2.00% MDR	2.67% MDR	2.00% MDR	1.67% MDR	PASS	From sensitivity to sensitivity +3 dB
Missed Detect Rate (MDR) Wideband Side (Weaver) Hardware Channel	2% MDR max	1.0% MDR	0.67% MDR	0.67% MDR	1.0% MDR	PASS	From sensitivity +3 dB to top of range.

Table 75 Dynamic Range

Conclusion: All results from Wakeup Dynamic Range tests show compliance with the specification.

### 11.5 Wakeup Intermodulation Rejection (IMR)

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.8.4

DVT Plan: 6.6.2

Test Executive Script: Rx\_Sc21

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
IMR Narrowband Center	44 dB min	52.75 dB	51.75 dB	52.75 dB	51.75 dB	PASS	5% MDR
IMR Narrowband Lower	44 dB min	51.75 dB	52.75 dB	52.75 dB	51.75 dB	PASS	
IMR Narrowband Upper	44 dB min	51.75 dB	51.75 dB	51.75 dB	51.75 dB	PASS	
IMR Wideband Center	44 dB min	50.75 dB	50.75 dB	50.75 dB	49.75 dB	PASS	
IMR Wideband Lower	44 dB min	50.75 dB	50.75 dB	49.75 dB	50.75 dB	PASS	
IMR Wideband Upper	44 dB min	49.75 dB	48.75 dB	48.75 dB	49.75 dB	PASS	

Table 76 Wakeup Intermodulation Rejection

Conclusion: All results from Wakeup Intermodulation Rejection tests show compliance with the specification.

### 11.6 Wakeup Adjacent Channel Rejection (ACR)

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.8.4

DVT Plan: 6.6.3

Test Executive Script: Rx\_Sc21

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
ACR Narrowband Center	25 dB min	34.00 dB	33.75 dB	34.00 dB	34.50 dB	PASS	5% MDR
ACR Narrowband Lower	25 dB min	35.00 dB	34.50 dB	34.75 dB	35.00 dB	PASS	
ACR Narrowband Upper	25 dB min	33.75 dB	33.50 dB	33.75 dB	34.25 dB	PASS	
ACR Wideband Center	25 dB min	40.75 dB	40.25 dB	40.00 dB	41.50 dB	PASS	
ACR Wideband Lower	25 dB min	41.75 dB	40.75 dB	41.25 dB	41.50 dB	PASS	
ACR Wideband Upper	25 dB min	39.75 dB	40.00 dB	39.75 dB	40.50 dB	PASS	

Table 77 Wakeup Adjacent Channel Rejection

Conclusion: All results from Wakeup Adjacent Channel Rejection tests show compliance with the specification.



### 11.7 Weaver Image Rejection

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.8.4

DVT Plan: 6.6.4

Test Executive Script: Rx\_Sc21

Note: It may not be clear to the reader what the difference is between Image Rejection and Alternate Channel Rejection (AltCR) is. For any desired side-channel there are two "alternate" channels, one that is two channels higher in frequency and one that is two channels lower in frequency. In the case of Wakeup Weaver Lower Channel (one below the center channel), the Image Rejection channel is the Alternate channel on the upper side. In the case of Wakeup Weaver Upper Channel (one above the center channel), the Image Rejection channel is the Alternate channel on the lower side. The Wakeup Alternate Channel Rejection is part of Wakeup External Spurious Response and therefore reported in section 11.8 Wakeup External Spurious Response and Blocking.

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Image Rej. Narrow Lower	25 dB min	36.25 dB	39.75 dB	44.50 dB	36.75 dB	PASS	5% MDR
Image Rej. Narrow Upper	25 dB min	36.75 dB	37.75 dB	36.75 dB	34.25 dB	PASS	
Image Rej. Wide Lower	25 dB min	39.50 dB	43.00 dB	38.00 dB	39.75 dB	PASS	
Image Rej. Wide Upper	25 dB min	31.75 dB	32.75 dB	36.75 dB	29.50 dB	PASS	

Table 78 Wakeup Image Rejection Channel Rejection

**Conclusion: All results from Wakeup Weaver Image Rejection tests show compliance with the specification.**

### 11.8 Wakeup External Spurious Response and Blocking

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.8.4

DVT Plan: 6.6.5

This test has a deviation (Deviation #12) from the DVT Plan. See Section 6 DVT plan Deviations for more information.

This test has a deviation (Deviation #14) from the DVT Plan. See Section 6 DVT plan Deviations for more information.

Test Executive Script: SpurSc2, Spur\_Sc3, Spur\_Sc4, Spur\_Sc8, Spur\_Sc9, Spur\_Sc10

Note: The DVT Plan calls for an interferer at specification limit for the Wakeup spurious fine test. The spurs from the main radio coarse spurious response test (section 9.6) were tested by the Wakeup spurious fine response test with 7dB overtesting for frequencies above 409MHz and below 398MHz, making it a much more conservative test. Within the 398 to 409MHz range the Wakeup fine spurious test was run at the specified level without overtesting. The overtesting was not needed because a CW rather than a modulated interferer is used in the fine test and the loss calibration made at 403.5MHz is valid within this frequency range. Note that within the frequency range of 400.1 MHz to 406.9 MHz (which was not covered by the main radio coarse test), the Wakeup spurious coarse test was run with 7dB of overtesting (see deviation #12 for details on this).

Test Parameter	Spec	sn337	sn338	sn343	Compliance	Notes
Interferer Level WideBand - Center Channel Center of Alternate channel and beyond	-55 dBm min	-44.25 dBm	-44.25 dBm	-45.25 dBm	PASS	5% MDR
Interferer Level NarrowBand - Center Channel Center of Alternate channel through Alternate channel + 2	-60 dBm min	-53.25 dBm	-52.50 dBm	-54.50 dBm	PASS	5% MDR
Interferer Level NarrowBand - Center Channel Alternate channel + 3 and beyond	-55 dBm min	-46.50 dBm	-45.50 dBm	-48.25 dBm	PASS	5% MDR
Interferer Level relative to specified sensitivity NB & WB - Side (Weaver) Channels Alternate channel + 1 and beyond except channels including 3 <sup>rd</sup> harmonic of Weaver LO	25 dB min	49.25 dB	50.00 dB	47.75 dB	PASS	5% MDR
Interferer Level relative to specified sensitivity NB & WB - Side (Weaver) Channels Channels including 3 <sup>rd</sup> Harmonic of Weaver LO	20 dB min	24.75 dB	26.75 dB	26.00 dB	PASS	5% MDR Includes Alternate channel for weaver side and alternate channel + 2 for image side.

Table 79 Wakeup External Spurious Response and Blocking

Conclusion: All results from Wakeup External Spurious Response and Blocking tests show compliance with the specification.

### 11.9 Wakeup Performance – Current and Latency

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.4.8.4

DVT Plan: 6.6.6

Test Executive Script: Rx\_Sc20

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Standby Current	A:100 nA max(37C) B:300 nA max(0-55C)	A:41 nA B:89 nA	A:40 nA B:88 nA	A:40 nA B:87 nA	A:39 nA B:87 nA	PASS	DVT Plan 6.6.6.1
Latency (MICS) A:25s B: 5s C: 2s	A: 25s max B: 5s max C: 2s max	A: 24.80s B: 4.93s C: 1.97s	A: 24.77s B: 4.93s C: 1.97s	A: 24.77s B: 4.93s C: 1.97s	A: 24.77s B: 4.93s C: 1.97s	PASS	DVT Plan 6.6.6.2 DVT Plan 6.6.6.4 DVT Plan 6.6.6.3
Current (MICS) 25 s latency 37C C1 no intfr.	250 nA max	156 nA	156 nA	157 nA	156 nA	PASS	DVT Plan 6.6.6.2 DVT Plan 6.6.6.4 DVT Plan 6.6.6.3
Current (MICS) 25 s latency 0-55C C1 no intfr	450 nA max	210 nA	208 nA	210 nA	209 nA	PASS	DVT Plan 6.6.6.2 DVT Plan 6.6.6.4 DVT Plan 6.6.6.3
Current (MICS) 5 s latency 37C A. No intfr. B. 10% intfr. C. 100% intfr. D. C1 no intfr.	1000 nA max	A. 734 nA B. 734 nA C. 736 nA D. 628 nA	A. 734 nA B. 734 nA C. 735 nA D. 624 nA	A. 745 nA B. 745 nA C. 745 nA D. 634 nA	A. 739 nA B. 740 nA C. 739 nA D. 629 nA	PASS	

<b>Current (MICS)</b> <b>5 s latency</b> <b>0-55C</b> <b>A. No intfr.</b> <b>B. 10% intfr.</b> <b>C. 100% intfr.</b> <b>D. C1 no intfr.</b>	<b>1300 nA</b> <b>max</b>	<b>A. 806 nA</b> <b>B. 807 nA</b> <b>C. 807 nA</b> <b>D. 702 nA</b>	<b>A. 803 nA</b> <b>B. 803 nA</b> <b>C. 804 nA</b> <b>D. 698 nA</b>	<b>A. 813 nA</b> <b>B. 813 nA</b> <b>C. 813 nA</b> <b>D. 707 nA</b>	<b>A. 809 nA</b> <b>B. 809 nA</b> <b>C. 810 nA</b> <b>D. 703 nA</b>	<b>PASS</b>	
<b>Current (MICS)</b> <b>2 s latency</b> <b>37C</b> <b>A. No intfr.</b> <b>B. 10% intfr.</b> <b>C. 100% intfr.</b> <b>D. C1 no intfr.</b>	<b>2140 nA</b> <b>max</b>	<b>A. 1643 nA</b> <b>B. 1644 nA</b> <b>C. 1649 nA</b> <b>D. 1541 nA</b>	<b>A. 1641 nA</b> <b>B. 1641 nA</b> <b>C. 1643 nA</b> <b>D. 1532 nA</b>	<b>A. 1668 nA</b> <b>B. 1668 nA</b> <b>C. 1668 nA</b> <b>D. 1557 nA</b>	<b>A. 1654 nA</b> <b>B. 1654 nA</b> <b>C. 1654 nA</b> <b>D. 1544 nA</b>	<b>PASS</b>	
<b>Current (MICS)</b> <b>2 s latency</b> <b>0-55C</b> <b>A. No intfr.</b> <b>B. 10% intfr.</b> <b>C. 100% intfr.</b> <b>D. C1 no intfr.</b>	<b>2500 nA</b> <b>max</b>	<b>A. 1759 nA</b> <b>B. 1760 nA</b> <b>C. 1759 nA</b> <b>D. 1655 nA</b>	<b>A. 1751 nA</b> <b>B. 1751 nA</b> <b>C. 1752 nA</b> <b>D. 1646 nA</b>	<b>A. 1775 nA</b> <b>B. 1775 nA</b> <b>C. 1775 nA</b> <b>D. 1669 nA</b>	<b>A. 1765 nA</b> <b>B. 1765 nA</b> <b>C. 1766 nA</b> <b>D. 1660 nA</b>	<b>PASS</b>	
<b>Latency (MEDS)</b> <b>A: 5 seconds</b> <b>B: 2 seconds</b>	<b>A: 5 seconds</b> <b>max</b> <b>B: 2 seconds</b> <b>max</b>	<b>A: 4.87 s</b> <b>B: 1.87 s</b>	<b>A: 4.87 s</b> <b>B: 1.87 s</b>	<b>A: 4.87 s</b> <b>B: 1.87 s</b>	<b>A: 4.87 s</b> <b>B: 1.87 s</b>	<b>PASS</b>	DVT Plan 6.6.6.6 DVT Plan 6.6.6.5
<b>Current (MEDS)</b> <b>5 seconds latency</b> <b>37C</b> <b>A. No intfr.</b> <b>B. 10% intfr.</b> <b>C. 100% intfr.</b> <b>D. C1 no intfr.</b>	<b>10,000 nA</b> <b>max</b>	<b>A. 5649 nA</b> <b>B. 5726 nA</b> <b>C. 5728 nA</b> <b>D. 5546 nA</b>	<b>A. 5623 nA</b> <b>B. 5736 nA</b> <b>C. 5755 nA</b> <b>D. 5518 nA</b>	<b>A. 5712 nA</b> <b>B. 5761 nA</b> <b>C. 5795 nA</b> <b>D. 5605 nA</b>	<b>A. 5667 nA</b> <b>B. 5712 nA</b> <b>C. 5764 nA</b> <b>D. 5553 nA</b>	<b>PASS</b>	DVT Plan 6.6.6.6 DVT Plan 6.6.6.5

<p><b>Current (MEDS)</b>  <b>5 seconds latency</b>  <b>0-55C</b>  <b>A. No intfr.</b>  <b>B. 10% intfr.</b>  <b>C. 100% intfr.</b>  <b>D. C1 no intfr</b></p>	<p><b>11,000 nA max</b></p>	<p>A. 5929 nA                  B. 5958 nA                  C. 5982 nA                  D. 5833 nA</p>	<p>A. 5916 nA                  B. 6097 nA                  C. 6097 nA                  D. 5819 nA</p>	<p>A. 5984 nA                  B. 6003 nA                  C. 6070 nA                  D. 5884 nA</p>	<p>A. 5957 nA                  B. 6060 nA                  C. 6095 nA                  D. 5860 nA</p>	<p><b>PASS</b></p>	
<p><b>Current (MEDS)</b>  <b>2 seconds latency</b>  <b>37C</b>  <b>A. No intfr.</b>  <b>B. 10% intfr.</b>  <b>C. 100% intfr.</b>  <b>D. C1 no intfr</b></p>	<p><b>17,100 nA max</b></p>	<p>A. 14985 nA                  B. 15191 nA                  C. 15196 nA                  D. 14891 nA</p>	<p>A. 14914 nA                  B. 15325 nA                  C. 15268 nA                  D. 14817 nA</p>	<p>A. 15150 nA                  B. 15282 nA                  C. 15374 nA                  D. 15052 nA</p>	<p>A. 15030 nA                  B. 15152 nA                  C. 15292 nA                  D. 14911 nA</p>	<p><b>PASS</b></p>	
<p><b>Current (MEDS)</b>  <b>2 seconds latency</b>  <b>0-55C</b>  <b>A. No intfr.</b>  <b>B. 10% intfr.</b>  <b>C. 100% intfr.</b>  <b>D. C1 no intfr</b></p>	<p><b>18,000 nA max</b></p>	<p>A. 15664 nA                  B. 15741 nA                  C. 15808 nA                  D. 15585</p>	<p>A. 15632 nA                  B. 16276 nA                  C. 16119 nA                  D. 15549</p>	<p>A. 15812 nA                  B. 15863 nA                  C. 16043 nA                  D. 15724</p>	<p>A. 15739 nA                  B. 16017 nA                  C. 16113 nA                  D. 15659</p>	<p><b>PASS</b></p>	

Table 80 Wakeup Performance – Current and Latency

**Conclusion: All results from Wakeup Current and Latency tests show compliance with the specification.**

## 12 Supply Currents Test Results

Note: BPFLT Supply Current is a bench test.

### 12.1 DVDD Supply Current

Mozart Requirement Specification (MDT Document #A17245); rev I paragraph: 2.3.1.2

DVT Plan: 6.7.4

Test Executive Script: Rx\_Sc22

This test has a deviation (Deviation #18) from the DVT Plan. See Section 6 DVT plan Deviations for more information.

Test Parameter	Spec	sn316	sn317	sn318	sn320	Compliance	Notes
Functional Static Current Max DVDD Max BPFLT	10 uA max	37 nA	38 nA	37 nA	37 nA	PASS	
Functional Static Current DVDD=BPFLT + 200mV	10.1 uA max	11 nA	11 nA	10 nA	11 nA	PASS	
Disabled Static Current Max DVDD Max BPFLT	A. 50 nA (25C) B. 100 nA (37C) C. 500 nA (0-55C) max	A. 13 nA B. 19 nA C. 37 nA	A. 13 nA B. 19 nA C. 37 nA	A. 13 nA B. 19 nA C. 37 nA	A. 12 nA B. 19 nA C. 36 nA	PASS	
Disabled Static Current DVDD=BPFLT + 200mV	A. 150 nA (25C) B. 200 nA (37C) C. 600 nA (0-55C) max	A. 1 nA B. 3 nA C. 11 nA	A. 1 nA B. 3 nA C. 11 nA	A. 1 nA B. 3 nA C. 9 nA	A. 1 nA B. 3 nA C. 10 nA	PASS	

Table 81 DVDD Supply Current

**Conclusion: All results from DVDD Supply Current tests show compliance with the specification.**

### 13 Conclusion

All results from DVT tests show compliance with the specification.

### 14 Appendix A – Resolution of Non-compliance

N/A

<p align="center"><b>Cardiac Disease Rhythm Management</b></p> <p align="center"><b>MEDTRONIC CONFIDENTIAL</b></p> <p>This document is the property of Medtronic, Inc. and must be accounted for. Information herein is confidential. Do not reproduce it, reveal it to unauthorized persons or send it outside Medtronic without permission.</p>	<b>Project DHF name:</b>	<b>Effectivity</b>	<b>Version</b>	<b>Page</b>
	Telemetry M	Upon Approval	2.0	Cover
	<b>Title</b>			
<b>Tel M FWVT Test Results and Status Phase 1 TCP-M</b>				
This document is electronically controlled. Printed copies are considered uncontrolled.				

**Deliverable(s):** FWVT Test Results and Status

Note: This document may be approved electronically through Documentum by the listed approvers.

<b>Reviewed and Approved By:</b>	<b>Name</b>	<b>Signatures and Date</b>
		Javaid Masoud
	Kenneth Kahle	<Electronic Signature>

**Change History**

<b>Version</b>	<b>Author</b>	<b>Description of Change</b>
2.0	Kenneth Kahle	Initial release.



Test Results From: [\\data\pace\fwvt\mozart\FWTest\FWVT\\_FORMAL\TestMode1](\\data\pace\fwvt\mozart\FWTest\FWVT_FORMAL\TestMode1)

FWVTBatch Version: 1.0.0.0

Proctor of execution: powelm4

Configuration file: \\data\pace\fwvt\mozart\FWTest\FWVT\_FORMAL\TestMode1\Testmode1.xml

Total tests	Pass	Fail	Truncated	Exception	No result	No build	Pass Ratio
528	528	0	0	0	0	0	100.0%

Test Results From: [\\data\pace\fwvt\mozart\FWTest\FWVT\\_FORMAL\TestMode2](\\data\pace\fwvt\mozart\FWTest\FWVT_FORMAL\TestMode2)

FWVTBatch Version: 1.0.0.0

Proctor of execution: powelm4

Configuration file: \\data\pace\fwvt\mozart\FWTest\FWVT\_FORMAL\TestMode2\Testmode2.xml

Total tests	Pass	Fail	Truncated	Exception	No result	No build	Pass Ratio
528	528	0	0	0	0	0	100.0%

Test Results From: [\\data\pace\fwvt\mozart\FWTest\FWVT\\_FORMAL\TestMode3](\\data\pace\fwvt\mozart\FWTest\FWVT_FORMAL\TestMode3)

FWVTBatch Version: 1.0.0.0

Proctor of execution: powelm4

Configuration file: \\data\pace\fwvt\mozart\FWTest\FWVT\_FORMAL\TestMode3\Testmode3.xml

Total tests	Pass	Fail	Truncated	Exception	No result	No build	Pass Ratio
527	527	0	0	0	0	0	100.0%

Test Results From: [\\data\pace\fwvt\mozart\FWTest\FWVT\\_FORMAL\TestMode4](\\data\pace\fwvt\mozart\FWTest\FWVT_FORMAL\TestMode4)

FWVTBatch Version: 1.0.0.0

Proctor of execution: powelm4

Configuration file: \\data\pace\fwvt\mozart\FWTest\FWVT\_FORMAL\TestMode4\Testmode4.xml

Total tests	Pass	Fail	Truncated	Exception	No result	No build	Pass Ratio
-------------	------	------	-----------	-----------	-----------	----------	------------

527 527 0 0 0 0 0 100.0%

Test Results From: [\\data\pace\fwvt\mozart\FWTest\FWVT\\_FORMAL\TestMode7\\_8](\\data\pace\fwvt\mozart\FWTest\FWVT_FORMAL\TestMode7_8)

FWVTBatch Version: 1.0.0.0

Proctor of execution: powelm4

Configuration file: \\data\pace\fwvt\mozart\FWTest\FWVT\_FORMAL\TestMode7\_8\Testmode7\_8.xml

Total tests	Pass	Fail	Truncated	Exception	No result	No build	Pass Ratio
528	528	0	0	0	0	0	100.0%

Test Results From: [\\data\pace\fwvt\mozart\FWTest\FWVT\\_FORMAL\TestMode9\\_10](\\data\pace\fwvt\mozart\FWTest\FWVT_FORMAL\TestMode9_10)

FWVTBatch Version: 1.0.0.0

Proctor of execution: powelm4

Configuration file: \\data\pace\fwvt\mozart\FWTest\FWVT\_FORMAL\TestMode9\_10\Testmode9\_10.xml

Total tests	Pass	Fail	Truncated	Exception	No result	No build	Pass Ratio
528	528	0	0	0	0	0	100.0%

Test Results From: [\\data\pace\fwvt\mozart\FWTest\FWVT\\_FORMAL\TestMode1](\\data\pace\fwvt\mozart\FWTest\FWVT_FORMAL\TestMode1)

Feature	Total	Pass	Fail	NoResult	NoBuild	Truncated	Exception	Pass %
M_TCP_AntennaSelection	2	2	0	0	0	0	0	100.0%
M_TCP_Channel	61	61	0	0	0	0	0	100.0%
M_TCP_Close	20	20	0	0	0	0	0	100.0%
M_TCP_Data	132	132	0	0	0	0	0	100.0%
M_TCP_Diagnostic	36	36	0	0	0	0	0	100.0%
M_TCP_Discover	30	30	0	0	0	0	0	100.0%
M_TCP_EEPROM	7	7	0	0	0	0	0	100.0%
M_TCP_Emergency	29	29	0	0	0	0	0	100.0%
M_TCP_General	14	14	0	0	0	0	0	100.0%
M_TCP_Initialize	4	4	0	0	0	0	0	100.0%
M_TCP_MedicalEvent	16	16	0	0	0	0	0	100.0%
M_TCP_MemoryTest	5	5	0	0	0	0	0	100.0%
M_TCP_Network	28	28	0	0	0	0	0	100.0%
M_TCP_Open	28	28	0	0	0	0	0	100.0%
M_TCP_Polling	32	32	0	0	0	0	0	100.0%
M_TCP_PowerInhibit	11	11	0	0	0	0	0	100.0%
M_TCP_RawMode	12	12	0	0	0	0	0	100.0%
M_TCP_Reset	2	2	0	0	0	0	0	100.0%
M_TCP_Security	45	45	0	0	0	0	0	100.0%
M_TCP_WirelessWakeup	14	14	0	0	0	0	0	100.0%

Test Results From: [\\data\pace\fwvt\mozart\FWTest\FWVT\\_FORMAL\TestMode2](\\data\pace\fwvt\mozart\FWTest\FWVT_FORMAL\TestMode2)

Feature	Total	Pass	Fail	NoResult	NoBuild	Truncated	Exception	Pass %
M_TCP_AntennaSelection	2	2	0	0	0	0	0	100.0%
M_TCP_Channel	61	61	0	0	0	0	0	100.0%
M_TCP_Close	20	20	0	0	0	0	0	100.0%
M_TCP_Data	132	132	0	0	0	0	0	100.0%
M_TCP_Diagnostic	36	36	0	0	0	0	0	100.0%
M_TCP_Discover	30	30	0	0	0	0	0	100.0%
M_TCP_EEPROM	7	7	0	0	0	0	0	100.0%
M_TCP_Emergency	29	29	0	0	0	0	0	100.0%
M_TCP_General	14	14	0	0	0	0	0	100.0%
M_TCP_Initialize	4	4	0	0	0	0	0	100.0%
M_TCP_MedicalEvent	16	16	0	0	0	0	0	100.0%

M_TCP_MemoryTest	5	5	0	0	0	0	0	100.0%
M_TCP_Network	28	28	0	0	0	0	0	100.0%
M_TCP_Open	28	28	0	0	0	0	0	100.0%
M_TCP_Polling	32	32	0	0	0	0	0	100.0%
M_TCP_PowerInhibit	11	11	0	0	0	0	0	100.0%
M_TCP_RawMode	12	12	0	0	0	0	0	100.0%
M_TCP_Reset	2	2	0	0	0	0	0	100.0%
M_TCP_Security	45	45	0	0	0	0	0	100.0%
M_TCP_WirelessWakeup	14	14	0	0	0	0	0	100.0%

Test Results From: [\\data\pace\fwvt\mozart\FWTest\FWVT\\_FORMAL\TestMode3](\\data\pace\fwvt\mozart\FWTest\FWVT_FORMAL\TestMode3)

Feature	Total	Pass	Fail	NoResult	NoBuild	Truncated	Exception	Pass %
M_TCP_AntennaSelection	2	2	0	0	0	0	0	100.0%
M_TCP_Channel	61	61	0	0	0	0	0	100.0%
M_TCP_Close	20	20	0	0	0	0	0	100.0%
M_TCP_Data	131	131	0	0	0	0	0	100.0%
M_TCP_Diagnostic	36	36	0	0	0	0	0	100.0%
M_TCP_Discover	30	30	0	0	0	0	0	100.0%
M_TCP_EEPROM	7	7	0	0	0	0	0	100.0%
M_TCP_Emergency	29	29	0	0	0	0	0	100.0%
M_TCP_General	14	14	0	0	0	0	0	100.0%
M_TCP_Initialize	4	4	0	0	0	0	0	100.0%
M_TCP_MedicalEvent	16	16	0	0	0	0	0	100.0%
M_TCP_MemoryTest	5	5	0	0	0	0	0	100.0%
M_TCP_Network	28	28	0	0	0	0	0	100.0%
M_TCP_Open	28	28	0	0	0	0	0	100.0%
M_TCP_Polling	32	32	0	0	0	0	0	100.0%
M_TCP_PowerInhibit	11	11	0	0	0	0	0	100.0%
M_TCP_RawMode	12	12	0	0	0	0	0	100.0%
M_TCP_Reset	2	2	0	0	0	0	0	100.0%
M_TCP_Security	45	45	0	0	0	0	0	100.0%
M_TCP_WirelessWakeup	14	14	0	0	0	0	0	100.0%

Test Results From: [\\data\pace\fwvt\mozart\FWTest\FWVT\\_FORMAL\TestMode4](\\data\pace\fwvt\mozart\FWTest\FWVT_FORMAL\TestMode4)

Feature	Total	Pass	Fail	NoResult	NoBuild	Truncated	Exception	Pass %
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M_TCP_AntennaSelection	2	2	0	0	0	0	0	100.0%
M_TCP_Channel	61	61	0	0	0	0	0	100.0%
M_TCP_Close	20	20	0	0	0	0	0	100.0%
M_TCP_Data	131	131	0	0	0	0	0	100.0%
M_TCP_Diagnostic	36	36	0	0	0	0	0	100.0%
M_TCP_Discover	30	30	0	0	0	0	0	100.0%
M_TCP_EEPROM	7	7	0	0	0	0	0	100.0%
M_TCP_Emergency	29	29	0	0	0	0	0	100.0%
M_TCP_General	14	14	0	0	0	0	0	100.0%
M_TCP_Initialize	4	4	0	0	0	0	0	100.0%
M_TCP_MedicalEvent	16	16	0	0	0	0	0	100.0%
M_TCP_MemoryTest	5	5	0	0	0	0	0	100.0%
M_TCP_Network	28	28	0	0	0	0	0	100.0%
M_TCP_Open	28	28	0	0	0	0	0	100.0%
M_TCP_Polling	32	32	0	0	0	0	0	100.0%
M_TCP_PowerInhibit	11	11	0	0	0	0	0	100.0%
M_TCP_RawMode	12	12	0	0	0	0	0	100.0%
M_TCP_Reset	2	2	0	0	0	0	0	100.0%
M_TCP_Security	45	45	0	0	0	0	0	100.0%
M_TCP_WirelessWakeup	14	14	0	0	0	0	0	100.0%

Test Results From:

[\\data\pace\fwvt\mozart\FWTest\FWVT\\_FORMAL\TestMode7\\_8](#)

Feature	Total	Pass	Fail	NoResult	NoBuild	Truncated	Exception	Pass %
M_TCP_AntennaSelection	2	2	0	0	0	0	0	100.0%
M_TCP_Channel	61	61	0	0	0	0	0	100.0%
M_TCP_Close	20	20	0	0	0	0	0	100.0%
M_TCP_Data	132	132	0	0	0	0	0	100.0%
M_TCP_Diagnostic	36	36	0	0	0	0	0	100.0%
M_TCP_Discover	30	30	0	0	0	0	0	100.0%
M_TCP_EEPROM	7	7	0	0	0	0	0	100.0%
M_TCP_Emergency	29	29	0	0	0	0	0	100.0%
M_TCP_General	14	14	0	0	0	0	0	100.0%
M_TCP_Initialize	4	4	0	0	0	0	0	100.0%
M_TCP_MedicalEvent	16	16	0	0	0	0	0	100.0%
M_TCP_MemoryTest	5	5	0	0	0	0	0	100.0%
M_TCP_Network	28	28	0	0	0	0	0	100.0%

M_TCP_Open	28	28	0	0	0	0	0	100.0%
M_TCP_Polling	32	32	0	0	0	0	0	100.0%
M_TCP_PowerInhibit	11	11	0	0	0	0	0	100.0%
M_TCP_RawMode	12	12	0	0	0	0	0	100.0%
M_TCP_Reset	2	2	0	0	0	0	0	100.0%
M_TCP_Security	45	45	0	0	0	0	0	100.0%
M_TCP_WirelessWakeup	14	14	0	0	0	0	0	100.0%

Test Results From:

[\\data\pace\fwvt\mozart\FWTest\FWVT\\_FORMAL\TestMode9\\_10](\\data\pace\fwvt\mozart\FWTest\FWVT_FORMAL\TestMode9_10)

Feature	Total	Pass	Fail	NoResult	NoBuild	Truncated	Exception	Pass %
M_TCP_AntennaSelection	2	2	0	0	0	0	0	100.0%
M_TCP_Channel	61	61	0	0	0	0	0	100.0%
M_TCP_Close	20	20	0	0	0	0	0	100.0%
M_TCP_Data	132	132	0	0	0	0	0	100.0%
M_TCP_Diagnostic	36	36	0	0	0	0	0	100.0%
M_TCP_Discover	30	30	0	0	0	0	0	100.0%
M_TCP_EEPROM	7	7	0	0	0	0	0	100.0%
M_TCP_Emergency	29	29	0	0	0	0	0	100.0%
M_TCP_General	14	14	0	0	0	0	0	100.0%
M_TCP_Initialize	4	4	0	0	0	0	0	100.0%
M_TCP_MedicalEvent	16	16	0	0	0	0	0	100.0%
M_TCP_MemoryTest	5	5	0	0	0	0	0	100.0%
M_TCP_Network	28	28	0	0	0	0	0	100.0%
M_TCP_Open	28	28	0	0	0	0	0	100.0%
M_TCP_Polling	32	32	0	0	0	0	0	100.0%
M_TCP_PowerInhibit	11	11	0	0	0	0	0	100.0%
M_TCP_RawMode	12	12	0	0	0	0	0	100.0%
M_TCP_Reset	2	2	0	0	0	0	0	100.0%
M_TCP_Security	45	45	0	0	0	0	0	100.0%
M_TCP_WirelessWakeup	14	14	0	0	0	0	0	100.0%

Feature	Test	Test Path	Revision	Revision Date	CVS Rev	CVS State	Test Firmware	Revision	Test RAM/Ware	Sys In Time	Test Time (ms)	Tester	Test Rev	Status	Warnings	Errors	Fails	Passes
M_TCP	FeatureSelection	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_Antenna001Hardware_Antenna001.exe</a>	2.4	20100616 12:48:48	2.4	Up-to-date	Baseline 17.1	None	09/02/2010 07:10:19	23624	TELM-06	1	Pass	0	0	0	127	
M_TCP	AntennaSelection	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_Antenna002Hardware_Antenna002.exe</a>	2.0	20100916 12:26:50	2.0	Up-to-date	Baseline 17.1	None	09/10/2010 07:03:21	28717	TELM-06	1	Pass	0	0	0	69	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery01Hardware_ChannelRecovery01.exe</a>	2.5	20100408 14:25:18	2.5	Up-to-date	Baseline 17.1	None	09/09/2010 01:03:43	15301	TELM-06	1	Pass	0	0	0	26	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery02Hardware_ChannelRecovery02.exe</a>	2.2	20100921 22:31:32	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 21:01:50	17660	TELM-06	1	Pass	0	0	0	5	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery03Hardware_ChannelRecovery03.exe</a>	2.2	20100509 12:32:32	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 21:02:33	17550	TELM-06	1	Pass	0	0	0	5	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery04Hardware_ChannelRecovery04.exe</a>	2.2	20100526 12:04:56	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 20:58:24	14525	TELM-06	1	Pass	0	0	0	5	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery05Hardware_ChannelRecovery05.exe</a>	2.5	20100621 18:34:44	2.5	Up-to-date	Baseline 17.1	None	09/09/2010 20:55:46	14155	TELM-06	1	Pass	0	0	0	37	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery06Hardware_ChannelRecovery06.exe</a>	2.5	20100621 18:34:44	2.5	Up-to-date	Baseline 17.1	None	09/09/2010 20:55:46	14155	TELM-06	1	Pass	0	0	0	37	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery07Hardware_ChannelRecovery07.exe</a>	2.7	20100511 11:49:24	2.7	Up-to-date	Baseline 17.1	None	09/09/2010 20:48:03	24871	TELM-06	1	Pass	0	0	0	89	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery08Hardware_ChannelRecovery08.exe</a>	2.6	20100513 15:05:39	2.6	Up-to-date	Baseline 17.1	None	09/09/2010 20:44:39	41292	TELM-06	1	Pass	0	0	0	574	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery09Hardware_ChannelRecovery09.exe</a>	2.7	20100522 15:16:15	2.7	Up-to-date	Baseline 17.1	None	09/09/2010 20:39:56	65139	TELM-06	1	Pass	0	0	0	342	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery10Hardware_ChannelRecovery10.exe</a>	2.8	20100505 15:48:10	2.8	Up-to-date	Baseline 17.1	None	09/09/2010 20:36:54	25296	TELM-06	1	Pass	0	0	0	132	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery11Hardware_ChannelRecovery11.exe</a>	2.5	20100513 21:30:10	2.5	Up-to-date	Baseline 17.1	None	09/09/2010 20:34:55	16129	TELM-06	1	Pass	0	0	0	14	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery12Hardware_ChannelRecovery12.exe</a>	2.6	20100907 20:30:00	2.6	Up-to-date	Baseline 17.1	None	09/09/2010 20:32:08	49065	TELM-06	1	Pass	0	0	0	193	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery13Hardware_ChannelRecovery13.exe</a>	2.8	20100105 19:17:54	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 20:27:03	25704	TELM-06	1	Pass	0	0	0	8	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery14Hardware_ChannelRecovery14.exe</a>	2.8	20100513 21:36:47	2.8	Up-to-date	Baseline 17.1	None	09/09/2010 20:24:49	62621	TELM-06	1	Pass	0	0	0	23	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery15Hardware_ChannelRecovery15.exe</a>	2.6	20100603 18:01:04	2.6	Up-to-date	Baseline 17.1	None	09/09/2010 20:22:03	12529	TELM-06	1	Pass	0	0	0	88	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery16Hardware_ChannelRecovery16.exe</a>	2.4	20100211 20:10:33	2.4	Up-to-date	Baseline 17.1	None	09/09/2010 20:19:55	38025	TELM-06	1	Pass	0	0	0	2	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery17Hardware_ChannelRecovery17.exe</a>	2.3	20100211 17:38:23	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 20:18:12	10442	TELM-06	1	Pass	0	0	0	5	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery18Hardware_ChannelRecovery18.exe</a>	2.3	20100201 19:41:54	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 20:14:55	18069	TELM-06	1	Pass	0	0	0	4	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery19Hardware_ChannelRecovery19.exe</a>	2.7	20100923 17:42:40	2.7	Up-to-date	Baseline 17.1	None	09/09/2010 20:13:26	38354	TELM-06	1	Pass	0	0	0	109	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery20Hardware_ChannelRecovery20.exe</a>	2.3	20100413 18:33:24	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 20:11:32	38271	TELM-06	1	Pass	0	0	0	9	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery21Hardware_ChannelRecovery21.exe</a>	2.3	20100413 18:36:50	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 20:09:50	20011	TELM-06	1	Pass	0	0	0	6	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery22Hardware_ChannelRecovery22.exe</a>	2.5	20100413 18:41:23	2.5	Up-to-date	Baseline 17.1	None	09/09/2010 20:07:44	29932	TELM-06	1	Pass	0	0	0	8	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery23Hardware_ChannelRecovery23.exe</a>	2.4	20100407 12:33:58	2.4	Up-to-date	Baseline 17.1	None	09/09/2010 20:05:97	15919	TELM-06	1	Pass	0	0	0	8	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery24Hardware_ChannelRecovery24.exe</a>	2.2	20100201 19:43:28	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 20:04:23	11094	TELM-06	1	Pass	0	0	0	8	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery25Hardware_ChannelRecovery25.exe</a>	2.2	20100211 21:01:06	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 20:02:26	12556	TELM-06	1	Pass	0	0	0	8	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery26Hardware_ChannelRecovery26.exe</a>	2.2	20100201 18:51:38	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 20:00:48	9464	TELM-06	1	Pass	0	0	0	8	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery27Hardware_ChannelRecovery27.exe</a>	2.2	20100203 17:19:25	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 19:58:54	12575	TELM-06	1	Pass	0	0	0	10	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery28Hardware_ChannelRecovery28.exe</a>	2.2	20091218 20:13:33	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 19:57:15	13526	TELM-06	1	Pass	0	0	0	9	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery29Hardware_ChannelRecovery29.exe</a>	2.10	20100923 21:18:13	2.10	Up-to-date	Baseline 17.1	None	09/09/2010 19:55:11	18836	TELM-06	1	Pass	0	0	0	30	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery30Hardware_ChannelRecovery30.exe</a>	2.6	20100413 18:46:58	2.6	Up-to-date	Baseline 17.1	None	09/09/2010 19:53:26	20991	TELM-06	1	Pass	0	0	0	9	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery31Hardware_ChannelRecovery31.exe</a>	2.5	20100923 21:50:15	2.5	Up-to-date	Baseline 17.1	None	09/09/2010 19:51:17	18231	TELM-06	1	Pass	0	0	0	5	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery32Hardware_ChannelRecovery32.exe</a>	2.3	20100407 17:51:54	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 19:48:21	19440	TELM-06	1	Pass	0	0	0	8	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery33Hardware_ChannelRecovery33.exe</a>	2.3	20100928 19:55:15	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 19:46:38	20951	TELM-06	1	Pass	0	0	0	25	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery34Hardware_ChannelRecovery34.exe</a>	2.3	20100210 20:47:43	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 19:43:55	12348	TELM-06	1	Pass	0	0	0	6	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery35Hardware_ChannelRecovery35.exe</a>	2.5	20100607 12:54:38	2.5	Up-to-date	Baseline 17.1	None	09/09/2010 19:42:38	15563	TELM-06	1	Pass	0	0	0	1	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery36Hardware_ChannelRecovery36.exe</a>	2.3	20091022 15:48:37	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 19:40:28	6493	TELM-06	1	Pass	0	0	0	4	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery37Hardware_ChannelRecovery37.exe</a>	2.3	20091203 15:57:39	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 19:38:46	21980	TELM-06	1	Pass	0	0	0	5	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery38Hardware_ChannelRecovery38.exe</a>	2.6	20100624 18:37:58	2.6	Up-to-date	Baseline 17.1	None	09/09/2010 19:36:16	15671	TELM-06	1	Pass	0	0	0	37	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery39Hardware_ChannelRecovery39.exe</a>	2.3	20091112 21:22:12	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 19:34:49	7201	TELM-06	1	Pass	0	0	0	44	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery40Hardware_ChannelRecovery40.exe</a>	2.3	20091116 18:40:10	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 19:33:17	52605	TELM-06	1	Pass	0	0	0	49	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery41Hardware_ChannelRecovery41.exe</a>	2.1	20091116 18:58:46	2.1	Up-to-date	Baseline 17.1	None	09/09/2010 19:31:11	6234	TELM-06	1	Pass	0	0	0	95	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery42Hardware_ChannelRecovery42.exe</a>	2.3	20100624 18:46:14	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 19:29:14	63535	TELM-06	1	Pass	0	0	0	156	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery43Hardware_ChannelRecovery43.exe</a>	2.3	20100928 19:55:15	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 19:27:40	3693	TELM-06	1	Pass	0	0	0	204	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery44Hardware_ChannelRecovery44.exe</a>	2.2	20091021 13:38:37	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 19:26:19	19302	TELM-06	1	Pass	0	0	0	2	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery45Hardware_ChannelRecovery45.exe</a>	2.3	20100624 19:40:38	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 19:23:53	85007	TELM-06	1	Pass	0	0	0	196	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery46Hardware_ChannelRecovery46.exe</a>	2.3	20100624 19:40:38	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 19:22:27	8166	TELM-06	1	Pass	0	0	0	6	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery47Hardware_ChannelRecovery47.exe</a>	2.4	20100224 22:31:30	2.4	Up-to-date	Baseline 17.1	None	09/09/2010 19:21:05	10307	TELM-06	1	Pass	0	0	0	6	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery48Hardware_ChannelRecovery48.exe</a>	2.4	20100211 14:12:25	2.4	Up-to-date	Baseline 17.1	None	09/10/2010 20:05:52	2020250	TELM-06	1	Pass	0	0	0	6	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery49Hardware_ChannelRecovery49.exe</a>	2.3	20100408 17:57:08	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 19:19:48	20266	TELM-06	1	Pass	0	0	0	12	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery50Hardware_ChannelRecovery50.exe</a>	2.2	20100625 15:47:26	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 19:18:27	15303	TELM-06	1	Pass	0	0	0	4	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery51Hardware_ChannelRecovery51.exe</a>	2.9	20100513 17:43:58	2.9	Up-to-date	Baseline 17.1	None	09/09/2010 19:15:55	24739	TELM-06	1	Pass	0	0	0	39	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery52Hardware_ChannelRecovery52.exe</a>	2.4	20100506 14:14:13	2.4	Up-to-date	Baseline 17.1	None	09/09/2010 19:14:05	4004	TELM-06	1	Pass	0	0	0	8	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery53Hardware_ChannelRecovery53.exe</a>	2.2	20100506 15:43:30	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 19:11:39	37392	TELM-06	1	Pass	0	0	0	8	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery54Hardware_ChannelRecovery54.exe</a>	2.2	20100506 15:49:13	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 19:09:43	37651	TELM-06	1	Pass	0	0	0	5	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery55Hardware_ChannelRecovery55.exe</a>	2.5	20100506 15:58:13	2.5	Up-to-date	Baseline 17.1	None	09/09/2010 19:04:29	40650	TELM-06	1	Pass	0	0	0	5	
M_TCP	Channel	<a href="#">VdiagspcwfwlmqzrFWTestFWT.FORMALTestMode1Testssm_nvfmzozurium_TCP_Channel_ChannelRecovery56Hardware_ChannelRecovery56.exe</a>	2.3	20100923 21:18:13	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 19:02:55									

M_TCP_Data	m_ARO028	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_ARO028Hardware AR0028.exe</a>	2.4	20100419 14:36:56	2.4	Up-to-date	Baseline 17_1	None	09/05/2010 13:33:41	18735	TELM-06	1	Pass	0	0	0	23
M_TCP_Data	m_ARO029	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_ARO029Hardware AR0029.exe</a>	2.1	20100308 19:53:24	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 09:29:40	29507	TELM-06	1	Pass	0	0	0	55
M_TCP_Data	m_ARO030	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_ARO030Hardware AR0030.exe</a>	2.5	20100603 15:11:29	2.5	Up-to-date	Baseline 17_1	None	09/05/2010 13:25:35	21523	TELM-06	1	Pass	0	0	0	355
M_TCP_Data	m_ARO031	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_ARO031Hardware AR0031.exe</a>	2.3	20100608 19:57:52	2.3	Up-to-date	Baseline 17_1	None	09/05/2010 13:23:00	14707	TELM-06	1	Pass	0	0	0	556
M_TCP_Data	m_Data012	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_Data012Hardware Data012.exe</a>	2.4	20091110 14:18:10	2.4	Up-to-date	Baseline 17_1	None	09/10/2010 14:47:05	37316	TELM-06	1	Pass	0	0	0	18
M_TCP_Data	m_Data013	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_Data013Hardware Data013.exe</a>	2.3	20100902 19:45:27	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 15:19:09	10960	TELM-06	1	Pass	0	0	0	483
M_TCP_Data	m_Data014	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_Data014Hardware Data014.exe</a>	2.3	20100512 19:37:35	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 13:15:23	98782	TELM-06	1	Pass	0	0	0	36
M_TCP_Data	m_Data015	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_Data015Hardware Data015.exe</a>	2.2	20100203 17:34:25	2.2	Up-to-date	Baseline 17_1	None	09/05/2010 13:13:06	10720	TELM-06	1	Pass	0	0	0	14
M_TCP_Data	m_Data016	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_Data016Hardware Data016.exe</a>	2.2	20100204 17:34:25	2.2	Up-to-date	Baseline 17_1	None	09/05/2010 13:08:31	70204	TELM-06	1	Pass	0	0	0	26
M_TCP_Data	m_Data017	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_Data017Hardware Data017.exe</a>	2.2	20100204 22:22:41	2.2	Up-to-date	Baseline 17_1	None	09/05/2010 13:06:35	67714	TELM-06	1	Pass	0	0	0	30
M_TCP_Data	m_Data018	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_Data018Hardware Data018.exe</a>	2.2	20100203 22:48:42	2.2	Up-to-date	Baseline 17_1	None	09/05/2010 13:01:32	59016	TELM-06	1	Pass	0	0	0	19
M_TCP_Data	m_MemoryRead001	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead001Hardware_MemoryRead001.exe</a>	2.2	20100201 17:26:47	2.2	Up-to-date	Baseline 17_1	None	09/05/2010 12:58:14	32348	TELM-06	1	Pass	0	0	0	439
M_TCP_Data	m_MemoryRead002	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead002Hardware_MemoryRead002.exe</a>	2.3	20091105 15:03:23	2.3	Up-to-date	Baseline 17_1	None	09/05/2010 12:55:14	20661	TELM-06	1	Pass	0	0	0	39
M_TCP_Data	m_MemoryRead003	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead003Hardware_MemoryRead003.exe</a>	2.4	20100405 13:08:22	2.4	Up-to-date	Baseline 17_1	None	09/05/2010 12:53:14	15603	TELM-06	1	Pass	0	0	0	320
M_TCP_Data	m_MemoryRead004	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead004Hardware_MemoryRead004.exe</a>	2.3	20100319 16:10:47	2.3	Up-to-date	Baseline 17_1	None	09/12/2010 07:34:02	9692	TELM-06	1	Pass	0	0	0	1
M_TCP_Data	m_MemoryRead005	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead005Hardware_MemoryRead005.exe</a>	2.1	20091207 19:15:30	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 12:49:00	48716	TELM-06	1	Pass	0	0	0	11
M_TCP_Data	m_MemoryRead006	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead006Hardware_MemoryRead006.exe</a>	2.6	20100629 21:05:35	2.6	Up-to-date	Baseline 17_1	None	09/05/2010 12:46:02	12473	TELM-06	1	Pass	0	0	0	37
M_TCP_Data	m_MemoryRead007	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead007Hardware_MemoryRead007.exe</a>	2.1	20091103 12:42:15	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 12:43:08	11022	TELM-06	1	Pass	0	0	0	16
M_TCP_Data	m_MemoryRead008	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead008Hardware_MemoryRead008.exe</a>	2.1	20090909 16:09:14	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 12:40:49	8910	TELM-06	1	Pass	0	0	0	4
M_TCP_Data	m_MemoryRead009	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead009Hardware_MemoryRead009.exe</a>	2.1	20091207 19:11:11	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 12:38:29	13780	TELM-06	1	Pass	0	0	0	39
M_TCP_Data	m_MemoryRead010	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead010Hardware_MemoryRead010.exe</a>	2.2	20090930 17:31:58	2.2	Up-to-date	Baseline 17_1	None	09/05/2010 12:34:48	7941	TELM-06	1	Pass	0	0	0	23
M_TCP_Data	m_MemoryRead011	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead011Hardware_MemoryRead011.exe</a>	2.2	20090930 17:32:37	2.2	Up-to-date	Baseline 17_1	None	09/05/2010 12:31:06	7511	TELM-06	1	Pass	0	0	0	23
M_TCP_Data	m_MemoryRead012	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead012Hardware_MemoryRead012.exe</a>	2.2	20090930 17:33:03	2.2	Up-to-date	Baseline 17_1	None	09/05/2010 12:28:14	8044	TELM-06	1	Pass	0	0	0	20
M_TCP_Data	m_MemoryRead013	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead013Hardware_MemoryRead013.exe</a>	2.2	20090930 17:33:27	2.2	Up-to-date	Baseline 17_1	None	09/05/2010 12:27:02	8105	TELM-06	1	Pass	0	0	0	57
M_TCP_Data	m_MemoryRead014	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead014Hardware_MemoryRead014.exe</a>	2.2	20090930 17:33:51	2.2	Up-to-date	Baseline 17_1	None	09/05/2010 12:25:74	7941	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_MemoryRead015	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead015Hardware_MemoryRead015.exe</a>	2.2	20090930 17:34:24	2.2	Up-to-date	Baseline 17_1	None	09/05/2010 12:24:14	8015	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_MemoryRead016	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead016Hardware_MemoryRead016.exe</a>	2.1	20091019 18:24:00	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 12:20:17	7922	TELM-06	1	Pass	0	0	0	57
M_TCP_Data	m_MemoryRead017	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead017Hardware_MemoryRead017.exe</a>	2.2	20091119 15:59:22	2.2	Up-to-date	Baseline 17_1	None	09/05/2010 12:19:01	8131	TELM-06	1	Pass	0	0	0	57
M_TCP_Data	m_MemoryRead018	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead018Hardware_MemoryRead018.exe</a>	2.1	20090929 17:52:39	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 12:17:26	7941	TELM-06	1	Pass	0	0	0	8
M_TCP_Data	m_MemoryRead019	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead019Hardware_MemoryRead019.exe</a>	2.4	20100208 20:49:34	2.4	Up-to-date	Baseline 17_1	None	09/05/2010 12:15:02	7354	TELM-06	1	Pass	0	0	0	8
M_TCP_Data	m_MemoryRead020	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead020Hardware_MemoryRead020.exe</a>	2.2	20091223 13:34:31	2.2	Up-to-date	Baseline 17_1	None	09/05/2010 12:11:13	10199	TELM-06	1	Pass	0	0	0	6
M_TCP_Data	m_MemoryRead021	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead021Hardware_MemoryRead021.exe</a>	2.1	20091016 14:00:21	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 12:08:56	6681	TELM-06	1	Pass	0	0	0	2
M_TCP_Data	m_MemoryRead022	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead022Hardware_MemoryRead022.exe</a>	2.3	20091228 18:23:34	2.3	Up-to-date	Baseline 17_1	None	09/05/2010 12:06:37	11182	TELM-06	1	Pass	0	0	0	43
M_TCP_Data	m_MemoryRead023	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead023Hardware_MemoryRead023.exe</a>	2.3	20091123 18:55:48	2.3	Up-to-date	Baseline 17_1	None	09/05/2010 12:04:45	12199	TELM-06	1	Pass	0	0	0	39
M_TCP_Data	m_MemoryRead024	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead024Hardware_MemoryRead024.exe</a>	2.1	20091018 14:15:21	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 12:02:30	8658	TELM-06	1	Pass	0	0	0	39
M_TCP_Data	m_MemoryRead025	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead025Hardware_MemoryRead025.exe</a>	2.1	20091120 15:56:22	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 11:57:02	8658	TELM-06	1	Pass	0	0	0	39
M_TCP_Data	m_MemoryRead026	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead026Hardware_MemoryRead026.exe</a>	2.2	20091123 18:57:01	2.2	Up-to-date	Baseline 17_1	None	09/05/2010 11:53:41	12427	TELM-06	1	Pass	0	0	0	12
M_TCP_Data	m_MemoryRead027	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead027Hardware_MemoryRead027.exe</a>	2.3	20100119 17:36:39	2.3	Up-to-date	Baseline 17_1	None	09/05/2010 11:50:59	14452	TELM-06	1	Pass	0	0	0	294
M_TCP_Data	m_MemoryRead028	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead028Hardware_MemoryRead028.exe</a>	2.1	20090929 17:52:39	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 11:48:59	7941	TELM-06	1	Pass	0	0	0	4
M_TCP_Data	m_MemoryRead029	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead029Hardware_MemoryRead029.exe</a>	2.6	20101010 14:10:47	2.6	Up-to-date	Baseline 17_1	None	09/05/2010 11:44:38	32695	TELM-06	1	Pass	0	0	0	10
M_TCP_Data	m_MemoryRead030	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead030Hardware_MemoryRead030.exe</a>	2.4	20101116 12:52:24	2.4	Up-to-date	Baseline 17_1	None	09/05/2010 11:43:02	18862	TELM-06	1	Pass	0	0	0	22
M_TCP_Data	m_MemoryRead031	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead031Hardware_MemoryRead031.exe</a>	2.2	20100629 22:24:23	2.2	Up-to-date	Baseline 17_1	None	09/05/2010 11:41:22	13696	TELM-06	1	Pass	0	0	0	41
M_TCP_Data	m_MemoryRead032	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead032Hardware_MemoryRead032.exe</a>	2.2	20101028 16:55:17	2.2	Up-to-date	Baseline 17_1	None	09/05/2010 11:39:08	19056	TELM-06	1	Pass	0	0	0	4
M_TCP_Data	m_MemoryRead033	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead033Hardware_MemoryRead033.exe</a>	2.0	20090922 14:52:52	2.0	Up-to-date	Baseline 17_1	None	09/05/2010 11:36:16	6973	TELM-06	1	Pass	0	0	0	2
M_TCP_Data	m_MemoryRead034	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead034Hardware_MemoryRead034.exe</a>	2.3	20091116 12:54:57	2.3	Up-to-date	Baseline 17_1	None	09/05/2010 11:33:18	8901	TELM-06	1	Pass	0	0	0	12
M_TCP_Data	m_MemoryRead035	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead035Hardware_MemoryRead035.exe</a>	2.1	20091027 16:22:11	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 11:30:46	9887	TELM-06	1	Pass	0	0	0	9
M_TCP_Data	m_MemoryRead036	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead036Hardware_MemoryRead036.exe</a>	2.3	20100629 23:18:49	2.3	Up-to-date	Baseline 17_1	None	09/05/2010 11:29:14	11437	TELM-06	1	Pass	0	0	0	4
M_TCP_Data	m_MemoryRead037	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead037Hardware_MemoryRead037.exe</a>	2.1	20090927 19:52:07	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 11:27:30	16048	TELM-06	1	Pass	0	0	0	15
M_TCP_Data	m_MemoryRead038	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead038Hardware_MemoryRead038.exe</a>	2.1	20090922 14:52:52	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 11:26:29	7554	TELM-06	1	Pass	0	0	0	7
M_TCP_Data	m_MemoryRead039	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead039Hardware_MemoryRead039.exe</a>	2.1	20091208 14:34:41	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 11:25:00	10064	TELM-06	1	Pass	0	0	0	3
M_TCP_Data	m_MemoryRead040	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead040Hardware_MemoryRead040.exe</a>	2.1	20091215 19:05:34	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 11:23:37	8047	TELM-06	1	Pass	0	0	0	186
M_TCP_Data	m_MemoryRead041	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead041Hardware_MemoryRead041.exe</a>	2.1	20091028 17:39:37	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 11:21:51	9139	TELM-06	1	Pass	0	0	0	3
M_TCP_Data	m_MemoryRead042	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead042Hardware_MemoryRead042.exe</a>	2.1	20091228 15:09:57	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 11:20:16	8108	TELM-06	1	Pass	0	0	0	9
M_TCP_Data	m_MemoryRead043	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead043Hardware_MemoryRead043.exe</a>	2.1	20100201 19:11:34	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 11:18:52	7940	TELM-06	1	Pass	0	0	0	9
M_TCP_Data	m_MemoryRead044	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead044Hardware_MemoryRead044.exe</a>	2.1	20091028 15:17:22	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 11:17:49	7650	TELM-06	1	Pass	0	0	0	23
M_TCP_Data	m_MemoryRead045	<a href="#">VidapacelwfmqzarFTestFWT FORMALTestMode1Testisan_nvmfmzarturium TCP_Datam_MemoryRead045Hardware_MemoryRead045.exe</a>	2.1	20091028 16:03:34	2.1	Up-to-date	Baseline 17_1	None	09/05/2010 11:15:41	7940							



M_TCP_Diagnostic	m_Diagnostic007	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic007Hardware_Diagnostic007.exe	2.0	2009/09/28 13:31:55	2.1	Up-to-date	Baseline 17, 1	None	09/09/2010 22:33:27	15889	TELM-06	1	Pass	0	0	0	0	21
M_TCP_Diagnostic	m_Diagnostic008	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic008Hardware_Diagnostic008.exe	2.0	2009/09/21 17:03:29	2.0	Up-to-date	Baseline 17, 1	None	09/09/2010 22:15:54	21647	TELM-06	1	Pass	0	0	0	0	23
M_TCP_Diagnostic	m_Diagnostic009	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic009Hardware_Diagnostic009.exe	2.5	2010/06/25 17:09:14	2.5	Up-to-date	Baseline 17, 1	None	09/09/2010 22:29:39	16588	TELM-06	1	Pass	0	0	0	0	19
M_TCP_Diagnostic	m_Diagnostic010	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic010Hardware_Diagnostic010.exe	2.5	2010/07/20 10:18:19	2.5	Up-to-date	Baseline 17, 1	None	09/09/2010 22:19:25	10760	TELM-06	1	Pass	0	0	0	0	10
M_TCP_Diagnostic	m_Diagnostic011	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic011Hardware_Diagnostic011.exe	2.4	2010/09/12 13:28:28	2.4	Up-to-date	Baseline 17, 1	None	09/09/2010 22:17:57	29977	TELM-06	1	Pass	0	0	0	0	19
M_TCP_Diagnostic	m_Diagnostic012	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic012Hardware_Diagnostic012.exe	2.5	2010/09/23 13:30:36	2.5	Up-to-date	Baseline 17, 1	None	09/09/2010 22:16:17	17377	TELM-06	1	Pass	0	0	0	0	9
M_TCP_Diagnostic	m_Diagnostic013	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic013Hardware_Diagnostic013.exe	2.5	2010/06/08 17:29:50	2.5	Up-to-date	Baseline 17, 1	None	09/09/2010 22:14:29	21004	TELM-06	1	Pass	0	0	0	0	15
M_TCP_Diagnostic	m_Diagnostic014	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic014Hardware_Diagnostic014.exe	2.4	2010/09/14 17:27:03	2.4	Up-to-date	Baseline 17, 1	None	09/09/2010 22:12:23	18029	TELM-06	1	Pass	0	0	0	0	18
M_TCP_Diagnostic	m_Diagnostic015	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic015Hardware_Diagnostic015.exe	2.5	2010/09/11 07:27:28	2.5	Up-to-date	Baseline 17, 1	None	09/09/2010 22:11:25	26917	TELM-06	1	Pass	0	0	0	0	29
M_TCP_Diagnostic	m_Diagnostic016	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic016Hardware_Diagnostic016.exe	2.0	2009/09/22 17:09:47	2.0	Up-to-date	Baseline 17, 1	None	09/09/2010 22:08:07	5908	TELM-06	1	Pass	0	0	0	0	1
M_TCP_Diagnostic	m_Diagnostic017	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic017Hardware_Diagnostic017.exe	2.3	2009/11/23 20:58:25	2.3	Up-to-date	Baseline 17, 1	None	09/09/2010 22:06:07	20043	TELM-06	1	Pass	0	0	0	0	32
M_TCP_Diagnostic	m_Diagnostic018	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic018Hardware_Diagnostic018.exe	2.2	2009/12/23 13:30:36	2.2	Up-to-date	Baseline 17, 1	None	09/09/2010 22:04:26	11841	TELM-06	1	Pass	0	0	0	0	9
M_TCP_Diagnostic	m_Diagnostic019	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic019Hardware_Diagnostic019.exe	2.1	2009/10/13 16:56:53	2.1	Up-to-date	Baseline 17, 1	None	09/09/2010 22:02:42	8012	TELM-06	1	Pass	0	0	0	0	4
M_TCP_Diagnostic	m_Diagnostic020	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic020Hardware_Diagnostic020.exe	2.2	2009/11/23 20:58:25	2.2	Up-to-date	Baseline 17, 1	None	09/09/2010 22:00:38	10296	TELM-06	1	Pass	0	0	0	0	3
M_TCP_Diagnostic	m_Diagnostic021	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic021Hardware_Diagnostic021.exe	2.1	2010/03/11 13:22:02	2.1	Up-to-date	Baseline 17, 1	None	09/09/2010 21:59:10	6038	TELM-06	1	Pass	0	0	0	0	2
M_TCP_Diagnostic	m_Diagnostic022	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic022Hardware_Diagnostic022.exe	2.1	2010/03/03 17:09:03	2.4	Up-to-date	Baseline 17, 1	None	09/09/2010 21:58:05	12545	TELM-06	1	Pass	0	0	0	0	4
M_TCP_Diagnostic	m_Diagnostic023	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic023Hardware_Diagnostic023.exe	2.2	2010/02/03 14:24:26	2.2	Up-to-date	Baseline 17, 1	None	09/09/2010 21:54:40	39133	TELM-06	1	Pass	0	0	0	0	5
M_TCP_Diagnostic	m_Diagnostic024	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic024Hardware_Diagnostic024.exe	2.5	2010/02/03 14:04:47	2.5	Up-to-date	Baseline 17, 1	None	09/09/2010 21:51:32	15934	TELM-06	1	Pass	0	0	0	0	20
M_TCP_Diagnostic	m_Diagnostic025	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic025Hardware_Diagnostic025.exe	2.1	2009/10/15 19:32:14	2.1	Up-to-date	Baseline 17, 1	None	09/09/2010 21:50:02	6055	TELM-06	1	Pass	0	0	0	0	3
M_TCP_Diagnostic	m_Diagnostic026	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic026Hardware_Diagnostic026.exe	2.2	2009/11/02 13:00:28	2.2	Up-to-date	Baseline 17, 1	None	09/09/2010 21:47:40	2915	TELM-06	1	Pass	0	0	0	0	8
M_TCP_Diagnostic	m_Diagnostic027	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic027Hardware_Diagnostic027.exe	2.4	2009/11/16 20:37:37	2.4	Up-to-date	Baseline 17, 1	None	09/09/2010 21:42:32	11487	TELM-06	1	Pass	0	0	0	0	11
M_TCP_Diagnostic	m_Diagnostic028	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic028Hardware_Diagnostic028.exe	2.1	2009/10/15 19:46:18	2.1	Up-to-date	Baseline 17, 1	None	09/09/2010 21:40:20	2750	TELM-06	1	Pass	0	0	0	0	2
M_TCP_Diagnostic	m_Diagnostic029	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic029Hardware_Diagnostic029.exe	2.5	2010/07/20 18:09:08	2.5	Up-to-date	Baseline 17, 1	None	09/09/2010 21:36:44	7550	TELM-06	1	Pass	0	0	0	0	277
M_TCP_Diagnostic	m_Diagnostic030	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic030Hardware_Diagnostic030.exe	2.2	2009/11/11 14:33:17	2.2	Up-to-date	Baseline 17, 1	None	09/09/2010 21:34:32	10852	TELM-06	1	Pass	0	0	0	0	3
M_TCP_Diagnostic	m_Diagnostic031	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic031Hardware_Diagnostic031.exe	2.3	2009/12/23 13:31:13	2.3	Up-to-date	Baseline 17, 1	None	09/09/2010 21:27:02	9931	TELM-06	1	Pass	0	0	0	0	5
M_TCP_Diagnostic	m_Diagnostic032	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic032Hardware_Diagnostic032.exe	2.4	2009/11/16 20:30:21	2.4	Up-to-date	Baseline 17, 1	None	09/09/2010 21:23:35	9042	TELM-06	1	Pass	0	0	0	0	2
M_TCP_Diagnostic	m_Diagnostic033	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic033Hardware_Diagnostic033.exe	2.2	2009/12/23 13:31:44	2.2	Up-to-date	Baseline 17, 1	None	09/09/2010 21:20:59	8071	TELM-06	1	Pass	0	0	0	0	7
M_TCP_Diagnostic	m_Diagnostic034	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic034Hardware_Diagnostic034.exe	2.3	2010/03/10 01:44:14	2.3	Up-to-date	Baseline 17, 1	None	09/09/2010 21:17:46	8541	TELM-06	1	Pass	0	0	0	0	8
M_TCP_Diagnostic	m_Diagnostic035	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic035Hardware_Diagnostic035.exe	2.1	2009/03/13 23:03:24	2.1	Up-to-date	Baseline 17, 1	None	09/09/2010 21:11:20	2198	TELM-06	1	Pass	0	0	0	0	10
M_TCP_Diagnostic	m_Diagnostic036	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Diagnostic_Diagnostic036Hardware_Diagnostic036.exe	2.3	2010/06/20 16:48:28	2.3	Up-to-date	Baseline 17, 1	None	09/09/2010 21:05:27	49678	TELM-06	1	Pass	0	0	0	0	18
M_TCP_Discover	m_DiscoverFull001	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull01Hardware_DiagnosticFull01.exe	2.8	2010/05/21 19:22:39	2.8	Up-to-date	Baseline 17, 1	None	09/10/2010 08:28:23	44695	TELM-06	1	Pass	0	0	0	0	150
M_TCP_Discover	m_DiscoverFull002	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull02Hardware_DiagnosticFull02.exe	2.6	2010/05/28 11:41:37	2.6	Up-to-date	Baseline 17, 1	None	09/10/2010 08:24:19	34593	TELM-06	1	Pass	0	0	0	0	1615
M_TCP_Discover	m_DiscoverFull003	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull03Hardware_DiagnosticFull03.exe	2.4	2010/05/25 20:00:01	2.4	Up-to-date	Baseline 17, 1	None	09/10/2010 08:39:26	12272	TELM-06	1	Pass	0	0	0	0	12
M_TCP_Discover	m_DiscoverFull004	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull04Hardware_DiagnosticFull04.exe	2.4	2010/05/25 21:19:17	2.4	Up-to-date	Baseline 17, 1	None	09/10/2010 07:16:41	271106	TELM-06	1	Pass	0	0	0	0	3713
M_TCP_Discover	m_DiscoverFull005	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull05Hardware_DiagnosticFull05.exe	2.2	2009/10/29 18:18:52	2.2	Up-to-date	Baseline 17, 1	None	09/10/2010 08:36:48	13479	TELM-06	1	Pass	0	0	0	0	12
M_TCP_Discover	m_DiscoverFull006	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull06Hardware_DiagnosticFull06.exe	2.7	2010/06/25 11:34:06	2.7	Up-to-date	Baseline 17, 1	None	09/10/2010 08:27:14	13827	TELM-06	1	Pass	0	0	0	0	127
M_TCP_Discover	m_DiscoverFull007	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull07Hardware_DiagnosticFull07.exe	2.7	2009/12/14 21:43:07	2.7	Up-to-date	Baseline 17, 1	None	09/10/2010 08:32:34	17688	TELM-06	1	Pass	0	0	0	0	6
M_TCP_Discover	m_DiscoverFull008	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull08Hardware_DiagnosticFull08.exe	2.3	2010/01/21 21:02:21	2.3	Up-to-date	Baseline 17, 1	None	09/10/2010 08:29:03	10978	TELM-06	1	Pass	0	0	0	0	65
M_TCP_Discover	m_DiscoverFull009	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull09Hardware_DiagnosticFull09.exe	2.3	2010/05/13 10:25:58	2.3	Up-to-date	Baseline 17, 1	None	09/10/2010 08:22:45	7958	TELM-06	1	Pass	0	0	0	0	2
M_TCP_Discover	m_DiscoverFull010	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull10Hardware_DiagnosticFull10.exe	2.3	2009/11/22 22:03:01	2.3	Up-to-date	Baseline 17, 1	None	09/10/2010 08:19:35	56827	TELM-06	1	Pass	0	0	0	0	9
M_TCP_Discover	m_DiscoverFull011	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull11Hardware_DiagnosticFull11.exe	2.8	2010/06/28 12:07:18	2.8	Up-to-date	Baseline 17, 1	None	09/10/2010 08:18:06	366221	TELM-06	1	Pass	0	0	0	0	33
M_TCP_Discover	m_DiscoverFull012	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull12Hardware_DiagnosticFull12.exe	2.2	2010/03/18 16:43:26	2.2	Up-to-date	Baseline 17, 1	None	09/10/2010 08:16:32	42568	TELM-06	1	Pass	0	0	0	0	10
M_TCP_Discover	m_DiscoverFull013	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull13Hardware_DiagnosticFull13.exe	2.1	2010/03/18 16:00:25	2.2	Up-to-date	Baseline 17, 1	None	09/10/2010 08:13:01	25044	TELM-06	1	Pass	0	0	0	0	13
M_TCP_Discover	m_DiscoverFull014	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull14Hardware_DiagnosticFull14.exe	2.1	2009/11/23 16:09:49	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 08:09:29	8083	TELM-06	1	Pass	0	0	0	0	12
M_TCP_Discover	m_DiscoverFull015	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull15Hardware_DiagnosticFull15.exe	2.1	2009/11/23 16:09:49	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 08:06:55	8311	TELM-06	1	Pass	0	0	0	0	6
M_TCP_Discover	m_DiscoverFull016	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull16Hardware_DiagnosticFull16.exe	2.1	2009/11/03 20:58:07	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 08:04:53	12151	TELM-06	1	Pass	0	0	0	0	8
M_TCP_Discover	m_DiscoverFull017	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull17Hardware_DiagnosticFull17.exe	2.1	2009/11/23 16:11:12	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 08:03:48	8439	TELM-06	1	Pass	0	0	0	0	6
M_TCP_Discover	m_DiscoverFull018	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull18Hardware_DiagnosticFull18.exe	2.1	2009/11/23 16:11:42	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 08:02:57	11452	TELM-06	1	Pass	0	0	0	0	7
M_TCP_Discover	m_DiscoverFull019	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull19Hardware_DiagnosticFull19.exe	2.1	2009/11/23 16:12:32	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 08:01:25	34279	TELM-06	1	Pass	0	0	0	0	11
M_TCP_Discover	m_DiscoverFull020	Vddapacelw/mozar/FWTestFWT/FORMALTestMode1/TESTsim_nvf/mzozar/miu TCP_Discover_DiscoverFull20Hardware_DiagnosticFull20.exe	2.0															

M_TCP_Initiaze	m_Initiaze002	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Initiaze_Initialze002Hardwarim_Initiaze002.exe</a>	2,2	20091020 12:16:24	2,2	Up-to-date	Baseline 17, 1	None	09/09/2010 23:22:26	19900	TELM-06	1	Pass	0	0	0	11
M_TCP_Initiaze	m_Initiaze003	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Initiaze_Initialze003Hardwarim_Initiaze003.exe</a>	2,1	20091020 15:57:16	2,1	Up-to-date	Baseline 17, 1	None	09/09/2010 23:18:46	23905	TELM-06	1	Pass	0	0	0	6
M_TCP_Initiaze	m_Initiaze004	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Initiaze_Initialze004Hardwarim_Initiaze004.exe</a>	2,4	20100908 15:47:44	2,4	Up-to-date	Baseline 17, 1	None	09/09/2010 23:16:47	34919	TELM-06	1	Pass	0	0	0	5
M_TCP_MedicalEvent	m_MedicalEvent001	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MedicalEvent_MedicalEvent001Hardwarim_MedicalEvent001.exe</a>	2,4	20101018 15:43:23	2,4	Up-to-date	Baseline 17, 1	None	09/09/2010 15:03:01	12606	TELM-06	1	Pass	0	0	0	36
M_TCP_MedicalEvent	m_MedicalEvent002	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MedicalEvent_MedicalEvent002Hardwarim_MedicalEvent002.exe</a>	2,6	20100209 19:50:39	2,6	Up-to-date	Baseline 17, 1	None	09/09/2010 14:59:39	72324	TELM-06	1	Pass	0	0	0	23
M_TCP_MedicalEvent	m_MedicalEvent003	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MedicalEvent_MedicalEvent003Hardwarim_MedicalEvent003.exe</a>	2,4	20100911 15:16:09	2,4	Up-to-date	Baseline 17, 1	None	09/09/2010 14:58:10	19895	TELM-06	1	Pass	0	0	0	24
M_TCP_MedicalEvent	m_MedicalEvent004	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MedicalEvent_MedicalEvent004Hardwarim_MedicalEvent004.exe</a>	2,4	20101018 15:44:34	2,4	Up-to-date	Baseline 17, 1	None	09/09/2010 14:56:33	12407	TELM-06	1	Pass	0	0	0	12
M_TCP_MedicalEvent	m_MedicalEvent005	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MedicalEvent_MedicalEvent005Hardwarim_MedicalEvent005.exe</a>	2,4	20101018 15:44:59	2,4	Up-to-date	Baseline 17, 1	None	09/09/2010 14:55:22	8462	TELM-06	1	Pass	0	0	0	6
M_TCP_MedicalEvent	m_MedicalEvent006	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MedicalEvent_MedicalEvent006Hardwarim_MedicalEvent006.exe</a>	2,4	20101018 15:44:59	2,4	Up-to-date	Baseline 17, 1	None	09/09/2010 14:55:22	8462	TELM-06	1	Pass	0	0	0	6
M_TCP_MedicalEvent	m_MedicalEvent007	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MedicalEvent_MedicalEvent007Hardwarim_MedicalEvent007.exe</a>	2,5	20101017 14:30:44	2,5	Up-to-date	Baseline 17, 1	None	09/09/2010 14:52:09	16656	TELM-06	1	Pass	0	0	0	5
M_TCP_MedicalEvent	m_MedicalEvent010	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MedicalEvent_MedicalEvent010Hardwarim_MedicalEvent010.exe</a>	2,2	20101018 15:47:08	2,2	Up-to-date	Baseline 17, 1	None	09/09/2010 14:50:39	15242	TELM-06	1	Pass	0	0	0	11
M_TCP_MedicalEvent	m_MedicalEvent011	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MedicalEvent_MedicalEvent011Hardwarim_MedicalEvent011.exe</a>	2,4	20101018 15:47:55	2,4	Up-to-date	Baseline 17, 1	None	09/09/2010 14:49:36	6024	TELM-06	1	Pass	0	0	0	3
M_TCP_MedicalEvent	m_MedicalEvent014	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MedicalEvent_MedicalEvent014Hardwarim_MedicalEvent014.exe</a>	2,5	20100908 13:20:31	2,5	Up-to-date	Baseline 17, 1	None	09/09/2010 14:48:18	15285	TELM-06	1	Pass	0	0	0	18
M_TCP_MedicalEvent	m_MedicalEvent015	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MedicalEvent_MedicalEvent015Hardwarim_MedicalEvent015.exe</a>	2,9	20100907 20:16:18	2,9	Up-to-date	Baseline 17, 1	None	09/09/2010 09:26:45	56509	TELM-06	1	Pass	0	0	0	152
M_TCP_MedicalEvent	m_MedicalEvent016	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MedicalEvent_MedicalEvent016Hardwarim_MedicalEvent016.exe</a>	2,9	20100512 18:44:37	2,9	Up-to-date	Baseline 17, 1	None	09/10/2010 07:30:50	293136	TELM-06	1	Pass	0	0	0	374
M_TCP_MedicalEvent	m_MedicalEvent017	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MedicalEvent_MedicalEvent017Hardwarim_MedicalEvent017.exe</a>	2,8	20100907 20:17:30	2,8	Up-to-date	Baseline 17, 1	None	09/10/2010 08:16:34	812725	TELM-06	1	Pass	0	0	0	13
M_TCP_MedicalEvent	m_MedicalEvent018	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MedicalEvent_MedicalEvent018Hardwarim_MedicalEvent018.exe</a>	2,5	20101018 15:50:21	2,5	Up-to-date	Baseline 17, 1	None	09/10/2010 07:23:41	272231	TELM-06	1	Pass	0	0	0	4627
M_TCP_MedicalEvent	m_MedicalEvent019	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MedicalEvent_MedicalEvent019Hardwarim_MedicalEvent019.exe</a>	2,5	20101018 15:50:59	2,5	Up-to-date	Baseline 17, 1	None	09/09/2010 14:45:48	7588	TELM-06	1	Pass	0	0	0	5
M_TCP_MedicalEvent	m_MedicalEvent020	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MedicalEvent_MedicalEvent020Hardwarim_MedicalEvent020.exe</a>	2,3	20101018 15:51:30	2,3	Up-to-date	Baseline 17, 1	None	09/09/2010 14:44:23	42580	TELM-06	1	Pass	0	0	0	9
M_TCP_MemoryTest	m_MemoryTest001	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MemoryTest_MemoryTest001Hardwarim_MemoryTest001.exe</a>	2,7	20100618 12:28:23	2,7	Up-to-date	Baseline 17, 1	None	09/10/2010 14:19:39	33194	TELM-06	1	Pass	0	0	0	33
M_TCP_MemoryTest	m_MemoryTest002	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MemoryTest_MemoryTest002Hardwarim_MemoryTest002.exe</a>	2,4	20100505 19:48:21	2,4	Up-to-date	Baseline 17, 1	None	09/10/2010 04:36:28	240636	TELM-06	1	Pass	0	0	0	75
M_TCP_MemoryTest	m_MemoryTest003	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MemoryTest_MemoryTest003Hardwarim_MemoryTest003.exe</a>	2,3	20100505 20:08:58	2,3	Up-to-date	Baseline 17, 1	None	09/10/2010 09:01:03	473623	TELM-06	1	Pass	0	0	0	75
M_TCP_MemoryTest	m_MemoryTest004	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MemoryTest_MemoryTest004Hardwarim_MemoryTest004.exe</a>	2,3	20100505 20:09:29	2,3	Up-to-date	Baseline 17, 1	None	09/10/2010 04:31:17	2103002	TELM-06	1	Pass	0	0	0	29
M_TCP_MemoryTest	m_MemoryTest005	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_MemoryTest_MemoryTest005Hardwarim_MemoryTest005.exe</a>	2,3	20100505 20:10:26	2,3	Up-to-date	Baseline 17, 1	None	09/10/2010 08:50:32	478969	TELM-06	1	Pass	0	0	0	75
M_TCP_Network	m_Network001	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network001Hardwarim_Network001.exe</a>	2,6	20100521 15:45:43	2,6	Up-to-date	Baseline 17, 1	None	09/10/2010 03:56:47	24624	TELM-06	1	Pass	0	0	0	1461
M_TCP_Network	m_Network002	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network002Hardwarim_Network002.exe</a>	2,6	20100512 12:01:17	2,6	Up-to-date	Baseline 17, 1	None	09/10/2010 10:59:39	34733	TELM-06	1	Pass	0	0	0	52
M_TCP_Network	m_Network003	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network003Hardwarim_Network003.exe</a>	2,1	20091216 22:07:06	2,1	Up-to-date	Baseline 17, 1	None	09/10/2010 03:53:62	6475	TELM-06	1	Pass	0	0	0	86
M_TCP_Network	m_Network004	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network004Hardwarim_Network004.exe</a>	2,1	20091221 17:14:24	2,1	Up-to-date	Baseline 17, 1	None	09/10/2010 03:51:47	3142	TELM-06	1	Pass	0	0	0	6
M_TCP_Network	m_Network005	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network005Hardwarim_Network005.exe</a>	2,1	20091221 17:18:03	2,1	Up-to-date	Baseline 17, 1	None	09/10/2010 03:50:03	48268	TELM-06	1	Pass	0	0	0	6
M_TCP_Network	m_Network006	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network006Hardwarim_Network006.exe</a>	2,5	20100521 16:49:56	2,5	Up-to-date	Baseline 17, 1	None	09/10/2010 03:48:34	15386	TELM-06	1	Pass	0	0	0	1421
M_TCP_Network	m_Network007	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network007Hardwarim_Network007.exe</a>	2,5	20100521 17:09:04	2,5	Up-to-date	Baseline 17, 1	None	09/10/2010 03:47:18	15844	TELM-06	1	Pass	0	0	0	1421
M_TCP_Network	m_Network008	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network008Hardwarim_Network008.exe</a>	2,4	20100521 17:13:03	2,4	Up-to-date	Baseline 17, 1	None	09/10/2010 03:46:02	21904	TELM-06	1	Pass	0	0	0	1421
M_TCP_Network	m_Network009	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network009Hardwarim_Network009.exe</a>	2,5	20100521 17:21:50	2,5	Up-to-date	Baseline 17, 1	None	09/10/2010 03:44:42	10372	TELM-06	1	Pass	0	0	0	1381
M_TCP_Network	m_Network010	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network010Hardwarim_Network010.exe</a>	2,5	20100521 17:34:27	2,5	Up-to-date	Baseline 17, 1	None	09/10/2010 03:43:06	10446	TELM-06	1	Pass	0	0	0	1381
M_TCP_Network	m_Network011	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network011Hardwarim_Network011.exe</a>	2,3	20100512 12:03:38	2,3	Up-to-date	Baseline 17, 1	None	09/10/2010 03:38:33	209491	TELM-06	1	Pass	0	0	0	122
M_TCP_Network	m_Network013	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network013Hardwarim_Network013.exe</a>	2,3	20100512 12:08:12	2,3	Up-to-date	Baseline 17, 1	None	09/10/2010 03:34:38	14164	TELM-06	1	Pass	0	0	0	392
M_TCP_Network	m_Network014	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network014Hardwarim_Network014.exe</a>	2,3	20100512 12:06:29	2,3	Up-to-date	Baseline 17, 1	None	09/10/2010 03:32:56	26821	TELM-06	1	Pass	0	0	0	12
M_TCP_Network	m_Network015	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network015Hardwarim_Network015.exe</a>	2,3	20100524 13:53:18	2,3	Up-to-date	Baseline 17, 1	None	09/10/2010 03:30:24	35646	TELM-06	1	Pass	0	0	0	25
M_TCP_Network	m_Network016	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network016Hardwarim_Network016.exe</a>	2,4	20100524 13:53:21	2,4	Up-to-date	Baseline 17, 1	None	09/10/2010 03:28:06	59426	TELM-06	1	Pass	0	0	0	25
M_TCP_Network	m_Network017	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network017Hardwarim_Network017.exe</a>	2,4	20100607 13:19:37	2,4	Up-to-date	Baseline 17, 1	None	09/10/2010 03:26:46	12646	TELM-06	1	Pass	0	0	0	41
M_TCP_Network	m_Network018	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network018Hardwarim_Network018.exe</a>	2,5	20100607 13:14:52	2,5	Up-to-date	Baseline 17, 1	None	09/10/2010 03:25:10	21746	TELM-06	1	Pass	0	0	0	11
M_TCP_Network	m_Network019	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network019Hardwarim_Network019.exe</a>	2,2	20100607 13:14:50	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 03:20:29	59508	TELM-06	1	Pass	0	0	0	51
M_TCP_Network	m_Network020	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network020Hardwarim_Network020.exe</a>	2,2	20100512 12:14:53	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 03:18:11	6017	TELM-06	1	Pass	0	0	0	67
M_TCP_Network	m_Network021	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network021Hardwarim_Network021.exe</a>	2,2	20100512 12:16:17	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 03:15:07	60263	TELM-06	1	Pass	0	0	0	133
M_TCP_Network	m_Network022	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network022Hardwarim_Network022.exe</a>	2,2	20100512 12:17:24	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 03:12:49	60346	TELM-06	1	Pass	0	0	0	175
M_TCP_Network	m_Network023	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network023Hardwarim_Network023.exe</a>	2,1	20100512 12:18:23	2,1	Up-to-date	Baseline 17, 1	None	09/10/2010 03:11:02	19492	TELM-06	1	Pass	0	0	0	45
M_TCP_Network	m_Network024	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network024Hardwarim_Network024.exe</a>	2,2	20100524 14:01:11	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 03:03:39	47908	TELM-06	1	Pass	0	0	0	46
M_TCP_Network	m_Network025	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network025Hardwarim_Network025.exe</a>	2,1	20100512 12:20:01	2,1	Up-to-date	Baseline 17, 1	None	09/10/2010 02:58:44	19786	TELM-06	1	Pass	0	0	0	178
M_TCP_Network	m_Network026	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network026Hardwarim_Network026.exe</a>	2,1	20100512 12:20:03	2,1	Up-to-date	Baseline 17, 1	None	09/10/2010 02:56:05	28049	TELM-06	1	Pass	0	0	0	180
M_TCP_Network	m_Network027	<a href="#">VdtaapacewfwmozanfWTestFWWT_FORMALTestMod1Testissam_nvfmzoaruzurium_TCP_Network_Network027Hardwarim_Network027.exe</a>	2,1	20100512 12:22:02	2,1	Up-to-date											

M_TCP_Polling	m_Polling05	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Pollngm_Polling05Hardwem_Polling05.exe</a></u>	2.0	2009110911837	2.0	Up-to-date	Baseline 17.1	None	09/10/2010 01:26:27	8356	TELM-06	1	Pass	0	0	0	2
M_TCP_Powerhitbit	m_Power02	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Powehhbitm_Power02Hardwem_Power02.exe</a></u>	2.2	2010031201364	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 01:24:43	52963	TELM-06	1	Pass	0	0	0	15
M_TCP_Powerhitbit	m_Power03	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Powehhbitm_Power03Hardwem_Power03.exe</a></u>	2.2	2010101519156	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 01:21:27	10702	TELM-06	1	Pass	0	0	0	194
M_TCP_Powerhitbit	m_Power04	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Powehhbitm_Power04Hardwem_Power04.exe</a></u>	2.4	2010062214046	2.4	Up-to-date	Baseline 17.1	None	09/10/2010 01:16:08	54558	TELM-06	1	Pass	0	0	0	13
M_TCP_Powerhitbit	m_Power05	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Powehhbitm_Power05Hardwem_Power05.exe</a></u>	2.3	20100322142621	2.3	Up-to-date	Baseline 17.1	None	09/10/2010 01:14:09	18198	TELM-06	1	Pass	0	0	0	46
M_TCP_Powerhitbit	m_Power06	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Powehhbitm_Power06Hardwem_Power06.exe</a></u>	2.2	2010092413541	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 01:05:17	290454	TELM-06	1	Pass	0	0	0	23
M_TCP_Powerhitbit	m_Power07	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Powehhbitm_Power07Hardwem_Power07.exe</a></u>	2.6	20100622122746	2.6	Up-to-date	Baseline 17.1	None	09/10/2010 01:08:09	194744	TELM-06	1	Pass	0	0	0	2609
M_TCP_Powerhitbit	m_Power08	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Powehhbitm_Power08Hardwem_Power08.exe</a></u>	2.1	20091214163957	2.1	Up-to-date	Baseline 17.1	None	09/10/2010 01:04:38	19408	TELM-06	1	Pass	0	0	0	13
M_TCP_Powerhitbit	m_Power09	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Powehhbitm_Power09Hardwem_Power09.exe</a></u>	2.2	20091214163957	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 01:01:25	348177	TELM-06	1	Pass	0	0	0	15
M_TCP_Powerhitbit	m_Power10	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Powehhbitm_Power10Hardwem_Power10.exe</a></u>	2.4	20100710150010	2.4	Up-to-date	Baseline 17.1	None	09/10/2010 00:56:38	10444	TELM-06	1	Pass	0	0	0	9
M_TCP_Powerhitbit	m_Power11	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Powehhbitm_Power11Hardwem_Power11.exe</a></u>	2.1	20100216221845	2.1	Up-to-date	Baseline 17.1	None	09/10/2010 00:54:20	12834	TELM-06	1	Pass	0	0	0	26
M_TCP_RawMode01	m_RawMode01	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_RawModem_RawMode01Hardwem_RawMode01.exe</a></u>	2.4	20100311190417	2.1	Up-to-date	Baseline 17.1	None	09/10/2010 00:50:17	106275	TELM-06	1	Pass	0	0	0	116
M_TCP_RawMode01	m_RawMode02	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_RawModem_RawMode02Hardwem_RawMode02.exe</a></u>	2.6	2010102820014	2.6	Up-to-date	Baseline 17.1	None	09/10/2010 04:28:59	7730	TELM-06	1	Pass	0	0	0	87
M_TCP_RawMode01	m_RawMode03	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_RawModem_RawMode03Hardwem_RawMode03.exe</a></u>	2.5	20100127130349	2.5	Up-to-date	Baseline 17.1	None	09/10/2010 04:18:56	11574	TELM-06	1	Pass	0	0	0	11
M_TCP_RawMode01	m_RawMode04	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_RawModem_RawMode04Hardwem_RawMode04.exe</a></u>	2.3	20100127130925	2.6	Up-to-date	Baseline 17.1	None	09/10/2010 04:12:46	7037	TELM-06	1	Pass	0	0	0	2
M_TCP_RawMode01	m_RawMode05	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_RawModem_RawMode05Hardwem_RawMode05.exe</a></u>	2.3	20100126201141	2.3	Up-to-date	Baseline 17.1	None	09/10/2010 04:10:38	13467	TELM-06	1	Pass	0	0	0	9
M_TCP_RawMode01	m_RawMode06	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_RawModem_RawMode06Hardwem_RawMode06.exe</a></u>	2.2	20100126201157	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 04:09:21	9182	TELM-06	1	Pass	0	0	0	4
M_TCP_RawMode01	m_RawMode07	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_RawModem_RawMode07Hardwem_RawMode07.exe</a></u>	2.3	201009092183543	2.3	Up-to-date	Baseline 17.1	None	09/10/2010 04:06:19	11340	TELM-06	1	Pass	0	0	0	11
M_TCP_RawMode01	m_RawMode08	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_RawModem_RawMode08Hardwem_RawMode08.exe</a></u>	2.4	20100127131420	2.4	Up-to-date	Baseline 17.1	None	09/10/2010 04:04:55	16186	TELM-06	1	Pass	0	0	0	4
M_TCP_RawMode01	m_RawMode09	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_RawModem_RawMode09Hardwem_RawMode09.exe</a></u>	2.2	20091214165158	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 04:02:58	15773	TELM-06	1	Pass	0	0	0	7
M_TCP_RawMode01	m_RawMode10	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_RawModem_RawMode10Hardwem_RawMode10.exe</a></u>	2.1	20091027173320	2.1	Up-to-date	Baseline 17.1	None	09/10/2010 04:01:40	3321	TELM-06	1	Pass	0	0	0	3
M_TCP_RawMode01	m_RawMode11	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_RawModem_RawMode11Hardwem_RawMode11.exe</a></u>	2.2	20100201161538	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 04:00:25	8799	TELM-06	1	Pass	0	0	0	3
M_TCP_RawMode01	m_RawMode12	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_RawModem_RawMode12Hardwem_RawMode12.exe</a></u>	2.3	20100126201322	2.3	Up-to-date	Baseline 17.1	None	09/10/2010 03:59:19	11799	TELM-06	1	Pass	0	0	0	3
M_TCP_Reset	m_Reset01	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Resetm_Reset01Hardwem_Reset01.exe</a></u>	2.3	20101006211255	2.3	Up-to-date	Baseline 17.1	None	09/10/2010 03:56:50	9350	TELM-06	1	Pass	0	0	0	23
M_TCP_Reset	m_Reset02	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Resetm_Reset02Hardwem_Reset02.exe</a></u>	2.4	20101028215207	2.4	Up-to-date	Baseline 17.1	None	09/10/2010 03:56:24	20976	TELM-06	1	Pass	0	0	0	39
M_TCP_Secur02	m_Secur02	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur02m_Secur02Hardwem_Secur02.exe</a></u>	2.9	20100603151825	2.9	Up-to-date	Baseline 17.1	None	09/10/2010 08:06:31	457327	TELM-06	1	Pass	0	0	0	154
M_TCP_Secur03	m_Secur03	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur03m_Secur03Hardwem_Secur03.exe</a></u>	2.2	20100217162041	2.4	Up-to-date	Baseline 17.1	None	09/10/2010 08:34:30	7141	TELM-06	1	Pass	0	0	0	73
M_TCP_Secur04	m_Secur04	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur04m_Secur04Hardwem_Secur04.exe</a></u>	2.2	20091209163449	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 08:28:41	252039	TELM-06	1	Pass	0	0	0	173
M_TCP_Secur05	m_Secur05	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur05m_Secur05Hardwem_Secur05.exe</a></u>	2.2	20100217162351	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 08:26:41	3998	TELM-06	1	Pass	0	0	0	72
M_TCP_Secur06	m_Secur06	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur06m_Secur06Hardwem_Secur06.exe</a></u>	2.4	20100217144438	2.4	Up-to-date	Baseline 17.1	None	09/10/2010 08:22:26	147476	TELM-06	1	Pass	0	0	0	108
M_TCP_Secur07	m_Secur07	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur07m_Secur07Hardwem_Secur07.exe</a></u>	2.1	20100216131338	2.6	Up-to-date	Baseline 17.1	None	09/10/2010 08:17:00	151610	TELM-06	1	Pass	0	0	0	26
M_TCP_Secur08	m_Secur08	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur08m_Secur08Hardwem_Secur08.exe</a></u>	2.3	20100217162805	2.3	Up-to-date	Baseline 17.1	None	09/10/2010 08:14:15	6759	TELM-06	1	Pass	0	0	0	72
M_TCP_Secur09	m_Secur09	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur09m_Secur09Hardwem_Secur09.exe</a></u>	2.3	20100217163240	2.3	Up-to-date	Baseline 17.1	None	09/10/2010 08:12:33	3682	TELM-06	1	Pass	0	0	0	36
M_TCP_Secur10	m_Secur10	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur10m_Secur10Hardwem_Secur10.exe</a></u>	2.3	20100218174503	2.3	Up-to-date	Baseline 17.1	None	09/10/2010 08:09:11	38532	TELM-06	1	Pass	0	0	0	113
M_TCP_Secur11	m_Secur11	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur11m_Secur11Hardwem_Secur11.exe</a></u>	2.9	20100903161617	2.5	Up-to-date	Baseline 17.1	None	09/10/2010 08:08:22	12121	TELM-06	1	Pass	0	0	0	19
M_TCP_Secur12	m_Secur12	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur12m_Secur12Hardwem_Secur12.exe</a></u>	2.9	20100218151419	2.9	Up-to-date	Baseline 17.1	None	09/10/2010 08:05:07	4736	TELM-06	1	Pass	0	0	0	132
M_TCP_Secur13	m_Secur13	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur13m_Secur13Hardwem_Secur13.exe</a></u>	2.5	20100218151519	2.5	Up-to-date	Baseline 17.1	None	09/10/2010 08:02:35	11859	TELM-06	1	Pass	0	0	0	140
M_TCP_Secur14	m_Secur14	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur14m_Secur14Hardwem_Secur14.exe</a></u>	2.3	20100903161617	2.5	Up-to-date	Baseline 17.1	None	09/10/2010 08:01:46	14990	TELM-06	1	Pass	0	0	0	12
M_TCP_Secur15	m_Secur15	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur15m_Secur15Hardwem_Secur15.exe</a></u>	2.4	20100217175826	2.4	Up-to-date	Baseline 17.1	None	09/10/2010 08:00:48	596225	TELM-06	1	Pass	0	0	0	34
M_TCP_Secur16	m_Secur16	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur16m_Secur16Hardwem_Secur16.exe</a></u>	2.2	20100908195640	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 08:00:43	10779	TELM-06	1	Pass	0	0	0	146
M_TCP_Secur17	m_Secur17	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur17m_Secur17Hardwem_Secur17.exe</a></u>	2.2	20091208192918	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 07:58:50	14629	TELM-06	1	Pass	0	0	0	39
M_TCP_Secur18	m_Secur18	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur18m_Secur18Hardwem_Secur18.exe</a></u>	2.4	20100318160837	2.4	Up-to-date	Baseline 17.1	None	09/10/2010 07:53:23	40667	TELM-06	1	Pass	0	0	0	12
M_TCP_Secur19	m_Secur19	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur19m_Secur19Hardwem_Secur19.exe</a></u>	2.3	20100328131317	2.3	Up-to-date	Baseline 17.1	None	09/10/2010 07:46:17	90409	TELM-06	1	Pass	0	0	0	1230
M_TCP_Secur20	m_Secur20	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur20m_Secur20Hardwem_Secur20.exe</a></u>	2.3	20100603182230	2.3	Up-to-date	Baseline 17.1	None	09/10/2010 07:44:32	22169	TELM-06	1	Pass	0	0	0	62
M_TCP_Secur21	m_Secur21	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur21m_Secur21Hardwem_Secur21.exe</a></u>	2.3	20100903163752	2.5	Up-to-date	Baseline 17.1	None	09/10/2010 07:41:09	40964	TELM-06	1	Pass	0	0	0	12
M_TCP_Secur22	m_Secur22	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur22m_Secur22Hardwem_Secur22.exe</a></u>	2.9	20100618190546	2.9	Up-to-date	Baseline 17.1	None	09/10/2010 06:48:55	259983	TELM-06	1	Pass	0	0	0	55496
M_TCP_Secur23	m_Secur23	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur23m_Secur23Hardwem_Secur23.exe</a></u>	2.12	20100617149047	2.12	Up-to-date	Baseline 17.1	None	09/10/2010 06:34:06	51544	TELM-06	1	Pass	0	0	0	1119
M_TCP_Secur24	m_Secur24	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur24m_Secur24Hardwem_Secur24.exe</a></u>	2.2	20100603182230	2.3	Up-to-date	Baseline 17.1	None	09/10/2010 06:33:45	23108	TELM-06	1	Pass	0	0	0	4
M_TCP_Secur25	m_Secur25	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur25m_Secur25Hardwem_Secur25.exe</a></u>	2.3	20100610143909	2.3	Up-to-date	Baseline 17.1	None	09/10/2010 06:30:56	4485	TELM-06	1	Pass	0	0	0	158
M_TCP_Secur26	m_Secur26	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur26m_Secur26Hardwem_Secur26.exe</a></u>	2.3	20100617151554	2.3	Up-to-date	Baseline 17.1	None	09/10/2010 07:14:02	42057	TELM-06	1	Pass	0	0	0	60
M_TCP_Secur27	m_Secur27	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur27m_Secur27Hardwem_Secur27.exe</a></u>	2.1	20100629182010	2.1	Up-to-date	Baseline 17.1	None	09/10/2010 07:38:10	89228	TELM-06	1	Pass	0	0	0	35
M_TCP_Secur28	m_Secur28	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur28m_Secur28Hardwem_Secur28.exe</a></u>	2.1	20100629182010	2.1	Up-to-date	Baseline 17.1	None	09/10/2010 07:34:00	30514	TELM-06	1	Pass	0	0	0	35
M_TCP_Secur29	m_Secur29	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur29m_Secur29Hardwem_Secur29.exe</a></u>	2.2	20100301182829	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 07:32:04	28544	TELM-06	1	Pass	0	0	0	46
M_TCP_Secur30	m_Secur30	<u><a href="#">VdIspacelwlmznarfWTestFWT.FORMAL.TestMode1.TesiSan_nvfmzozarvnm.TCP_Secur30m_Secur30Hardwem_Secur30.exe</a></u>	2.2	20100208132052	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 07:30:18	11778	TELM-06	1	Pass				

M_TCP_Channel	m_ChannelRecovery027	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20100221 12:11:00	2.2	Up-to-date	Baseline 17.1	None	08/10/2010 02:14:01	11619	TELM-06	1	Pass	0	0	0	8
M_TCP_Channel	m_ChannelRecovery028	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20100221 17:19:25	2.2	Up-to-date	Baseline 17.1	None	08/10/2010 07:41:57	13274	TELM-06	1	Pass	0	0	0	3
M_TCP_Channel	m_ChannelRecovery029	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20091218 20:13:33	2.2	Up-to-date	Baseline 17.1	None	08/10/2010 02:06:45	13555	TELM-06	1	Pass	0	0	0	9
M_TCP_Channel	m_ChannelRecovery030	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.10	20100623 21:11:51	2.10	Up-to-date	Baseline 17.1	None	08/10/2010 02:20:16	19109	TELM-06	1	Pass	0	0	0	30
M_TCP_Channel	m_ChannelRecovery031	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20090421 18:40:20	2.2	Up-to-date	Baseline 17.1	None	08/10/2010 01:58:48	19692	TELM-06	1	Pass	0	0	0	5
M_TCP_Channel	m_ChannelRecovery032	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.5	20100623 01:32:15	2.5	Up-to-date	Baseline 17.1	None	08/10/2010 01:55:21	18086	TELM-06	1	Pass	0	0	0	5
M_TCP_Channel	m_ChannelRecovery033	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.3	20100407 17:51:54	2.3	Up-to-date	Baseline 17.1	None	08/10/2010 01:53:55	19208	TELM-06	1	Pass	0	0	0	8
M_TCP_Channel	m_ChannelRecovery038	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20090122 13:18:38	2.1	Up-to-date	Baseline 17.1	None	08/10/2010 01:48:40	19428	TELM-06	1	Pass	0	0	0	1
M_TCP_Channel	m_ChannelRecovery039	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.3	20100210 20:47:43	2.3	Up-to-date	Baseline 17.1	None	08/10/2010 01:46:56	12347	TELM-06	1	Pass	0	0	0	6
M_TCP_Channel	m_ChannelRecovery040	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.5	20100607 12:54:38	2.5	Up-to-date	Baseline 17.1	None	08/10/2010 01:44:18	15273	TELM-06	1	Pass	0	0	0	1
M_TCP_Channel	m_ChannelRecovery041	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.1	20091022 13:18:38	2.1	Up-to-date	Baseline 17.1	None	08/10/2010 01:40:37	38479	TELM-06	1	Pass	0	0	0	1
M_TCP_Channel	m_ChannelRecovery042	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.3	20091203 15:57:39	2.3	Up-to-date	Baseline 17.1	None	08/10/2010 01:33:30	21995	TELM-06	1	Pass	0	0	0	5
M_TCP_Channel	m_ChannelRecovery043	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.6	20100624 18:37:58	2.6	Up-to-date	Baseline 17.1	None	08/10/2010 01:30:41	56022	TELM-06	1	Pass	0	0	0	37
M_TCP_Channel	m_ChannelRecovery045	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20091112 21:22:11	2.2	Up-to-date	Baseline 17.1	None	08/10/2010 01:28:35	11646	TELM-06	1	Pass	0	0	0	40
M_TCP_Channel	m_ChannelRecovery046	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20091116 18:40:10	2.3	Up-to-date	Baseline 17.1	None	08/10/2010 01:26:13	12396	TELM-06	1	Pass	0	0	0	49
M_TCP_Channel	m_ChannelRecovery047	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.1	20091116 18:58:46	2.1	Up-to-date	Baseline 17.1	None	08/10/2010 01:22:22	52466	TELM-06	1	Pass	0	0	0	95
M_TCP_Channel	m_ChannelRecovery048	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.3	20100624 18:46:14	2.3	Up-to-date	Baseline 17.1	None	08/10/2010 01:18:49	63270	TELM-06	1	Pass	0	0	0	156
M_TCP_Channel	m_ChannelRecovery049	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.5	20100625 13:35:18	2.5	Up-to-date	Baseline 17.1	None	08/10/2010 01:14:40	36508	TELM-06	1	Pass	0	0	0	207
M_TCP_Channel	m_ChannelRecovery050	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20091120 13:38:37	2.2	Up-to-date	Baseline 17.1	None	08/10/2010 01:12:34	18906	TELM-06	1	Pass	0	0	0	2
M_TCP_Channel	m_ChannelRecovery051	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.3	20100624 19:40:38	2.3	Up-to-date	Baseline 17.1	None	08/10/2010 01:06:23	83694	TELM-06	1	Pass	0	0	0	196
M_TCP_Channel	m_ChannelRecovery053	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.3	20100624 21:57:03	2.3	Up-to-date	Baseline 17.1	None	08/10/2010 01:04:03	31591	TELM-06	1	Pass	0	0	0	96
M_TCP_Channel	m_ChannelRecovery054	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.4	20100624 22:30:30	2.4	Up-to-date	Baseline 17.1	None	08/10/2010 01:00:40	9000	TELM-06	1	Pass	0	0	0	6
M_TCP_Channel	m_ChannelRecovery055	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.4	20100211 14:12:25	2.4	Up-to-date	Baseline 17.1	None	08/11/2010 03:37:30	2022332	TELM-06	1	Pass	0	0	0	6
M_TCP_Channel	m_ChannelRecovery061	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.3	20100406 11:52:17	2.3	Up-to-date	Baseline 17.1	None	08/11/2010 03:55:54	20734	TELM-06	1	Pass	0	0	0	12
M_TCP_Channel	m_ChannelRecovery062	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20100625 16:47:28	2.2	Up-to-date	Baseline 17.1	None	08/11/2010 03:54:06	13116	TELM-06	1	Pass	0	0	0	4
M_TCP_Channel	m_ChannelRecovery063	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.9	20100613 17:43:56	2.9	Up-to-date	Baseline 17.1	None	08/11/2010 03:49:51	11980	TELM-06	1	Pass	0	0	0	39
M_TCP_Channel	m_ChannelRecovery064	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20100506 14:14:14	2.4	Up-to-date	Baseline 17.1	None	08/11/2010 03:47:26	40763	TELM-06	1	Pass	0	0	0	8
M_TCP_Channel	m_ChannelRecovery065	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20100506 14:33:26	2.2	Up-to-date	Baseline 17.1	None	08/11/2010 03:43:26	42288	TELM-06	1	Pass	0	0	0	2
M_TCP_Channel	m_ChannelRecovery066	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20100506 15:48:13	2.2	Up-to-date	Baseline 17.1	None	08/11/2010 03:38:33	37510	TELM-06	1	Pass	0	0	0	5
M_TCP_Channel	m_ChannelRecovery067	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20100506 15:58:13	2.2	Up-to-date	Baseline 17.1	None	08/11/2010 03:36:06	40825	TELM-06	1	Pass	0	0	0	5
M_TCP_Channel	m_ChannelRecovery068	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.1	20090921 12:45:09	2.1	Up-to-date	Baseline 17.1	None	08/11/2010 03:31:57	34708	TELM-06	1	Pass	0	0	0	5
M_TCP_Channel	m_ChannelRecovery069	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.3	20100510 15:40:47	2.3	Up-to-date	Baseline 17.1	None	08/11/2010 03:27:47	1009344	TELM-06	1	Pass	0	0	0	5
M_TCP_Channel	m_ChannelRecovery070	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.1	20100510 18:14:32	2.1	Up-to-date	Baseline 17.1	None	08/11/2010 03:28:49	12790	TELM-06	1	Pass	0	0	0	3
M_TCP_Channel	m_ChannelRecovery071	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.1	20100204 17:57:00	2.1	Up-to-date	Baseline 17.1	None	08/11/2010 03:27:27	15803	TELM-06	1	Pass	0	0	0	3
M_TCP_Channel	m_ChannelRecovery072	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20100407 11:42:12	2.3	Up-to-date	Baseline 17.1	None	08/11/2010 03:18:48	64203	TELM-06	1	Pass	0	0	0	8
M_TCP_Channel	m_ChannelRecovery073	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.3	20100507 11:00:38	2.3	Up-to-date	Baseline 17.1	None	08/11/2010 03:15:46	44810	TELM-06	1	Pass	0	0	0	3
M_TCP_Close	m_Close001	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.6	20100329 17:53:05	2.6	Up-to-date	Baseline 17.1	None	08/11/2010 04:11:39	7668	TELM-06	1	Pass	0	0	0	51
M_TCP_Close	m_Close002	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.3	20100426 19:30:19	2.3	Up-to-date	Baseline 17.1	None	08/11/2010 04:07:32	36340	TELM-06	1	Pass	0	0	0	4
M_TCP_Close	m_Close003	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.3	20100624 15:01:11	2.3	Up-to-date	Baseline 17.1	None	08/11/2010 04:05:28	7015	TELM-06	1	Pass	0	0	0	5
M_TCP_Close	m_Close004	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.5	20100316 12:03:27	2.5	Up-to-date	Baseline 17.1	None	08/11/2010 04:03:57	11497	TELM-06	1	Pass	0	0	0	150
M_TCP_Close	m_Close005	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.5	20100524 17:00:08	2.5	Up-to-date	Baseline 17.1	None	08/11/2010 04:01:30	64145	TELM-06	1	Pass	0	0	0	61
M_TCP_Close	m_Close006	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.1	20091119 20:38:31	2.2	Up-to-date	Baseline 17.1	None	08/11/2010 04:00:55	11089	TELM-06	1	Pass	0	0	0	3
M_TCP_Close	m_Close007	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.1	20100204 18:46:09	2.1	Up-to-date	Baseline 17.1	None	08/11/2010 03:59:33	16535	TELM-06	1	Pass	0	0	0	34
M_TCP_Close	m_Close008	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.4	20100512 15:22:15	2.4	Up-to-date	Baseline 17.1	None	08/11/2010 03:57:13	7081	TELM-06	1	Pass	0	0	0	10
M_TCP_Close	m_Close009	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20100204 18:29:20	2.2	Up-to-date	Baseline 17.1	None	08/11/2010 03:54:59	7903	TELM-06	1	Pass	0	0	0	3
M_TCP_Close	m_Close010	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.0	20090921 12:45:39	2.0	Up-to-date	Baseline 17.1	None	08/11/2010 03:52:24	15776	TELM-06	1	Pass	0	0	0	5
M_TCP_Close	m_Close011	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.0	20090921 12:46:20	2.0	Up-to-date	Baseline 17.1	None	08/11/2010 03:51:04	19177	TELM-06	1	Pass	0	0	0	2
M_TCP_Close	m_Close012	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.0	20090921 12:48:51	2.0	Up-to-date	Baseline 17.1	None	08/11/2010 03:48:52	11534	TELM-06	1	Pass	0	0	0	2
M_TCP_Close	m_Close013	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.0	20090921 12:48:45	2.0	Up-to-date	Baseline 17.1	None	08/11/2010 03:47:36	7995	TELM-06	1	Pass	0	0	0	4
M_TCP_Close	m_Close014	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.1	20100129 16:44:05	2.1	Up-to-date	Baseline 17.1	None	08/11/2010 03:46:14	8895	TELM-06	1	Pass	0	0	0	6
M_TCP_Close	m_Close015	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.1	20100624 12:05:17	2.2	Up-to-date	Baseline 17.1	None	08/11/2010 03:44:55	11137	TELM-06	1	Pass	0	0	0	5
M_TCP_Close	m_Close017	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.0	20090921 12:47:07	2.0	Up-to-date	Baseline 17.1	None	08/11/2010 03:43:35	9458	TELM-06	1	Pass	0	0	0	2
M_TCP_Close	m_Close019	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.1	20090921 14:47:50	2.1	Up-to-date	Baseline 17.1	None	08/11/2010 03:42:35	4923	TELM-06	1	Pass	0	0	0	2
M_TCP_Close	m_Close020	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20090921 14:47:42	2.2	Up-to-date	Baseline 17.1	None	08/11/2010 03:37:22	9555	TELM-06	1	Pass	0	0	0	2
M_TCP_Close	m_Close021	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20090921 12:48:33	2.2	Up-to-date	Baseline 17.1	None	08/11/2010 03:33:45	11726	TELM-06	1	Pass	0	0	0	2
M_TCP_Close	m_Close022	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.2	20090921 14:53:53	2.2	Up-to-date	Baseline 17.1	None	08/11/2010 03:31:23	12396	TELM-06	1	Pass	0	0	0	13
M_TCP_Data	m_AR001	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.5	20100629 16:28:36	2.5	Up-to-date	Baseline 17.1	None	08/09/2010 12:25:12	14930	TELM-06	1	Pass	0	0	0	54
M_TCP_Data	m_AR002	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.3	20090921 12:48:25	2.3	Up-to-date	Baseline 17.1	None	08/09/2010 12:23:08	6992	TELM-06	1	Pass	0	0	0	21
M_TCP_Data	m_AR003	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.3	20100405 12:22:02	2.3	Up-to-date	Baseline 17.1	None	08/09/2010 12:20:49	8593	TELM-06	1	Pass	0	0	0	148
M_TCP_Data	m_AR004	<a href="#">Vdaipacelw/m/zozar/FWTestFWWT_FORMALTestMod5[Test].nsf/m/zozar/m/z</a>	2.1	20091104 21:23:33	2.1	Up-to-date	Baseline 17.1	None	08/09/2010 12:24:42	8350	TELM						

M_TCP_Data	m_MemoryRead017	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead017Hardwarein_MemoryRead017.exe	2,2	2009/11/09 15:52:59	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 20:38:30	7901	TELM-06	1	Pass	0	0	0	57
M_TCP_Data	m_MemoryRead018	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead018Hardwarein_MemoryRead018.exe	2,2	2009/12/01 20:57:27	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 20:36:20	8823	TELM-06	1	Pass	0	0	0	58
M_TCP_Data	m_MemoryRead020	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead020Hardwarein_MemoryRead020.exe	2,4	2009/10/09 20:46:06	2,4	Up-to-date	Baseline 17, 1	None	09/05/2010 20:33:48	7111	TELM-06	1	Pass	0	0	0	8
M_TCP_Data	m_MemoryRead021	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead021Hardwarein_MemoryRead021.exe	2,2	2009/12/23 13:34:31	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 20:31:56	9293	TELM-06	1	Pass	0	0	0	6
M_TCP_Data	m_MemoryRead030	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead030Hardwarein_MemoryRead030.exe	2,1	2009/01/16 13:54:03	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 20:26:54	6611	TELM-06	1	Pass	0	0	0	2
M_TCP_Data	m_MemoryRead032	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead032Hardwarein_MemoryRead032.exe	2,1	2009/12/02 20:33:49	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 20:24:04	9329	TELM-06	1	Pass	0	0	0	8
M_TCP_Data	m_MemoryRead033	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead033Hardwarein_MemoryRead033.exe	2,3	2009/1/23 18:55:48	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 20:21:18	12011	TELM-06	1	Pass	0	0	0	39
M_TCP_Data	m_MemoryRead034	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead034Hardwarein_MemoryRead034.exe	2,1	2009/01/16 14:15:21	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 20:19:45	8504	TELM-06	1	Pass	0	0	0	39
M_TCP_Data	m_MemoryRead038	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead038Hardwarein_MemoryRead038.exe	2,1	2009/09/28 15:09:29	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 20:16:19	8516	TELM-06	1	Pass	0	0	0	2
M_TCP_Data	m_MemoryRead037	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead037Hardwarein_MemoryRead037.exe	2,2	2009/1/23 18:57:01	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 20:14:41	12455	TELM-06	1	Pass	0	0	0	12
M_TCP_Data	m_MemoryRead038	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead038Hardwarein_MemoryRead038.exe	2,3	2010/01/19 17:36:39	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 20:13:02	14635	TELM-06	1	Pass	0	0	0	470
M_TCP_Data	m_MemoryRead039	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead039Hardwarein_MemoryRead039.exe	2,1	2009/09/28 15:09:29	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 20:11:12	8516	TELM-06	1	Pass	0	0	0	2
M_TCP_Data	m_MemoryRead040	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead040Hardwarein_MemoryRead040.exe	2,6	2010/01/06 14:10:24	2,6	Up-to-date	Baseline 17, 1	None	09/05/2010 20:09:16	32367	TELM-06	1	Pass	0	0	0	10
M_TCP_Data	m_MemoryRead041	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead041Hardwarein_MemoryRead041.exe	2,4	2009/1/16 12:52:46	2,4	Up-to-date	Baseline 17, 1	None	09/05/2010 20:07:24	18463	TELM-06	1	Pass	0	0	0	22
M_TCP_Data	m_MemoryRead042	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead042Hardwarein_MemoryRead042.exe	2,3	2010/09/28 22:24:03	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 20:05:08	28226	TELM-06	1	Pass	0	0	0	41
M_TCP_Data	m_MemoryRead043	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead043Hardwarein_MemoryRead043.exe	2,2	2010/01/08 16:15:12	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 20:03:33	17748	TELM-06	1	Pass	0	0	0	4
M_TCP_Data	m_MemoryRead045	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead045Hardwarein_MemoryRead045.exe	2,0	2009/09/22 14:34:20	2,0	Up-to-date	Baseline 17, 1	None	09/05/2010 20:01:43	6823	TELM-06	1	Pass	0	0	0	2
M_TCP_Data	m_MemoryRead049	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead049Hardwarein_MemoryRead049.exe	2,3	2009/1/16 12:52:47	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 20:00:21	8602	TELM-06	1	Pass	0	0	0	12
M_TCP_Data	m_MemoryRead051	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead051Hardwarein_MemoryRead051.exe	2,1	2009/10/27 19:22:11	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 19:58:26	9811	TELM-06	1	Pass	0	0	0	7
M_TCP_Data	m_MemoryRead052	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead052Hardwarein_MemoryRead052.exe	2,3	2010/06/29 23:18:69	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 19:56:52	11147	TELM-06	1	Pass	0	0	0	4
M_TCP_Data	m_MemoryRead059	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead059Hardwarein_MemoryRead059.exe	2,2	2009/10/27 19:52:07	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 19:54:57	12047	TELM-06	1	Pass	0	0	0	15
M_TCP_Data	m_MemoryRead060	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead060Hardwarein_MemoryRead060.exe	2,0	2009/09/22 14:46:30	2,0	Up-to-date	Baseline 17, 1	None	09/05/2010 19:52:53	10651	TELM-06	1	Pass	0	0	0	7
M_TCP_Data	m_MemoryRead063	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead063Hardwarein_MemoryRead063.exe	2,1	2009/10/28 14:34:41	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 19:50:05	10032	TELM-06	1	Pass	0	0	0	3
M_TCP_Data	m_MemoryRead065	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead065Hardwarein_MemoryRead065.exe	2,2	2009/12/15 19:05:34	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 19:48:11	7177	TELM-06	1	Pass	0	0	0	186
M_TCP_Data	m_MemoryRead066	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead066Hardwarein_MemoryRead066.exe	2,3	2009/1/24 17:33:37	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 19:46:44	12912	TELM-06	1	Pass	0	0	0	145
M_TCP_Data	m_MemoryRead067	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead067Hardwarein_MemoryRead067.exe	2,1	2009/10/29 18:07:57	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 19:43:45	7433	TELM-06	1	Pass	0	0	0	9
M_TCP_Data	m_MemoryRead068	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead068Hardwarein_MemoryRead068.exe	2,1	2010/02/01 19:11:34	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 19:42:28	7465	TELM-06	1	Pass	0	0	0	9
M_TCP_Data	m_MemoryRead069	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead069Hardwarein_MemoryRead069.exe	2,1	2009/10/29 15:17:22	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 19:40:28	7517	TELM-06	1	Pass	0	0	0	23
M_TCP_Data	m_MemoryRead070	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead070Hardwarein_MemoryRead070.exe	2,1	2009/10/29 16:57:02	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 19:38:26	7379	TELM-06	1	Pass	0	0	0	6
M_TCP_Data	m_MemoryRead071	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead071Hardwarein_MemoryRead071.exe	2,1	2009/10/29 16:07:34	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 19:36:06	7595	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_MemoryRead072	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead072Hardwarein_MemoryRead072.exe	2,2	2009/10/28 19:15:86	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 19:34:35	12402	TELM-06	1	Pass	0	0	0	120
M_TCP_Data	m_MemoryRead073	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead073Hardwarein_MemoryRead073.exe	2,1	2009/10/29 16:21:17	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 19:33:07	7571	TELM-06	1	Pass	0	0	0	8
M_TCP_Data	m_MemoryRead074	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead074Hardwarein_MemoryRead074.exe	2,1	2009/10/28 16:28:59	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 19:31:01	7554	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_MemoryRead075	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead075Hardwarein_MemoryRead075.exe	2,1	2009/10/28 16:36:30	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 19:28:49	7467	TELM-06	1	Pass	0	0	0	57
M_TCP_Data	m_MemoryRead076	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead076Hardwarein_MemoryRead076.exe	2,5	2010/02/01 21:41:41	2,5	Up-to-date	Baseline 17, 1	None	09/05/2010 19:26:59	9686	TELM-06	1	Pass	0	0	0	1246
M_TCP_Data	m_MemoryRead077	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead077Hardwarein_MemoryRead077.exe	2,1	2010/01/19 13:37:33	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 19:25:14	8158	TELM-06	1	Pass	0	0	0	12
M_TCP_Data	m_MemoryRead078	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead078Hardwarein_MemoryRead078.exe	2,1	2009/10/29 20:06:15	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 19:23:34	6776	TELM-06	1	Pass	0	0	0	171
M_TCP_Data	m_MemoryRead079	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead079Hardwarein_MemoryRead079.exe	2,0	2009/09/22 15:13:28	2,0	Up-to-date	Baseline 17, 1	None	09/05/2010 19:22:05	9564	TELM-06	1	Pass	0	0	0	2
M_TCP_Data	m_MemoryRead080	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead080Hardwarein_MemoryRead080.exe	2,1	2009/10/29 16:56:17	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 19:20:42	10651	TELM-06	1	Pass	0	0	0	4
M_TCP_Data	m_MemoryRead082	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead082Hardwarein_MemoryRead082.exe	2,3	2009/11/03 17:28:46	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 19:19:36	10019	TELM-06	1	Pass	0	0	0	2
M_TCP_Data	m_MemoryRead083	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead083Hardwarein_MemoryRead083.exe	2,4	2010/02/04 16:15:17	2,4	Up-to-date	Baseline 17, 1	None	09/05/2010 19:17:52	20709	TELM-06	1	Pass	0	0	0	8
M_TCP_Data	m_MemoryRead084	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead084Hardwarein_MemoryRead084.exe	2,2	2009/11/24 16:32:12	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 19:16:45	7388	TELM-06	1	Pass	0	0	0	5
M_TCP_Data	m_MemoryRead085	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead085Hardwarein_MemoryRead085.exe	2,1	2009/10/29 16:47:12	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 19:15:53	11033	TELM-06	1	Pass	0	0	0	7
M_TCP_Data	m_MemoryRead089	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead089Hardwarein_MemoryRead089.exe	2,2	2010/02/01 21:00:35	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 19:11:02	13914	TELM-06	1	Pass	0	0	0	15
M_TCP_Data	m_MemoryRead090	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead090Hardwarein_MemoryRead090.exe	2,5	2010/03/15 01:08:48	2,5	Up-to-date	Baseline 17, 1	None	09/05/2010 19:09:30	9701	TELM-06	1	Pass	0	0	0	243
M_TCP_Data	m_MemoryRead091	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead091Hardwarein_MemoryRead091.exe	2,1	2009/10/29 16:42:13	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 19:07:42	8154	TELM-06	1	Pass	0	0	0	3
M_TCP_Data	m_MemoryRead093	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead093Hardwarein_MemoryRead093.exe	2,1	2010/02/01 18:22:02	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 19:06:36	9971	TELM-06	1	Pass	0	0	0	3
M_TCP_Data	m_MemoryRead094	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead094Hardwarein_MemoryRead094.exe	2,2	2010/01/20 17:56:56	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 18:59:27	9889	TELM-06	1	Pass	0	0	0	6
M_TCP_Data	m_MemoryRead097	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead097Hardwarein_MemoryRead097.exe	2,2	2009/10/29 17:19:47	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 18:58:06	6183	TELM-06	1	Pass	0	0	0	11
M_TCP_Data	m_MemoryRead098	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead098Hardwarein_MemoryRead098.exe	2,2	2010/01/19 17:38:15	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 18:53:57	10266	TELM-06	1	Pass	0	0	0	469
M_TCP_Data	m_MemoryRead046	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead046Hardwarein_MemoryRead046.exe	2,3	2010/01/24 16:51:09	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 18:50:56	7519	TELM-06	1	Pass	0	0	0	8
M_TCP_Data	m_MemoryRead047	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead047Hardwarein_MemoryRead047.exe	2,2	2009/11/11 16:28:20	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 18:49:21	8270	TELM-06	1	Pass	0	0	0	28
M_TCP_Data	m_MemoryRead048	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead048Hardwarein_MemoryRead048.exe	2,2	2009/11/11 18:32:37	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 18:43:37	9366	TELM-06	1	Pass	0	0	0	11
M_TCP_Data	m_MemoryRead049	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead049Hardwarein_MemoryRead049.exe	2,5	2010/02/01 16:21:26	2,5	Up-to-date	Baseline 17, 1	None	09/05/2010 18:38:34	21482	TELM-06	1	Pass	0	0	0	13
M_TCP_Data	m_MemoryRead052	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead052Hardwarein_MemoryRead052.exe	2,3	2009/12/23 13:37:43	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 18:36:16	11029	TELM-06	1	Pass	0	0	0	11
M_TCP_Data	m_MemoryRead053	UdtaipacefwlmznarfWTestFWT.FORMALTestMode21Testssan_nvfmznarvurmm TCP_Datam_MemoryRead053Hardwarein_MemoryRead053.exe	2,2	2009/11/11 17:01:43	2,2	Up-to-date	Baseline 17, 1	None									

M_TCP_Diagnostic	m_Diagnostic036	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Diagnostic_Diagnostic036Hardwarem_Diagnostic036.exe</a>	2.3	20100310134414	2.3	Up-to-date	Baseline 17.1	None	09/05/2010 11:19:23	8489	TELM-06	1	Pass	0	0	0	8
M_TCP_Diagnostic	m_Diagnostic037	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Diagnostic_Diagnostic037Hardwarem_Diagnostic037.exe</a>	2.3	20100310134414	2.3	Up-to-date	Baseline 17.1	None	09/05/2010 11:19:07	3208	TELM-06	1	Pass	0	0	0	8
M_TCP_Diagnostic	m_Diagnostic038	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Diagnostic_Diagnostic038Hardwarem_Diagnostic038.exe</a>	2.3	20100607201648	2.3	Up-to-date	Baseline 17.1	None	09/05/2010 11:16:15	49201	TELM-06	1	Pass	0	0	0	15
M_TCP_Discover	m_DiscoverFull01	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull01Hardwarem_DiscoverFull01.exe</a>	2.8	20100521192239	2.8	Up-to-date	Baseline 17.1	None	09/09/2010 16:03:35	44629	TELM-06	1	Pass	0	0	0	150
M_TCP_Discover	m_DiscoverFull02	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull02Hardwarem_DiscoverFull02.exe</a>	2.6	20100319182047	2.6	Up-to-date	Baseline 17.1	None	09/09/2010 15:55:47	144862	TELM-06	1	Pass	0	0	0	1815
M_TCP_Discover	m_DiscoverFull03	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull03Hardwarem_DiscoverFull03.exe</a>	2.2	20100529152000	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 12:19:06	12196	TELM-06	1	Pass	0	0	0	1747
M_TCP_Discover	m_DiscoverFull04	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull04Hardwarem_DiscoverFull04.exe</a>	2.4	20100205211917	2.4	Up-to-date	Baseline 17.1	None	09/10/2010 11:00:26	21110	TELM-06	1	Pass	0	0	0	3713
M_TCP_Discover	m_DiscoverFull05	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull05Hardwarem_DiscoverFull05.exe</a>	2.2	20091029191852	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 15:59:19	27266	TELM-06	1	Pass	0	0	0	12
M_TCP_Discover	m_DiscoverFull06	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull06Hardwarem_DiscoverFull06.exe</a>	2.2	20100209155026	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 15:40:25	13268	TELM-06	1	Pass	0	0	0	12
M_TCP_Discover	m_DiscoverFull07	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull07Hardwarem_DiscoverFull07.exe</a>	2.7	2009121424307	2.7	Up-to-date	Baseline 17.1	None	09/09/2010 15:48:15	13709	TELM-06	1	Pass	0	0	0	6
M_TCP_Discover	m_DiscoverFull08	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull08Hardwarem_DiscoverFull08.exe</a>	2.3	20091029191852	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 15:42:30	10987	TELM-06	1	Pass	0	0	0	65
M_TCP_Discover	m_DiscoverFull09	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull09Hardwarem_DiscoverFull09.exe</a>	2.1	20100512107381	2.1	Up-to-date	Baseline 17.1	None	09/09/2010 16:40:22	8394	TELM-06	1	Pass	0	0	0	121
M_TCP_Discover	m_DiscoverFull10	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull10Hardwarem_DiscoverFull10.exe</a>	2.3	20091110222031	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 15:37:34	56722	TELM-06	1	Pass	0	0	0	9
M_TCP_Discover	m_DiscoverFull12	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull12Hardwarem_DiscoverFull12.exe</a>	2.8	201006291220718	2.8	Up-to-date	Baseline 17.1	None	09/10/2010 12:21:41	368842	TELM-06	1	Pass	0	0	0	33
M_TCP_Discover	m_DiscoverFull13	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull13Hardwarem_DiscoverFull13.exe</a>	2.2	20100318163003	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 15:34:21	42764	TELM-06	1	Pass	0	0	0	10
M_TCP_Discover	m_DiscoverFull14	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull14Hardwarem_DiscoverFull14.exe</a>	2.2	20100318163045	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 15:31:37	24544	TELM-06	1	Pass	0	0	0	15
M_TCP_Discover	m_DiscoverFull15	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull15Hardwarem_DiscoverFull15.exe</a>	2.1	20091123160949	2.1	Up-to-date	Baseline 17.1	None	09/09/2010 15:29:21	7995	TELM-06	1	Pass	0	0	0	12
M_TCP_Discover	m_DiscoverFull16	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull16Hardwarem_DiscoverFull16.exe</a>	2.1	20091103205687	2.1	Up-to-date	Baseline 17.1	None	09/09/2010 15:28:09	8405	TELM-06	1	Pass	0	0	0	6
M_TCP_Discover	m_DiscoverFull17	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull17Hardwarem_DiscoverFull17.exe</a>	2.1	20091103205687	2.1	Up-to-date	Baseline 17.1	None	09/09/2010 15:26:30	12175	TELM-06	1	Pass	0	0	0	10
M_TCP_Discover	m_DiscoverFull22	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull22Hardwarem_DiscoverFull22.exe</a>	2.1	20091123161112	2.1	Up-to-date	Baseline 17.1	None	09/09/2010 15:25:22	8269	TELM-06	1	Pass	0	0	0	6
M_TCP_Discover	m_DiscoverFull23	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull23Hardwarem_DiscoverFull23.exe</a>	2.1	20091123161142	2.1	Up-to-date	Baseline 17.1	None	09/09/2010 15:22:52	11491	TELM-06	1	Pass	0	0	0	7
M_TCP_Discover	m_DiscoverFull24	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull24Hardwarem_DiscoverFull24.exe</a>	2.1	20091123161204	2.1	Up-to-date	Baseline 17.1	None	09/09/2010 15:21:36	12574	TELM-06	1	Pass	0	0	0	7
M_TCP_Discover	m_DiscoverFull25	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull25Hardwarem_DiscoverFull25.exe</a>	2.1	20091123161232	2.1	Up-to-date	Baseline 17.1	None	09/09/2010 15:20:29	9056	TELM-06	1	Pass	0	0	0	3
M_TCP_Discover	m_DiscoverFull29	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull29Hardwarem_DiscoverFull29.exe</a>	2.0	20091113212790	2.0	Up-to-date	Baseline 17.1	None	09/09/2010 15:19:22	12479	TELM-06	1	Pass	0	0	0	3
M_TCP_Discover	m_DiscoverFull30	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull30Hardwarem_DiscoverFull30.exe</a>	2.3	20100528113920	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 15:18:33	19316	TELM-06	1	Pass	0	0	0	10
M_TCP_Discover	m_DiscoverFull31	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull31Hardwarem_DiscoverFull31.exe</a>	2.3	20100528113920	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 15:14:40	3308	TELM-06	1	Pass	0	0	0	22
M_TCP_Discover	m_DiscoverFull32	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull32Hardwarem_DiscoverFull32.exe</a>	2.0	20091113129243	2.0	Up-to-date	Baseline 17.1	None	09/09/2010 15:11:12	9172	TELM-06	1	Pass	0	0	0	12
M_TCP_Discover	m_DiscoverFull33	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull33Hardwarem_DiscoverFull33.exe</a>	2.0	20091113129243	2.0	Up-to-date	Baseline 17.1	None	09/09/2010 15:09:34	9446	TELM-06	1	Pass	0	0	0	2
M_TCP_Discover	m_DiscoverFull34	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull34Hardwarem_DiscoverFull34.exe</a>	2.0	20100318163045	2.0	Up-to-date	Baseline 17.1	None	09/09/2010 15:08:02	11166	TELM-06	1	Pass	0	0	0	2
M_TCP_Discover	m_DiscoverFull35	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull35Hardwarem_DiscoverFull35.exe</a>	2.2	20100208205533	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 23:56:25	23612	TELM-06	1	Pass	0	0	0	31
M_TCP_Discover	m_DiscoverFull36	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull36Hardwarem_DiscoverFull36.exe</a>	2.2	20100201143148	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 23:24:54	42005	TELM-06	1	Pass	0	0	0	38
M_TCP_Discover	m_DiscoverFull37	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Discover_DiscoverFull37Hardwarem_DiscoverFull37.exe</a>	2.1	20100203121437	2.1	Up-to-date	Baseline 17.1	None	09/11/2010 03:08:40	35136	TELM-06	1	Pass	0	0	0	2
M_TCP_DiscoverFull08	m_Eeprom01	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP EEPROM_Eeprom01Hardwarem_Eeprom01.exe</a>	2.1	20091201204849	2.1	Up-to-date	Baseline 17.1	None	09/09/2010 15:03:50	14702	TELM-06	1	Pass	0	0	0	7
M_TCP_EEPROM	m_Eeprom01	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP EEPROM_Eeprom01Hardwarem_Eeprom01.exe</a>	2.3	20091123162859	2.3	Up-to-date	Baseline 17.1	None	09/10/2010 21:32:33	11085	TELM-06	1	Pass	0	0	0	22
M_TCP_EEPROM	m_Eeprom02	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP EEPROM_Eeprom02Hardwarem_Eeprom02.exe</a>	2.3	20091218120743	2.3	Up-to-date	Baseline 17.1	None	09/10/2010 15:45:09	10794	TELM-06	1	Pass	0	0	0	938
M_TCP_EEPROM	m_Eeprom03	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP EEPROM_Eeprom03Hardwarem_Eeprom03.exe</a>	2.2	20100102163033	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 09:58:14	16401	TELM-06	1	Pass	0	0	0	5
M_TCP_EEPROM	m_Eeprom04	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP EEPROM_Eeprom04Hardwarem_Eeprom04.exe</a>	2.2	20100125192361	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 05:55:48	11262	TELM-06	1	Pass	0	0	0	583
M_TCP_EEPROM	m_Eeprom05	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP EEPROM_Eeprom05Hardwarem_Eeprom05.exe</a>	2.2	20100119153205	2.2	Up-to-date	Baseline 17.1	None	09/10/2010 05:51:29	174270	TELM-06	1	Pass	0	0	0	704
M_TCP_EEPROM	m_Eeprom06	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP EEPROM_Eeprom06Hardwarem_Eeprom06.exe</a>	2.1	20100208148225	2.1	Up-to-date	Baseline 17.1	None	09/10/2010 05:48:25	47255	TELM-06	1	Pass	0	0	0	5
M_TCP_EEPROM	m_Eeprom07	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP EEPROM_Eeprom07Hardwarem_Eeprom07.exe</a>	2.1	20100218183833	2.1	Up-to-date	Baseline 17.1	None	09/10/2010 05:48:09	4999	TELM-06	1	Pass	0	0	0	5
M_TCP_Emergency	m_Emergency001	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Emergency_Emergency001Hardwarem_Emergency001.exe</a>	2.3	20091103215433	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 11:13:15	9464	TELM-06	1	Pass	0	0	0	100
M_TCP_Emergency	m_Emergency002	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Emergency_Emergency002Hardwarem_Emergency002.exe</a>	2.3	20100626201826	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 11:11:03	19875	TELM-06	1	Pass	0	0	0	45
M_TCP_Emergency	m_Emergency003	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Emergency_Emergency003Hardwarem_Emergency003.exe</a>	2.6	20100629141935	2.6	Up-to-date	Baseline 17.1	None	09/09/2010 11:07:05	2091	TELM-06	1	Pass	0	0	0	1220
M_TCP_Emergency	m_Emergency004	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Emergency_Emergency004Hardwarem_Emergency004.exe</a>	2.3	20100205122243	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 11:02:42	15022	TELM-06	1	Pass	0	0	0	4
M_TCP_Emergency	m_Emergency005	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Emergency_Emergency005Hardwarem_Emergency005.exe</a>	2.2	20100110003159	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 10:58:10	8923	TELM-06	1	Pass	0	0	0	5
M_TCP_Emergency	m_Emergency006	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Emergency_Emergency006Hardwarem_Emergency006.exe</a>	2.1	20091103164407	2.1	Up-to-date	Baseline 17.1	None	09/09/2010 10:51:06	9307	TELM-06	1	Pass	0	0	0	6
M_TCP_Emergency	m_Emergency007	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Emergency_Emergency007Hardwarem_Emergency007.exe</a>	2.1	20091018164428	2.1	Up-to-date	Baseline 17.1	None	09/09/2010 10:51:25	9957	TELM-06	1	Pass	0	0	0	33
M_TCP_Emergency	m_Emergency009	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Emergency_Emergency009Hardwarem_Emergency009.exe</a>	2.1	20091108195442	2.1	Up-to-date	Baseline 17.1	None	09/09/2010 10:45:30	6034	TELM-06	1	Pass	0	0	0	6
M_TCP_Emergency	m_Emergency010	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Emergency_Emergency010Hardwarem_Emergency010.exe</a>	2.2	20100608171657	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 10:40:29	3168	TELM-06	1	Pass	0	0	0	26
M_TCP_Emergency	m_Emergency011	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Emergency_Emergency011Hardwarem_Emergency011.exe</a>	2.0	20091021162523	2.0	Up-to-date	Baseline 17.1	None	09/09/2010 10:37:35	6743	TELM-06	1	Pass	0	0	0	2
M_TCP_Emergency	m_Emergency012	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Emergency_Emergency012Hardwarem_Emergency012.exe</a>	2.1	20091111123208	2.1	Up-to-date	Baseline 17.1	None	09/09/2010 10:33:23	8897	TELM-06	1	Pass	0	0	0	17
M_TCP_Emergency	m_Emergency013	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Emergency_Emergency013Hardwarem_Emergency013.exe</a>	2.3	20091103164407	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 10:33:20	12719	TELM-06	1	Pass	0	0	0	26
M_TCP_Emergency	m_Emergency014	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Emergency_Emergency014Hardwarem_Emergency014.exe</a>	2.3	20091203133636	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 10:31:19	8458	TELM-06	1	Pass	0	0	0	6
M_TCP_Emergency	m_Emergency015	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Emergency_Emergency015Hardwarem_Emergency015.exe</a>	2.3	20100610155640	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 10:30:08	8978	TELM-06	1	Pass	0	0	0	8
M_TCP_Emergency	m_Emergency016	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Emergency_Emergency016Hardwarem_Emergency016.exe</a>	2.2	20091221210344	2.2	Up-to-date	Baseline 17.1	None	09/09/2010 10:27:11	13725	TELM-06	1	Pass	0	0	0	17
M_TCP_Emergency	m_Emergency017	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Emergency_Emergency017Hardwarem_Emergency017.exe</a>	2.3	20091116121317	2.3	Up-to-date	Baseline 17.1	None	09/09/2010 10:22:33	10516	TELM-06	1	Pass	0	0	0	21
M_TCP_Emergency	m_Emergency018	<a href="#">VdtaipacefwlmzanzfWTestFWWT-FORMALTestMod2tTestlan_nvfwmozarturium TCP Emergency_Emergency018Hardwarem_Emergency018.exe</a>	2.3	20100629153240	2.3</												

M_TCP_Network	m_Network04	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw004	Hardwarim_Netw004.ece	2.1	20100421 17:14:24	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 14:17:20	3063	TELM-06	1	Pass	0	0	0	6
M_TCP_Network	m_Network05	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw005	Hardwarim_Netw005.ece	2.3	20100512 13:02:18	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 14:14:20	32736	TELM-06	1	Pass	0	0	0	50
M_TCP_Network	m_Network06	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw006	Hardwarim_Netw006.ece	2.5	20100521 16:46:56	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 14:12:16	15243	TELM-06	1	Pass	0	0	0	1421
M_TCP_Network	m_Network07	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw007	Hardwarim_Netw007.ece	2.5	20100521 17:09:05	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 14:10:22	15431	TELM-06	1	Pass	0	0	0	1421
M_TCP_Network	m_Network08	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw008	Hardwarim_Netw008.ece	2.5	20100521 17:13:03	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 14:08:26	12021	TELM-06	1	Pass	0	0	0	1380
M_TCP_Network	m_Network09	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw009	Hardwarim_Netw009.ece	2.5	20100521 17:29:57	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 14:07:28	14787	TELM-06	1	Pass	0	0	0	1078
M_TCP_Network	m_Network10	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw010	Hardwarim_Netw010.ece	2.5	20100521 17:34:27	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 14:05:24	10396	TELM-06	1	Pass	0	0	0	1381
M_TCP_Network	m_Network11	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw011	Hardwarim_Netw011.ece	2.3	20100512 12:03:38	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 13:57:29	209569	TELM-06	1	Pass	0	0	0	122
M_TCP_Network	m_Network12	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw012	Hardwarim_Netw012.ece	2.3	20100512 12:07:49	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 13:57:28	14729	TELM-06	1	Pass	0	0	0	7
M_TCP_Network	m_Network13	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw013	Hardwarim_Netw013.ece	2.3	20100512 12:06:29	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 13:50:36	26768	TELM-06	1	Pass	0	0	0	12
M_TCP_Network	m_Network14	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw014	Hardwarim_Netw014.ece	2.3	20100524 13:58:18	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 13:48:26	35589	TELM-06	1	Pass	0	0	0	25
M_TCP_Network	m_Network15	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw015	Hardwarim_Netw015.ece	2.1	20100607 13:19:37	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 13:46:22	55466	TELM-06	1	Pass	0	0	0	262
M_TCP_Network	m_Network16	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw016	Hardwarim_Netw016.ece	2.1	20100607 13:19:37	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 13:43:38	12793	TELM-06	1	Pass	0	0	0	41
M_TCP_Network	m_Network17	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw017	Hardwarim_Netw017.ece	2.5	20100607 13:14:52	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 13:40:58	21760	TELM-06	1	Pass	0	0	0	11
M_TCP_Network	m_Network18	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw018	Hardwarim_Netw018.ece	2.2	20100612 12:12:40	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 13:38:46	56611	TELM-06	1	Pass	0	0	0	51
M_TCP_Network	m_Network19	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw019	Hardwarim_Netw019.ece	2.2	20100612 12:16:17	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 13:35:24	60381	TELM-06	1	Pass	0	0	0	67
M_TCP_Network	m_Network20	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw020	Hardwarim_Netw020.ece	2.2	20100612 12:12:40	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 13:31:33	60337	TELM-06	1	Pass	0	0	0	133
M_TCP_Network	m_Network21	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw021	Hardwarim_Netw021.ece	2.2	20100612 12:17:24	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 13:26:48	60306	TELM-06	1	Pass	0	0	0	175
M_TCP_Network	m_Network22	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw022	Hardwarim_Netw022.ece	2.1	20100612 12:16:23	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 13:23:38	19524	TELM-06	1	Pass	0	0	0	454
M_TCP_Network	m_Network23	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw023	Hardwarim_Netw023.ece	2.2	20100624 14:41:01	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 13:21:06	47955	TELM-06	1	Pass	0	0	0	46
M_TCP_Network	m_Network24	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw024	Hardwarim_Netw024.ece	2.2	20100612 12:20:01	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 13:17:42	19527	TELM-06	1	Pass	0	0	0	178
M_TCP_Network	m_Network25	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw025	Hardwarim_Netw025.ece	2.3	20100612 12:20:56	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 13:13:17	20906	TELM-06	1	Pass	0	0	0	178
M_TCP_Network	m_Network26	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw026	Hardwarim_Netw026.ece	2.1	20100612 12:22:02	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 13:10:44	20936	TELM-06	1	Pass	0	0	0	7
M_TCP_Network	m_Network27	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw027	Hardwarim_Netw027.ece	2.1	20100607 13:22:27	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 13:07:58	14406	TELM-06	1	Pass	0	0	0	22
M_TCP_Network	m_Network28	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw028	Hardwarim_Netw028.ece	2.4	20100629 21:17:11	2.4	Up-to-date	Baseline 17_1	None	09/10/2010 11:36:22	21777	TELM-06	1	Pass	0	0	0	48
M_TCP_Network	m_Network29	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Netwkwk_Netw029	Hardwarim_Netw029.ece	2.4	20100629 13:59:26	2.4	Up-to-date	Baseline 17_1	None	09/09/2010 11:30:12	31657	TELM-06	1	Pass	0	0	0	335
M_TCP_Open	m_Open001	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open001	Hardwarim_Open001.ece	2.1	20100618 15:52:02	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 14:59:00	18745	TELM-06	1	Pass	0	0	0	31
M_TCP_Open	m_Open002	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open002	Hardwarim_Open002.ece	2.3	20091015 19:09:20	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 14:57:44	6454	TELM-06	1	Pass	0	0	0	3
M_TCP_Open	m_Open003	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open003	Hardwarim_Open003.ece	2.1	20100622 10:18:18	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 14:55:57	8210	TELM-06	1	Pass	0	0	0	2
M_TCP_Open	m_Open004	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open004	Hardwarim_Open004.ece	2.3	20100622 17:40:45	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 14:54:41	16844	TELM-06	1	Pass	0	0	0	4
M_TCP_Open	m_Open005	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open005	Hardwarim_Open005.ece	2.3	20100618 14:26:09	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 14:53:18	21151	TELM-06	1	Pass	0	0	0	1173
M_TCP_Open	m_Open006	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open006	Hardwarim_Open006.ece	2.2	20100315 14:08:09	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 14:51:30	17088	TELM-06	1	Pass	0	0	0	1177
M_TCP_Open	m_Open007	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open007	Hardwarim_Open007.ece	2.7	20091003 14:23:08	2.7	Up-to-date	Baseline 17_1	None	09/09/2010 14:50:06	7921	TELM-06	1	Pass	0	0	0	8
M_TCP_Open	m_Open008	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open008	Hardwarim_Open008.ece	2.1	20100618 00:36:27	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 14:48:47	12456	TELM-06	1	Pass	0	0	0	1268
M_TCP_Open	m_Open009	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open009	Hardwarim_Open009.ece	2.7	20091016 00:36:27	2.7	Up-to-date	Baseline 17_1	None	09/09/2010 14:46:21	17335	TELM-06	1	Pass	0	0	0	3965
M_TCP_Open	m_Open010	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open010	Hardwarim_Open010.ece	2.6	20100315 15:05:26	2.6	Up-to-date	Baseline 17_1	None	09/09/2010 14:46:21	17335	TELM-06	1	Pass	0	0	0	3965
M_TCP_Open	m_Open011	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open011	Hardwarim_Open011.ece	2.1	20100622 17:01:14	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 14:43:02	7963	TELM-06	1	Pass	0	0	0	1
M_TCP_Open	m_Open012	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open012	Hardwarim_Open012.ece	2.4	20100226 17:01:14	2.4	Up-to-date	Baseline 17_1	None	09/09/2010 14:43:01	15955	TELM-06	1	Pass	0	0	0	10
M_TCP_Open	m_Open013	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open013	Hardwarim_Open013.ece	2.5	20100210 13:34:06	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 14:41:16	9370	TELM-06	1	Pass	0	0	0	101
M_TCP_Open	m_Open014	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open014	Hardwarim_Open014.ece	2.1	20100218 19:06:20	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 14:39:02	8462	TELM-06	1	Pass	0	0	0	9
M_TCP_Open	m_Open015	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open015	Hardwarim_Open015.ece	2.0	20100128 19:06:20	2.0	Up-to-date	Baseline 17_1	None	09/09/2010 14:37:38	9157	TELM-06	1	Pass	0	0	0	9
M_TCP_Open	m_Open030	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open030	Hardwarim_Open030.ece	2.1	20100610 13:57:56	2.1	Up-to-date	Baseline 17_1	None	09/11/2010 02:48:26	58213	TELM-06	1	Pass	0	0	0	16
M_TCP_Open	m_Open031	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open031	Hardwarim_Open031.ece	2.1	20091119 14:56:30	2.1	Up-to-date	Baseline 17_1	None	09/11/2010 02:48:26	58213	TELM-06	1	Pass	0	0	0	13
M_TCP_Open	m_Open032	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open032	Hardwarim_Open032.ece	2.3	20100323 22:17:53	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 02:40:20	32386	TELM-06	1	Pass	0	0	0	10
M_TCP_Open	m_Open033	<a href="#">VdtaipacefwwmzanzFWTestFWT</a>	FORMALTestMode2	TestSim	nvfvmzaruftsm	TCP_Openm_Open033	Hardwarim_Open033.ece	2.3	20100203 22:32:54	2.3												

M_TCP_Security	m_Security03	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur03Hrdwarem_Secur03.exe</a>	2.4	20100217 16:20:41	2.4	Up-to-date	Baseline 17_1	None	09/10/2010 10:00:05	6811	TELM-06	1	Pass	0	0	0	73
M_TCP_Security	m_Security04	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur04Hrdwarem_Secur04.exe</a>	2.4	20100217 16:20:41	2.4	Up-to-date	Baseline 17_1	None	09/10/2010 09:20:06	12587	TELM-06	1	Pass	0	0	0	112
M_TCP_Security	m_Security05	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur05Hrdwarem_Secur05.exe</a>	2.2	20100217 16:23:51	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 09:20:09	4081	TELM-06	1	Pass	0	0	0	108
M_TCP_Security	m_Security06	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur06Hrdwarem_Secur06.exe</a>	2.4	20100217 14:44:38	2.4	Up-to-date	Baseline 17_1	None	09/10/2010 09:27:00	153473	TELM-06	1	Pass	0	0	0	108
M_TCP_Security	m_Security07	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur07Hrdwarem_Secur07.exe</a>	2.6	20100218 17:45:03	2.6	Up-to-date	Baseline 17_1	None	09/10/2010 09:29:23	109044	TELM-06	1	Pass	0	0	0	126
M_TCP_Security	m_Security08	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur08Hrdwarem_Secur08.exe</a>	2.3	20100218 16:28:47	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 09:28:11	61265	TELM-06	1	Pass	0	0	0	128
M_TCP_Security	m_Security09	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur09Hrdwarem_Secur09.exe</a>	2.3	20100217 16:32:40	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 08:44:59	6208	TELM-06	1	Pass	0	0	0	36
M_TCP_Security	m_Security10	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur10Hrdwarem_Secur10.exe</a>	2.3	20100218 17:45:03	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 08:34:54	3832	TELM-06	1	Pass	0	0	0	113
M_TCP_Security	m_Security11	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur11Hrdwarem_Secur11.exe</a>	2.5	20100218 16:33:05	2.5	Up-to-date	Baseline 17_1	None	09/10/2010 08:24:14	201020	TELM-06	1	Pass	0	0	0	124
M_TCP_Security	m_Security12	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur12Hrdwarem_Secur12.exe</a>	2.9	20100218 15:14:18	2.9	Up-to-date	Baseline 17_1	None	09/10/2010 08:16:30	4746	TELM-06	1	Pass	0	0	0	132
M_TCP_Security	m_Security13	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur13Hrdwarem_Secur13.exe</a>	2.5	20100218 15:14:19	2.5	Up-to-date	Baseline 17_1	None	09/10/2010 08:06:17	11672	TELM-06	1	Pass	0	0	0	140
M_TCP_Security	m_Security14	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur14Hrdwarem_Secur14.exe</a>	2.2	20100603 18:21:27	2.2	Up-to-date	Baseline 17_1	None	09/11/2010 03:54:49	14827	TELM-06	1	Pass	0	0	0	36
M_TCP_Security	m_Security15	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur15Hrdwarem_Secur15.exe</a>	2.2	20100217 17:58:26	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 02:20:07	589776	TELM-06	1	Pass	0	0	0	34
M_TCP_Security	m_Security16	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur16Hrdwarem_Secur16.exe</a>	2.2	20100608 19:56:40	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 08:03:33	10679	TELM-06	1	Pass	0	0	0	146
M_TCP_Security	m_Security17	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur17Hrdwarem_Secur17.exe</a>	2.2	20091208 17:29:14	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 08:01:47	14627	TELM-06	1	Pass	0	0	0	39
M_TCP_Security	m_Security18	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur18Hrdwarem_Secur18.exe</a>	2.4	20100318 16:05:37	2.4	Up-to-date	Baseline 17_1	None	09/10/2010 07:59:19	40624	TELM-06	1	Pass	0	0	0	12
M_TCP_Security	m_Security19	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur19Hrdwarem_Secur19.exe</a>	2.3	20100328 13:47:17	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 07:54:03	90395	TELM-06	1	Pass	0	0	0	1226
M_TCP_Security	m_Security20	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur20Hrdwarem_Secur20.exe</a>	2.3	20100603 18:22:30	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 07:46:53	22013	TELM-06	1	Pass	0	0	0	62
M_TCP_Security	m_Security21	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur21Hrdwarem_Secur21.exe</a>	2.5	20100603 18:37:52	2.5	Up-to-date	Baseline 17_1	None	09/10/2010 07:30:08	40297	TELM-06	1	Pass	0	0	0	81
M_TCP_Security	m_Security22	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur22Hrdwarem_Secur22.exe</a>	2.9	20100618 19:05:16	2.9	Up-to-date	Baseline 17_1	None	09/10/2010 10:23:47	290940	TELM-06	1	Pass	0	0	0	55505
M_TCP_Security	m_Security23	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur23Hrdwarem_Secur23.exe</a>	2.12	20100610 17:30:47	2.12	Up-to-date	Baseline 17_1	None	09/10/2010 17:51:39	51681	TELM-06	1	Pass	0	0	0	1119
M_TCP_Security	m_Security24	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur24Hrdwarem_Secur24.exe</a>	2.3	20100626 13:06:23	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 17:02:04	30594	TELM-06	1	Pass	0	0	0	4
M_TCP_Security	m_Security25	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur25Hrdwarem_Secur25.exe</a>	2.3	20100710 14:39:03	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 16:37:09	48466	TELM-06	1	Pass	0	0	0	158
M_TCP_Security	m_Security26	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur26Hrdwarem_Secur26.exe</a>	2.3	20100218 15:15:54	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 07:28:14	4194	TELM-06	1	Pass	0	0	0	60
M_TCP_Security	m_Security27	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur27Hrdwarem_Secur27.exe</a>	2.1	20100629 19:03:00	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 07:21:15	38007	TELM-06	1	Pass	0	0	0	35
M_TCP_Security	m_Security28	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur28Hrdwarem_Secur28.exe</a>	2.1	20100629 19:26:29	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 07:14:19	42568	TELM-06	1	Pass	0	0	0	35
M_TCP_Security	m_Security29	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur29Hrdwarem_Secur29.exe</a>	2.2	20100311 18:28:14	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 07:08:11	20448	TELM-06	1	Pass	0	0	0	46
M_TCP_Security	m_Security30	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur30Hrdwarem_Secur30.exe</a>	2.2	20100208 13:02:22	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 06:56:27	11968	TELM-06	1	Pass	0	0	0	44
M_TCP_Security	m_Security31	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur31Hrdwarem_Secur31.exe</a>	2.2	20100208 13:02:22	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 06:53:51	32007	TELM-06	1	Pass	0	0	0	89
M_TCP_Security	m_Security32	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur32Hrdwarem_Secur32.exe</a>	2.1	20100203 12:51:08	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 06:46:41	8142	TELM-06	1	Pass	0	0	0	11
M_TCP_Security	m_Security33	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur33Hrdwarem_Secur33.exe</a>	2.1	20100727 21:32:15	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 06:41:42	13895	TELM-06	1	Pass	0	0	0	12
M_TCP_Security	m_Security34	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur34Hrdwarem_Secur34.exe</a>	2.0	20100326 12:51:40	2.0	Up-to-date	Baseline 17_1	None	09/10/2010 06:35:57	21874	TELM-06	1	Pass	0	0	0	8
M_TCP_Security	m_Security35	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur35Hrdwarem_Secur35.exe</a>	2.0	20100414 21:18:30	2.0	Up-to-date	Baseline 17_1	None	09/10/2010 06:34:11	17849	TELM-06	1	Pass	0	0	0	30
M_TCP_Security	m_Security36	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur36Hrdwarem_Secur36.exe</a>	2.5	20100507 14:41:43	2.5	Up-to-date	Baseline 17_1	None	09/10/2010 06:30:30	86752	TELM-06	1	Pass	0	0	0	10
M_TCP_Security	m_Security37	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur37Hrdwarem_Secur37.exe</a>	2.6	20100603 18:54:41	2.6	Up-to-date	Baseline 17_1	None	09/11/2010 03:31:17	51152	TELM-06	1	Pass	0	0	0	119
M_TCP_Security	m_Security38	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur38Hrdwarem_Secur38.exe</a>	2.2	20100607 13:02:22	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 15:08:24	18744	TELM-06	1	Pass	0	0	0	26
M_TCP_Security	m_Security39	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur39Hrdwarem_Secur39.exe</a>	2.2	20100618 18:25:22	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 08:27:21	56653	TELM-06	1	Pass	0	0	0	55
M_TCP_Security	m_Security40	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur40Hrdwarem_Secur40.exe</a>	2.3	20100603 18:25:22	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 08:21:16	27851	TELM-06	1	Pass	0	0	0	33
M_TCP_Security	m_Security41	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur41Hrdwarem_Secur41.exe</a>	2.3	20100621 13:51:48	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 08:15:39	65508	TELM-06	1	Pass	0	0	0	17
M_TCP_Security	m_Security42	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur42Hrdwarem_Secur42.exe</a>	2.1	20100408 12:57:18	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 08:11:31	58145	TELM-06	1	Pass	0	0	0	48
M_TCP_Security	m_Security43	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur43Hrdwarem_Secur43.exe</a>	2.0	20100612 20:27:42	2.0	Up-to-date	Baseline 17_1	None	09/10/2010 08:10:06	68922	TELM-06	1	Pass	0	0	0	56
M_TCP_Security	m_Security44	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur44Hrdwarem_Secur44.exe</a>	2.3	20100625 18:18:27	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 08:06:47	70706	TELM-06	1	Pass	0	0	0	44
M_TCP_Security	m_Security45	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur45Hrdwarem_Secur45.exe</a>	2.3	20100512 17:38:23	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 08:03:39	71181	TELM-06	1	Pass	0	0	0	62
M_TCP_Security	m_Security46	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_P_SecurIvm_Secur46Hrdwarem_Secur46.exe</a>	2.2	20100607 13:05:30	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 08:02:25	3559	TELM-06	1	Pass	0	0	0	30
M_TCP_WirelessWakeUp	m_Wakeup01	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_WirelessWakeUp_Wakeup01Hrdwarem_Wakeup01.exe</a>	2.3	20100621 17:44:25	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 15:22:11	291386	TELM-06	1	Pass	0	0	0	16
M_TCP_WirelessWakeUp	m_Wakeup02	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_WirelessWakeUp_Wakeup02Hrdwarem_Wakeup02.exe</a>	2.3	20100612 16:16:46	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 15:21:48	35024	TELM-06	1	Pass	0	0	0	12
M_TCP_WirelessWakeUp	m_Wakeup03	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_WirelessWakeUp_Wakeup03Hrdwarem_Wakeup03.exe</a>	2.2	20100607 13:05:30	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 08:02:25	3559	TELM-06	1	Pass	0	0	0	30
M_TCP_WirelessWakeUp	m_Wakeup04	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_WirelessWakeUp_Wakeup04Hrdwarem_Wakeup04.exe</a>	2.3	20100621 17:44:25	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 15:22:11	291386	TELM-06	1	Pass	0	0	0	16
M_TCP_WirelessWakeUp	m_Wakeup05	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_WirelessWakeUp_Wakeup05Hrdwarem_Wakeup05.exe</a>	2.1	20100609 17:20:20	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 08:46:26	25046	TELM-06	1	Pass	0	0	0	12
M_TCP_WirelessWakeUp	m_Wakeup06	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_WirelessWakeUp_Wakeup06Hrdwarem_Wakeup06.exe</a>	2.2	20100610 17:58:29	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 08:44:57	14177	TELM-06	1	Pass	0	0	0	11
M_TCP_WirelessWakeUp	m_Wakeup07	<a href="#">VdtapacefwlwmzmfWTestFWT-FORMALTestMod2Testplan_nvfwmozarivm TC_WirelessWakeUp_Wakeup07Hrdwarem_Wakeup07.exe</a>															





M_TCP_Data	m_MemoryWine010	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine010/Hardw/mem/MemoryWine010.exe	2.1	20091028160035	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 02:47:57	7560	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_MemoryWine011	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine011/Hardw/mem/MemoryWine011.exe	2.1	20091028160036	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 02:47:57	7560	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_MemoryWine012	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine012/Hardw/mem/MemoryWine012.exe	2.2	20091028161556	2.2	Up-to-date	Baseline 17, 1	None	09/10/2010 02:41:10	12266	TELM-06	1	Pass	0	0	0	120
M_TCP_Data	m_MemoryWine013	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine013/Hardw/mem/MemoryWine013.exe	2.1	20091028162117	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 02:37:11	7526	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_MemoryWine014	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine014/Hardw/mem/MemoryWine014.exe	2.1	20091028162659	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 02:33:33	7555	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_MemoryWine015	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine015/Hardw/mem/MemoryWine015.exe	2.1	20091028163333	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 02:31:38	7581	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_MemoryWine016	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine016/Hardw/mem/MemoryWine016.exe	2.5	20100201211421	2.5	Up-to-date	Baseline 17, 1	None	09/10/2010 02:28:43	9501	TELM-06	1	Pass	0	0	0	2286
M_TCP_Data	m_MemoryWine017	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine017/Hardw/mem/MemoryWine017.exe	2.3	20100119173739	2.3	Up-to-date	Baseline 17, 1	None	09/10/2010 02:25:49	8703	TELM-06	1	Pass	0	0	0	1553
M_TCP_Data	m_MemoryWine018	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine018/Hardw/mem/MemoryWine018.exe	2.1	20091028163933	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 02:22:05	7571	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_MemoryWine019	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine019/Hardw/mem/MemoryWine019.exe	2.0	20090922151338	2.0	Up-to-date	Baseline 17, 1	None	09/10/2010 02:18:13	9553	TELM-06	1	Pass	0	0	0	2
M_TCP_Data	m_MemoryWine020	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine020/Hardw/mem/MemoryWine020.exe	2.2	20091029194400	2.2	Up-to-date	Baseline 17, 1	None	09/10/2010 02:16:55	7889	TELM-06	1	Pass	0	0	0	3
M_TCP_Data	m_MemoryWine021	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine021/Hardw/mem/MemoryWine021.exe	2.2	20091103172846	2.2	Up-to-date	Baseline 17, 1	None	09/10/2010 02:15:17	8981	TELM-06	1	Pass	0	0	0	4
M_TCP_Data	m_MemoryWine023	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine023/Hardw/mem/MemoryWine023.exe	2.4	20100204161517	2.4	Up-to-date	Baseline 17, 1	None	09/10/2010 02:13:04	20500	TELM-06	1	Pass	0	0	0	8
M_TCP_Data	m_MemoryWine024	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine024/Hardw/mem/MemoryWine024.exe	2.2	20091124235121	2.2	Up-to-date	Baseline 17, 1	None	09/10/2010 02:10:06	7527	TELM-06	1	Pass	0	0	0	5
M_TCP_Data	m_MemoryWine025	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine025/Hardw/mem/MemoryWine025.exe	2.1	20091029184712	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 02:07:25	10685	TELM-06	1	Pass	0	0	0	7
M_TCP_Data	m_MemoryWine029	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine029/Hardw/mem/MemoryWine029.exe	2.2	20100201210035	2.2	Up-to-date	Baseline 17, 1	None	09/10/2010 02:04:52	14037	TELM-06	1	Pass	0	0	0	15
M_TCP_Data	m_MemoryWine032	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine032/Hardw/mem/MemoryWine032.exe	2.5	20100315108446	2.5	Up-to-date	Baseline 17, 1	None	09/10/2010 01:59:16	9682	TELM-06	1	Pass	0	0	0	505
M_TCP_Data	m_MemoryWine038	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine038/Hardw/mem/MemoryWine038.exe	2.1	20091029182413	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 01:55:41	7230	TELM-06	1	Pass	0	0	0	23
M_TCP_Data	m_MemoryWine039	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine039/Hardw/mem/MemoryWine039.exe	2.1	20100110162202	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 01:54:16	9654	TELM-06	1	Pass	0	0	0	3
M_TCP_Data	m_MemoryWine040	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine040/Hardw/mem/MemoryWine040.exe	2.2	20100210175656	2.2	Up-to-date	Baseline 17, 1	None	09/10/2010 01:49:24	9517	TELM-06	1	Pass	0	0	0	6
M_TCP_Data	m_MemoryWine041	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine041/Hardw/mem/MemoryWine041.exe	2.2	20100201204537	2.2	Up-to-date	Baseline 17, 1	None	09/10/2010 01:47:36	13738	TELM-06	1	Pass	0	0	0	11
M_TCP_Data	m_MemoryWine042	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine042/Hardw/mem/MemoryWine042.exe	2.2	20100119173815	2.2	Up-to-date	Baseline 17, 1	None	09/10/2010 01:42:27	10220	TELM-06	1	Pass	0	0	0	997
M_TCP_Data	m_MemoryWine046	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine046/Hardw/mem/MemoryWine046.exe	2.3	20100204165109	2.3	Up-to-date	Baseline 17, 1	None	09/10/2010 01:40:07	7294	TELM-06	1	Pass	0	0	0	8
M_TCP_Data	m_MemoryWine047	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine047/Hardw/mem/MemoryWine047.exe	2.2	20091111191521	2.2	Up-to-date	Baseline 17, 1	None	09/10/2010 01:33:13	8238	TELM-06	1	Pass	0	0	0	98
M_TCP_Data	m_MemoryWine048	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine048/Hardw/mem/MemoryWine048.exe	2.2	20091111183937	2.2	Up-to-date	Baseline 17, 1	None	09/10/2010 01:29:07	9043	TELM-06	1	Pass	0	0	0	11
M_TCP_Data	m_MemoryWine049	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine049/Hardw/mem/MemoryWine049.exe	2.5	20100210165734	2.5	Up-to-date	Baseline 17, 1	None	09/10/2010 01:27:48	21157	TELM-06	1	Pass	0	0	0	13
M_TCP_Data	m_MemoryWine052	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine052/Hardw/mem/MemoryWine052.exe	2.3	20091223133547	2.3	Up-to-date	Baseline 17, 1	None	09/10/2010 01:25:44	11110	TELM-06	1	Pass	0	0	0	11
M_TCP_Data	m_MemoryWine053	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine053/Hardw/mem/MemoryWine053.exe	2.2	20091111170143	2.2	Up-to-date	Baseline 17, 1	None	09/10/2010 01:21:17	8457	TELM-06	1	Pass	0	0	0	9
M_TCP_Data	m_MemoryWine054	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine054/Hardw/mem/MemoryWine054.exe	2.1	20091029181500	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 01:17:04	9268	TELM-06	1	Pass	0	0	0	10
M_TCP_Data	m_MemoryWine055	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine055/Hardw/mem/MemoryWine055.exe	2.2	20091111180403	2.2	Up-to-date	Baseline 17, 1	None	09/10/2010 01:14:30	7356	TELM-06	1	Pass	0	0	0	8
M_TCP_Data	m_MemoryWine056	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_Mem/Wine056/Hardw/mem/MemoryWine056.exe	2.4	20100210163214	2.4	Up-to-date	Baseline 17, 1	None	09/10/2010 01:11:41	8646	TELM-06	1	Pass	0	0	0	8
M_TCP_Data	m_TransferMode001	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod001/Hardw/mem/TransferMode001.exe	2.8	20100514120817	2.8	Up-to-date	Baseline 17, 1	None	09/10/2010 01:08:05	12862	TELM-06	1	Pass	0	0	0	238
M_TCP_Data	m_TransferMode002	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod002/Hardw/mem/TransferMode002.exe	2.0	20100702130052	2.0	Up-to-date	Baseline 17, 1	None	09/10/2010 01:03:07	9940	TELM-06	1	Pass	0	0	0	167
M_TCP_Data	m_TransferMode003	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod003/Hardw/mem/TransferMode003.exe	2.0	20091116295923	2.0	Up-to-date	Baseline 17, 1	None	09/10/2010 01:02:28	7081	TELM-06	1	Pass	0	0	0	129
M_TCP_Data	m_TransferMode004	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod004/Hardw/mem/TransferMode004.exe	2.3	20100108170747	2.3	Up-to-date	Baseline 17, 1	None	09/10/2010 00:55:33	13974	TELM-06	1	Pass	0	0	0	312
M_TCP_Data	m_TransferMode005	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod005/Hardw/mem/TransferMode005.exe	2.7	20100210163613	2.7	Up-to-date	Baseline 17, 1	None	09/10/2010 00:53:27	11409	TELM-06	1	Pass	0	0	0	11
M_TCP_Data	m_TransferMode006	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod006/Hardw/mem/TransferMode006.exe	2.4	20100416115813	2.4	Up-to-date	Baseline 17, 1	None	09/10/2010 00:49:42	6946	TELM-06	1	Pass	0	0	0	8
M_TCP_Data	m_TransferMode007	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod007/Hardw/mem/TransferMode007.exe	2.2	20091102154645	2.2	Up-to-date	Baseline 17, 1	None	09/10/2010 00:48:08	11838	TELM-06	1	Pass	0	0	0	112
M_TCP_Data	m_TransferMode008	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod008/Hardw/mem/TransferMode008.exe	2.1	20090909162708	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 00:44:07	8263	TELM-06	1	Pass	0	0	0	10
M_TCP_Data	m_TransferMode009	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod009/Hardw/mem/TransferMode009.exe	2.1	20091013162511	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 00:38:12	11369	TELM-06	1	Pass	0	0	0	39
M_TCP_Data	m_TransferMode010	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod010/Hardw/mem/TransferMode010.exe	2.1	20091013162621	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 00:35:52	11373	TELM-06	1	Pass	0	0	0	46
M_TCP_Data	m_TransferMode011	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod011/Hardw/mem/TransferMode011.exe	2.3	20100210133708	2.3	Up-to-date	Baseline 17, 1	None	09/10/2010 00:31:47	7324	TELM-06	1	Pass	0	0	0	72
M_TCP_Data	m_TransferMode012	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod012/Hardw/mem/TransferMode012.exe	2.3	20100210133800	2.3	Up-to-date	Baseline 17, 1	None	09/10/2010 00:28:31	8211	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_TransferMode013	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod013/Hardw/mem/TransferMode013.exe	2.3	20100210133816	2.3	Up-to-date	Baseline 17, 1	None	09/10/2010 00:27:17	8267	TELM-06	1	Pass	0	0	0	44
M_TCP_Data	m_TransferMode014	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod014/Hardw/mem/TransferMode014.exe	2.3	20100210134035	2.3	Up-to-date	Baseline 17, 1	None	09/10/2010 00:26:18	8117	TELM-06	1	Pass	0	0	0	16
M_TCP_Data	m_TransferMode015	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod015/Hardw/mem/TransferMode015.exe	2.1	20100209145656	2.1	Up-to-date	Baseline 17, 1	None	09/10/2010 00:15:35	3905	TELM-06	1	Pass	0	0	0	4
M_TCP_Data	m_TransferMode016	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod016/Hardw/mem/TransferMode016.exe	2.8	20100702131411	2.8	Up-to-date	Baseline 17, 1	None	09/10/2010 00:12:29	29610	TELM-06	1	Pass	0	0	0	47
M_TCP_Data	m_TransferMode017	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod017/Hardw/mem/TransferMode017.exe	2.7	20100519134709	2.7	Up-to-date	Baseline 17, 1	None	09/10/2010 00:09:39	36916	TELM-06	1	Pass	0	0	0	257
M_TCP_Data	m_TransferMode018	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod018/Hardw/mem/TransferMode018.exe	2.6	20100414106244	2.6	Up-to-date	Baseline 17, 1	None	09/10/2010 00:05:26	25644	TELM-06	1	Pass	0	0	0	17
M_TCP_Data	m_TransferMode019	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Dalaru_TransferMod019/Hardw/mem/TransferMode019.exe	2.6	20100319185504	2.6	Up-to-date	Baseline 17, 1	None	09/10/2010 00:04:32	19327	TELM-06	1	Pass	0	0	0	11
M_TCP_Diagnostic	m_Diagnostic001	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Diagnostic_Diagnostic001/Hardw/mem/Diagnostic001.exe	2.5	20091209174527	2.5	Up-to-date	Baseline 17, 1	None	09/09/2010 17:12:11	7547	TELM-06	1	Pass	0	0	0	166
M_TCP_Diagnostic	m_Diagnostic002	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Diagnostic_Diagnostic002/Hardw/mem/Diagnostic002.exe	2.1	20091123180038	2.1	Up-to-date	Baseline 17, 1	None	09/09/2010 17:04:49	6170	TELM-06	1	Pass	0	0	0	4
M_TCP_Diagnostic	m_Diagnostic003	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Diagnostic_Diagnostic003/Hardw/mem/Diagnostic003.exe	2.2	20100314200148	2.2	Up-to-date	Baseline 17, 1	None	09/09/2010 17:02:37	6786	TELM-06	1	Pass	0	0	0	4
M_TCP_Diagnostic	m_Diagnostic004	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Diagnostic_Diagnostic004/Hardw/mem/Diagnostic004.exe	2.3	20091203132244	2.3	Up-to-date	Baseline 17, 1	None	09/09/2010 16:56:19	16010	TELM-06	1	Pass	0	0	0	128
M_TCP_Diagnostic	m_Diagnostic005	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Diagnostic_Diagnostic005/Hardw/mem/Diagnostic005.exe	2.1	20091013141048	2.1	Up-to-date	Baseline 17, 1	None	09/09/2010 16:53:47	7493	TELM-06	1	Pass	0	0	0	13
M_TCP_Diagnostic	m_Diagnostic006	Vdtaipace/w/mzoar/FTestFWT/FORMALTestMod3/TeaTime_nvf/mzoar/m/m CPD Diagnostic_Diagnostic006/Hardw/mem/Diagnostic006.exe	2.1	20090922130215	2.1	Up-to-date	Baseline 17, 1	None									

M_TCP_Discover	m_DiscoverFull034	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Discover_DiscoverFull034Hardware_DiscoverFull034.ese	2,2	20100918 16:04:21	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 12:25:20	11266	TELM-06	1	Pass	0	0	0	21
M_TCP_Discover	m_DiscoverFull035	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Discover_DiscoverFull035Hardware_DiscoverFull035.ese	2,2	20101001 14:35:33	2,2	Up-to-date	Baseline 17, 1	None	09/11/2010 09:31:37	4378	TELM-06	1	Pass	0	0	0	38
M_TCP_Discover	m_DiscoverFull036	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Discover_DiscoverFull036Hardware_DiscoverFull036.ese	2,2	20101011 14:31:48	2,2	Up-to-date	Baseline 17, 1	None	09/11/2010 01:42:42	22074	TELM-06	1	Pass	0	0	0	38
M_TCP_Discover	m_DiscoverFull037	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Discover_DiscoverFull037Hardware_DiscoverFull037.ese	2,4	20100203 21:29:46	2,4	Up-to-date	Baseline 17, 1	None	09/11/2010 03:35:47	35196	TELM-06	1	Pass	0	0	0	4
M_TCP_Discover	m_DiscoverFull038	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Discover_DiscoverFull038Hardware_DiscoverFull038.ese	2,4	20091201 20:48:48	2,1	Up-to-date	Baseline 17, 1	None	09/09/2010 12:21:47	141690	TELM-06	1	Pass	0	0	0	7
M_TCP_EEPR0M	m_EEPR0M001	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_EEPR0Mm_EEPR0M001Hardware_EEPR0M001.ese	2,2	20091129 16:23:53	2,2	Up-to-date	Baseline 17, 1	None	09/11/2010 09:02:00	11195	TELM-06	1	Pass	0	0	0	4
M_TCP_EEPR0M	m_EEPR0M002	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_EEPR0Mm_EEPR0M002Hardware_EEPR0M002.ese	2,3	20091218 21:07:43	2,3	Up-to-date	Baseline 17, 1	None	09/10/2010 18:20:23	10794	TELM-06	1	Pass	0	0	0	938
M_TCP_EEPR0M	m_EEPR0M003	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_EEPR0Mm_EEPR0M003Hardware_EEPR0M003.ese	2,2	20100105 18:03:37	2,2	Up-to-date	Baseline 17, 1	None	09/09/2010 20:58:58	16726	TELM-06	1	Pass	0	0	0	702
M_TCP_EEPR0M	m_EEPR0M004	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_EEPR0Mm_EEPR0M004Hardware_EEPR0M004.ese	2,2	20100101 19:12:33	2,2	Up-to-date	Baseline 17, 1	None	09/09/2010 20:58:09	1309871	TELM-06	1	Pass	0	0	0	693
M_TCP_EEPR0M	m_EEPR0M005	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_EEPR0Mm_EEPR0M005Hardware_EEPR0M005.ese	2,2	20100119 15:32:05	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 20:51:28	172324	TELM-06	1	Pass	0	0	0	704
M_TCP_EEPR0M	m_EEPR0M006	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_EEPR0Mm_EEPR0M006Hardware_EEPR0M006.ese	2,2	20100528 12:55:48	2,2	Up-to-date	Baseline 17, 1	None	09/09/2010 20:48:48	46885	TELM-06	1	Pass	0	0	0	6
M_TCP_EEPR0M	m_EEPR0M007	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_EEPR0Mm_EEPR0M007Hardware_EEPR0M007.ese	2,2	20100218 18:38:33	2,1	Up-to-date	Baseline 17, 1	None	09/09/2010 20:46:32	5090	TELM-06	1	Pass	0	0	0	5
M_TCP_Emergency001	m_Emergency001	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency001Hardware_Emergency001.ese	2,3	20091103 21:54:33	2,3	Up-to-date	Baseline 17, 1	None	09/10/2010 12:16:04	9474	TELM-06	1	Pass	0	0	0	100
M_TCP_Emergency002	m_Emergency002	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency002Hardware_Emergency002.ese	2,5	20100625 20:19:36	2,5	Up-to-date	Baseline 17, 1	None	09/10/2010 11:47:05	13038	TELM-06	1	Pass	0	0	0	45
M_TCP_Emergency003	m_Emergency003	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency003Hardware_Emergency003.ese	2,6	20100629 14:19:25	2,6	Up-to-date	Baseline 17, 1	None	09/10/2010 11:12:39	28332	TELM-06	1	Pass	0	0	0	2564
M_TCP_Emergency004	m_Emergency004	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency004Hardware_Emergency004.ese	2,3	20100205 21:22:43	2,3	Up-to-date	Baseline 17, 1	None	09/10/2010 10:57:24	11821	TELM-06	1	Pass	0	0	0	4
M_TCP_Emergency005	m_Emergency005	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency005Hardware_Emergency005.ese	2,2	20091110 00:31:25	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 10:43:26	8148	TELM-06	1	Pass	0	0	0	5
M_TCP_Emergency006	m_Emergency006	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency006Hardware_Emergency006.ese	2,1	20091016 16:44:27	2,1	Up-to-date	Baseline 17, 1	None	09/10/2010 10:31:32	9310	TELM-06	1	Pass	0	0	0	6
M_TCP_Emergency007	m_Emergency007	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency007Hardware_Emergency007.ese	2,1	20091016 16:44:28	2,1	Up-to-date	Baseline 17, 1	None	09/10/2010 10:14:04	9537	TELM-06	1	Pass	0	0	0	33
M_TCP_Emergency008	m_Emergency008	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency008Hardware_Emergency008.ese	2,1	20091008 19:54:01	2,1	Up-to-date	Baseline 17, 1	None	09/10/2010 10:00:39	6003	TELM-06	1	Pass	0	0	0	6
M_TCP_Emergency009	m_Emergency009	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency009Hardware_Emergency009.ese	2,1	20100608 15:56:17	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 09:59:15	13158	TELM-06	1	Pass	0	0	0	6
M_TCP_Emergency010	m_Emergency010	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency010Hardware_Emergency010.ese	2,2	20091021 16:25:23	2,0	Up-to-date	Baseline 17, 1	None	09/10/2010 09:39:49	6789	TELM-06	1	Pass	0	0	0	2
M_TCP_Emergency011	m_Emergency011	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency011Hardware_Emergency011.ese	2,1	20091111 13:23:08	2,1	Up-to-date	Baseline 17, 1	None	09/10/2010 09:33:37	8248	TELM-06	1	Pass	0	0	0	17
M_TCP_Emergency012	m_Emergency012	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency012Hardware_Emergency012.ese	2,1	20091111 14:02:24	2,1	Up-to-date	Baseline 17, 1	None	09/10/2010 09:16:20	11805	TELM-06	1	Pass	0	0	0	26
M_TCP_Emergency013	m_Emergency013	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency013Hardware_Emergency013.ese	2,3	20091223 13:33:36	2,3	Up-to-date	Baseline 17, 1	None	09/10/2010 09:00:45	8180	TELM-06	1	Pass	0	0	0	6
M_TCP_Emergency014	m_Emergency014	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency014Hardware_Emergency014.ese	2,3	20100908 15:56:40	2,3	Up-to-date	Baseline 17, 1	None	09/10/2010 08:50:03	8968	TELM-06	1	Pass	0	0	0	8
M_TCP_Emergency015	m_Emergency015	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency015Hardware_Emergency015.ese	2,2	20091221 1:10:44	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 09:39:46	43976	TELM-06	1	Pass	0	0	0	17
M_TCP_Emergency016	m_Emergency016	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency016Hardware_Emergency016.ese	2,2	20091116 12:31:37	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 09:29:31	9670	TELM-06	1	Pass	0	0	0	21
M_TCP_Emergency017	m_Emergency017	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency017Hardware_Emergency017.ese	2,2	20100929 12:33:04	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 08:17:39	7256	TELM-06	1	Pass	0	0	0	23
M_TCP_Emergency018	m_Emergency018	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency018Hardware_Emergency018.ese	2,2	20101007 19:28:32	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 08:15:45	11445	TELM-06	1	Pass	0	0	0	17
M_TCP_Emergency019	m_Emergency019	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency019Hardware_Emergency019.ese	2,2	20100318 17:47:12	2,6	Up-to-date	Baseline 17, 1	None	09/10/2010 08:06:04	11447	TELM-06	1	Pass	0	0	0	26
M_TCP_Emergency020	m_Emergency020	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency020Hardware_Emergency020.ese	2,6	20091221 17:27:01	2,3	Up-to-date	Baseline 17, 1	None	09/10/2010 08:03:04	914607	TELM-06	1	Pass	0	0	0	83
M_TCP_Emergency021	m_Emergency021	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency021Hardware_Emergency021.ese	2,3	20091221 17:27:01	2,3	Up-to-date	Baseline 17, 1	None	09/10/2010 08:02:28	10360	TELM-06	1	Pass	0	0	0	82
M_TCP_Emergency022	m_Emergency022	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency022Hardware_Emergency022.ese	2,2	20100107 18:54:43	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 08:00:28	10360	TELM-06	1	Pass	0	0	0	82
M_TCP_Emergency023	m_Emergency023	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency023Hardware_Emergency023.ese	2,2	20100107 19:42:11	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 07:56:17	10412	TELM-06	1	Pass	0	0	0	14
M_TCP_Emergency024	m_Emergency024	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency024Hardware_Emergency024.ese	2,2	20100203 17:51:34	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 07:48:51	15425	TELM-06	1	Pass	0	0	0	2
M_TCP_Emergency025	m_Emergency025	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency025Hardware_Emergency025.ese	2,2	20090929 14:53:02	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 07:38:00	10949	TELM-06	1	Pass	0	0	0	2
M_TCP_Emergency026	m_Emergency026	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency026Hardware_Emergency026.ese	2,0	20090929 14:54:05	2,0	Up-to-date	Baseline 17, 1	None	09/10/2010 07:30:02	4972	TELM-06	1	Pass	0	0	0	3
M_TCP_Emergency027	m_Emergency027	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency027Hardware_Emergency027.ese	2,0	20090929 14:54:20	2,0	Up-to-date	Baseline 17, 1	None	09/10/2010 07:23:34	5054	TELM-06	1	Pass	0	0	0	3
M_TCP_Emergency028	m_Emergency028	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency028Hardware_Emergency028.ese	2,4	20100421 17:01:25	2,4	Up-to-date	Baseline 17, 1	None	09/10/2010 07:16:20	72867	TELM-06	1	Pass	0	0	0	6
M_TCP_Emergency029	m_Emergency029	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency029Hardware_Emergency029.ese	2,5	20091110 14:19:43	2,5	Up-to-date	Baseline 17, 1	None	09/10/2010 05:40:57	37654	TELM-06	1	Pass	0	0	0	18
M_TCP_Emergency030	m_Emergency030	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Emergencym_Emergency030Hardware_Emergency030.ese	2,3	20091011 12:18:39	2,3	Up-to-date	Baseline 17, 1	None	09/10/2010 07:10:07	11108	TELM-06	1	Pass	0	0	0	16
M_TCP_General001	m_General001	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Generalm_General001Hardware_General001.ese	2,2	20090915 14:20:31	2,2	Up-to-date	Baseline 17, 1	None	09/10/2010 00:25:22	6710	TELM-06	1	Pass	0	0	0	4646
M_TCP_General002	m_General002	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Generalm_General002Hardware_General002.ese	2,2	20091201 19:02:30	2,4	Up-to-date	Baseline 17, 1	None	09/10/2010 23:55:10	67945	TELM-06	1	Pass	0	0	0	16811
M_TCP_General003	m_General003	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Generalm_General003Hardware_General003.ese	2,3	20091201 19:02:32	2,3	Up-to-date	Baseline 17, 1	None	09/10/2010 23:53:06	36440	TELM-06	1	Pass	0	0	0	130639
M_TCP_General004	m_General004	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Generalm_General004Hardware_General004.ese	2,4	20100329 10:43:22	2,4	Up-to-date	Baseline 17, 1	None	09/09/2010 23:49:53	8578	TELM-06	1	Pass	0	0	0	2
M_TCP_General005	m_General005	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Generalm_General005Hardware_General005.ese	2,4	20091201 19:03:38	2,3	Up-to-date	Baseline 17, 1	None	09/09/2010 23:48:07	7344	TELM-06	1	Pass	0	0	0	2
M_TCP_General006	m_General006	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Generalm_General006Hardware_General006.ese	2,3	20100203 18:07:27	2,2	Up-to-date	Baseline 17, 1	None	09/09/2010 23:45:19	29674	TELM-06	1	Pass	0	0	0	9
M_TCP_General007	m_General007	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Generalm_General007Hardware_General007.ese	2,7	20100607 11:39:47	2,7	Up-to-date	Baseline 17, 1	None	09/11/2010 06:46:50	802195	TELM-06	1	Pass	0	0	0	21
M_TCP_General008	m_General008	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Generalm_General008Hardware_General008.ese	2,3	20100901 14:53:25	2,5	Up-to-date	Baseline 17, 1	None	09/11/2010 04:55:51	436573	TELM-06	1	Pass	0	0	0	9
M_TCP_General009	m_General009	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Generalm_General009Hardware_General009.ese	2,3	20100607 12:27:26	2,3	Up-to-date	Baseline 17, 1	None	09/11/2010 04:17:04	274170	TELM-06	1	Pass	0	0	0	12
M_TCP_General010	m_General010	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Generalm_General010Hardware_General010.ese	2,1	20100607 12:30:51	2,1	Up-to-date	Baseline 17, 1	None	09/09/2010 23:43:17	17093	TELM-06	1	Pass	0	0	0	12
M_TCP_General011	m_General011	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Generalm_General011Hardware_General011.ese	2,5	20100511 14:20:31	2,5	Up-to-date	Baseline 17, 1	None	09/09/2010 20:40:07	12928	TELM-06	1	Pass	0	0	0	12
M_TCP_General012	m_General012	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Generalm_General012Hardware_General012.ese	2,2	20100505 18:56:06	2,2	Up-to-date	Baseline 17, 1	None	09/09/2010 23:38:04	29704	TELM-06	1	Pass	0	0	0	12
M_TCP_General013	m_General013	Vdtsapace/wf/mzoar/FWTestFWT_FORMALTestMod31Testplan_nvfmzozarvium TCP_Generalm_General013Hardware_General013.ese	2,0	20100204 17:42:57	2,0	Up-to-date	Baseline 17, 1	None	09/09/201								

M_TCP	Open	m_Open001	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper004/Hardwrem_Open004.exe	2.6	20100622/200121	2.6	Up-to-date	Baseline 17_1	None	09/09/2010 11:16:01	13174	TELM-06	1	Pass	0	0	0	21
M_TCP	Open	m_Open005	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper005/Hardwrem_Open005.exe	2.6	20100920/110232	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 11:21:57	16807	TELM-06	1	Pass	0 <td>0<td>0<td>4</td></td></td>	0 <td>0<td>4</td></td>	0 <td>4</td>	4
M_TCP	Open	m_Open006	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper006/Hardwrem_Open006.exe	2.6	20100315/142629	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 11:10:39	21283	TELM-06	1	Pass	0 <td>0<td>0<td>1173</td></td></td>	0 <td>0<td>1173</td></td>	0 <td>1173</td>	1173
M_TCP	Open	m_Open007	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper007/Hardwrem_Open007.exe	2.7	20100315/144620	2.7	Up-to-date	Baseline 17_1	None	09/09/2010 11:06:45	17578	TELM-06	1	Pass	0 <td>0<td>0<td>1181</td></td></td>	0 <td>0<td>1181</td></td>	0 <td>1181</td>	1181
M_TCP	Open	m_Open008	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper008/Hardwrem_Open008.exe	2.1	20091030/142308	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 11:02:32	18767	TELM-06	1	Pass	0 <td>0<td>0<td>5</td></td></td>	0 <td>0<td>5</td></td>	0 <td>5</td>	5
M_TCP	Open	m_Open009	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper009/Hardwrem_Open009.exe	2.6	20100428/150317	2.6	Up-to-date	Baseline 17_1	None	09/09/2010 11:04:42	19442	TELM-06	1	Pass	0 <td>0<td>0<td>38</td></td></td>	0 <td>0<td>38</td></td>	0 <td>38</td>	38
M_TCP	Open	m_Open010	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper010/Hardwrem_Open010.exe	2.6	20100315/150550	2.6	Up-to-date	Baseline 17_1	None	09/09/2010 10:54:17	17503	TELM-06	1	Pass	0 <td>0<td>0<td>3965</td></td></td>	0 <td>0<td>3965</td></td>	0 <td>3965</td>	3965
M_TCP	Open	m_Open011	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper011/Hardwrem_Open011.exe	2.2	20100210/133130	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 10:51:47	6434	TELM-06	1	Pass	0 <td>0<td>0<td>4</td></td></td>	0 <td>0<td>4</td></td>	0 <td>4</td>	4
M_TCP	Open	m_Open012	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper012/Hardwrem_Open012.exe	2.6	20100228/150317	2.6	Up-to-date	Baseline 17_1	None	09/09/2010 10:45:12	15608	TELM-06	1	Pass	0 <td>0<td>0<td>9</td></td></td>	0 <td>0<td>9</td></td>	0 <td>9</td>	9
M_TCP	Open	m_Open013	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper013/Hardwrem_Open013.exe	2.5	20100210/133406	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 10:40:17	9000	TELM-06	1	Pass	0 <td>0<td>0<td>101</td></td></td>	0 <td>0<td>101</td></td>	0 <td>101</td>	101
M_TCP	Open	m_Open014	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper014/Hardwrem_Open014.exe	2.6	20100210/133536	2.6	Up-to-date	Baseline 17_1	None	09/09/2010 10:37:25	8444	TELM-06	1	Pass	0 <td>0<td>0<td>101</td></td></td>	0 <td>0<td>101</td></td>	0 <td>101</td>	101
M_TCP	Open	m_Open015	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper015/Hardwrem_Open015.exe	2.6	20100128/150026	2.6	Up-to-date	Baseline 17_1	None	09/09/2010 10:35:13	8910	TELM-06	1	Pass	0 <td>0<td>0<td>9</td></td></td>	0 <td>0<td>9</td></td>	0 <td>9</td>	9
M_TCP	Open	m_Open016	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper016/Hardwrem_Open016.exe	2.1	20100510/135486	2.1	Up-to-date	Baseline 17_1	None	09/11/2010 03:33:10	5794	TELM-06	1	Pass	0 <td>0<td>0<td>16</td></td></td>	0 <td>0<td>16</td></td>	0 <td>16</td>	16
M_TCP	Open	m_Open017	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper017/Hardwrem_Open017.exe	2.7	20091119/214020	2.7	Up-to-date	Baseline 17_1	None	09/11/2010 03:28:31	63789	TELM-06	1	Pass	0 <td>0<td>0<td>13</td></td></td>	0 <td>0<td>13</td></td>	0 <td>13</td>	13
M_TCP	Open	m_Open022	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper022/Hardwrem_Open022.exe	2.3	20100203/221727	2.3	Up-to-date	Baseline 17_1	None	09/11/2010 01:35:19	32332	TELM-06	1	Pass	0 <td>0<td>0<td>19</td></td></td>	0 <td>0<td>19</td></td>	0 <td>19</td>	19
M_TCP	Open	m_Open033	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper033/Hardwrem_Open033.exe	2.1	20100203/223264	2.1	Up-to-date	Baseline 17_1	None	09/11/2010 01:06:44	9241	TELM-06	1	Pass	0 <td>0<td>0<td>5</td></td></td>	0 <td>0<td>5</td></td>	0 <td>5</td>	5
M_TCP	Open	m_Open034	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper034/Hardwrem_Open034.exe	2.2	20100217/141909	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 10:32:31	56986	TELM-06	1	Pass	0 <td>0<td>0<td>42</td></td></td>	0 <td>0<td>42</td></td>	0 <td>42</td>	42
M_TCP	Open	m_Open035	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper035/Hardwrem_Open035.exe	2.2	20100217/141607	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 10:31:07	9757	TELM-06	1	Pass	0 <td>0<td>0<td>32</td></td></td>	0 <td>0<td>32</td></td>	0 <td>32</td>	32
M_TCP	Open	m_Open036	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper036/Hardwrem_Open036.exe	2.1	20091021/155246	2.1	Up-to-date	Baseline 17_1	None	09/11/2010 10:26:13	36305	TELM-06	1	Pass	0 <td>0<td>0<td>16</td></td></td>	0 <td>0<td>16</td></td>	0 <td>16</td>	16
M_TCP	Open	m_Open037	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper037/Hardwrem_Open037.exe	2.2	20091021/155107	2.2	Up-to-date	Baseline 17_1	None	09/11/2010 10:31:52	31336	TELM-06	1	Pass	0 <td>0<td>0<td>9</td></td></td>	0 <td>0<td>9</td></td>	0 <td>9</td>	9
M_TCP	Open	m_Open038	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper038/Hardwrem_Open038.exe	2.7	20100217/140040	2.7	Up-to-date	Baseline 17_1	None	09/09/2010 10:28:43	78270	TELM-06	1	Pass	0 <td>0<td>0<td>46</td></td></td>	0 <td>0<td>46</td></td>	0 <td>46</td>	46
M_TCP	Open	m_Open039	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper039/Hardwrem_Open039.exe	2.0	20091108/142044	2.0	Up-to-date	Baseline 17_1	None	09/09/2010 10:27:01	9394	TELM-06	1	Pass	0 <td>0<td>0<td>1</td></td></td>	0 <td>0<td>1</td></td>	0 <td>1</td>	1
M_TCP	Open	m_Open040	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper040/Hardwrem_Open040.exe	2.1	20100201/194637	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 10:22:14	17037	TELM-06	1	Pass	0 <td>0<td>0<td>1</td></td></td>	0 <td>0<td>1</td></td>	0 <td>1</td>	1
M_TCP	Open	m_Open041	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper041/Hardwrem_Open041.exe	2.0	20091109/142153	2.0	Up-to-date	Baseline 17_1	None	09/10/2010 14:59:14	51379	TELM-06	1	Pass	0 <td>0<td>0<td>1</td></td></td>	0 <td>0<td>1</td></td>	0 <td>1</td>	1
M_TCP	Open	m_Open042	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPOpenm_Oper042/Hardwrem_Open042.exe	2.4	20100702/123807	2.4	Up-to-date	Baseline 17_1	None	09/09/2010 10:17:28	15930	TELM-06	1	Pass	0 <td>0<td>0<td>52</td></td></td>	0 <td>0<td>52</td></td>	0 <td>52</td>	52
M_TCP	Open	m_Polling016	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng016/Hardwrem_Pollng016.exe	2.0	20090923/192605	2.0	Up-to-date	Baseline 17_1	None	09/09/2010 14:37:48	4910	TELM-06	1	Pass	0 <td>0<td>0<td>1</td></td></td>	0 <td>0<td>1</td></td>	0 <td>1</td>	1
M_TCP	Open	m_Polling017	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng017/Hardwrem_Pollng017.exe	2.1	20100126/200446	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 10:06:28	6124	TELM-06	1	Pass	0 <td>0<td>0<td>4</td></td></td>	0 <td>0<td>4</td></td>	0 <td>4</td>	4
M_TCP	Open	m_Polling018	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng018/Hardwrem_Pollng018.exe	2.1	20100126/200523	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 14:35:25	8293	TELM-06	1	Pass	0 <td>0<td>0<td>4</td></td></td>	0 <td>0<td>4</td></td>	0 <td>4</td>	4
M_TCP	Open	m_Polling019	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng019/Hardwrem_Pollng019.exe	2.1	20100128/200446	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 14:32:14	78199	TELM-06	1	Pass	0 <td>0<td>0<td>10</td></td></td>	0 <td>0<td>10</td></td>	0 <td>10</td>	10
M_TCP	Open	m_Polling025	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng025/Hardwrem_Pollng025.exe	2.1	20091124/205139	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 14:30:15	46139	TELM-06	1	Pass	0 <td>0<td>0<td>2</td></td></td>	0 <td>0<td>2</td></td>	0 <td>2</td>	2
M_TCP	Open	m_Polling026	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng026/Hardwrem_Pollng026.exe	2.2	20091203/145918	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 14:27:09	19449	TELM-06	1	Pass	0 <td>0<td>0<td>3</td></td></td>	0 <td>0<td>3</td></td>	0 <td>3</td>	3
M_TCP	Open	m_Polling040	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng040/Hardwrem_Pollng040.exe	2.1	20100126/160561	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 14:25:50	6644	TELM-06	1	Pass	0 <td>0<td>0<td>4</td></td></td>	0 <td>0<td>4</td></td>	0 <td>4</td>	4
M_TCP	Open	m_Polling045	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng045/Hardwrem_Pollng045.exe	2.1	20100126/200642	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 14:24:02	39596	TELM-06	1	Pass	0 <td>0<td>0<td>2</td></td></td>	0 <td>0<td>2</td></td>	0 <td>2</td>	2
M_TCP	Open	m_Polling046	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng046/Hardwrem_Pollng046.exe	2.6	20100418/142147	2.6	Up-to-date	Baseline 17_1	None	09/09/2010 14:22:12	47148	TELM-06	1	Pass	0 <td>0<td>0<td>38</td></td></td>	0 <td>0<td>38</td></td>	0 <td>38</td>	38
M_TCP	Open	m_Polling047	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng047/Hardwrem_Pollng047.exe	2.1	20100126/200721	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 14:20:14	36178	TELM-06	1	Pass	0 <td>0<td>0<td>2</td></td></td>	0 <td>0<td>2</td></td>	0 <td>2</td>	2
M_TCP	Open	m_Polling048	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng048/Hardwrem_Pollng048.exe	2.3	20091124/220214	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 14:17:37	34994	TELM-06	1	Pass	0 <td>0<td>0<td>1</td></td></td>	0 <td>0<td>1</td></td>	0 <td>1</td>	1
M_TCP	Open	m_Polling049	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng049/Hardwrem_Pollng049.exe	2.4	20100310/194421	2.4	Up-to-date	Baseline 17_1	None	09/09/2010 14:16:03	46193	TELM-06	1	Pass	0 <td>0<td>0<td>2</td></td></td>	0 <td>0<td>2</td></td>	0 <td>2</td>	2
M_TCP	Open	m_Polling050	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng050/Hardwrem_Pollng050.exe	2.1	20100629/174457	2.6	Up-to-date	Baseline 17_1	None	09/09/2010 14:14:24	22757	TELM-06	1	Pass	0 <td>0<td>0<td>5</td></td></td>	0 <td>0<td>5</td></td>	0 <td>5</td>	5
M_TCP	Open	m_Polling056	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng056/Hardwrem_Pollng056.exe	2.3	20091109/225718	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 14:11:05	45375	TELM-06	1	Pass	0 <td>0<td>0<td>4</td></td></td>	0 <td>0<td>4</td></td>	0 <td>4</td>	4
M_TCP	Open	m_Polling066	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng066/Hardwrem_Pollng066.exe	2.3	20091109/225718	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 14:09:03	52626	TELM-06	1	Pass	0 <td>0<td>0<td>4</td></td></td>	0 <td>0<td>4</td></td>	0 <td>4</td>	4
M_TCP	Open	m_Polling067	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng067/Hardwrem_Pollng067.exe	2.1	20090912/242820	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 14:08:35	14083	TELM-06	1	Pass	0 <td>0<td>0<td>11</td></td></td>	0 <td>0<td>11</td></td>	0 <td>11</td>	11
M_TCP	Open	m_Polling068	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng068/Hardwrem_Pollng068.exe	2.3	20091108/182327	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 14:04:43	7055	TELM-06	1	Pass	0 <td>0<td>0<td>3</td></td></td>	0 <td>0<td>3</td></td>	0 <td>3</td>	3
M_TCP	Open	m_Polling076	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng076/Hardwrem_Pollng076.exe	2.1	20091103/150859	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 14:02:17	8093	TELM-06	1	Pass	0 <td>0<td>0<td>1</td></td></td>	0 <td>0<td>1</td></td>	0 <td>1</td>	1
M_TCP	Open	m_Polling077	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng077/Hardwrem_Pollng077.exe	2.1	20091105/183439	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 23:06:05	527412	TELM-06	1	Pass	0 <td>0<td>0<td>2</td></td></td>	0 <td>0<td>2</td></td>	0 <td>2</td>	2
M_TCP	Open	m_Polling080	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng080/Hardwrem_Pollng080.exe	2.2	20091105/183404	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 22:58:46	277402	TELM-06	1	Pass	0 <td>0<td>0<td>2</td></td></td>	0 <td>0<td>2</td></td>	0 <td>2</td>	2
M_TCP	Open	m_Polling081	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng081/Hardwrem_Pollng081.exe	2.2	20090927/141947	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 14:16:40	24160	TELM-06	1	Pass	0 <td>0<td>0<td>1</td></td></td>	0 <td>0<td>1</td></td>	0 <td>1</td>	1
M_TCP	Open	m_Polling082	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng082/Hardwrem_Pollng082.exe	2.2	20090912/182825	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 13:52:48	9483	TELM-06	1	Pass	0 <td>0<td>0<td>1</td></td></td>	0 <td>0<td>1</td></td>	0 <td>1</td>	1
M_TCP	Open	m_Polling083	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng083/Hardwrem_Pollng083.exe	2.3	20091102/184507	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 13:49:47	19464	TELM-06	1	Pass	0 <td>0<td>0<td>2</td></td></td>	0 <td>0<td>2</td></td>	0 <td>2</td>	2
M_TCP	Open	m_Polling084	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng084/Hardwrem_Pollng084.exe	2.1	20091102/184507	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 13:48:23	19533	TELM-06	1	Pass	0 <td>0<td>0<td>2</td></td></td>	0 <td>0<td>2</td></td>	0 <td>2</td>	2
M_TCP	Open	m_Polling088	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng088/Hardwrem_Pollng088.exe	2.5	20100512/175919	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 13:47:39	23416	TELM-06	1	Pass	0 <td>0<td>0<td>27</td></td></td>	0 <td>0<td>27</td></td>	0 <td>27</td>	27
M_TCP	Open	m_Polling089	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng089/Hardwrem_Pollng089.exe	2.7	20100511/192817	2.7	Up-to-date	Baseline 17_1	None	09/09/2010 13:44:23	97045	TELM-06	1	Pass	0 <td>0<td>0<td>26</td></td></td>	0 <td>0<td>26</td></td>	0 <td>26</td>	26
M_TCP	Open	m_Polling090	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng090/Hardwrem_Pollng090.exe	2.2	20100511/192817	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 13:41:55	6871	TELM-06	1	Pass	0 <td>0<td>0<td>3</td></td></td>	0 <td>0<td>3</td></td>	0 <td>3</td>	3
M_TCP	Open	m_Polling091	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng091/Hardwrem_Pollng091.exe	2.6	20100512/201612	2.6	Up-to-date	Baseline 17_1	None	09/09/2010 13:40:21	19339	TELM-06	1	Pass	0 <td>0<td>0<td>13</td></td></td>	0 <td>0<td>13</td></td>	0 <td>13</td>	13
M_TCP	Open	m_Polling092	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng092/Hardwrem_Pollng092.exe	2.1	20091105/184135	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 22:02:27	77726	TELM-06	1	Pass	0 <td>0<td>0<td>2</td></td></td>	0 <td>0<td>2</td></td>	0 <td>2</td>	2
M_TCP	Open	m_Polling093	Vdtsapce/hw/inszar/FWTestFWT/FORMALTestMod3/TeStssian_nvfnvmozarvum/TCPPollngm_Pollng093/Hardwrem_Pollng093.exe	2.0	20091109/183012	2.0	Up-to-date	Baseline 17_1										

M_TCP_Security	m_Security01	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Security_Secur01/Hardwarew_Secur01_01.exe</a>	2.1	20100603 1844.12	2.1	Up-to-date	Baseline 17.1	None	09/05/2010 21:54:16	22951	TELM-06	1	Pass	0	0	16
M_TCP_Security	m_Security02	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Security_Secur02/Hardwarew_Secur02_02.exe</a>	2.1	20100603 1851.08	2.1	Up-to-date	Baseline 17.1	None	09/05/2010 21:51:21	8317	TELM-06	1	Pass	0	0	11
M_TCP_Security	m_Security03	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Security_Secur03/Hardwarew_Secur03_03.exe</a>	2.1	20100127 21:38:15	2.1	Up-to-date	Baseline 17.1	None	09/05/2010 21:49:45	14033	TELM-06	1	Pass	0	0	12
M_TCP_Security	m_Security04	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Security_Secur04/Hardwarew_Secur04_04.exe</a>	2.3	20100326 13:19:51	2.3	Up-to-date	Baseline 17.1	None	09/05/2010 21:45:39	118775	TELM-06	1	Pass	0	0	15
M_TCP_Security	m_Security05	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Security_Secur05/Hardwarew_Secur05_05.exe</a>	2.0	20100114 21:18:20	2.0	Up-to-date	Baseline 17.1	None	09/05/2010 21:42:12	17867	TELM-06	1	Pass	0	0	30
M_TCP_Security	m_Security06	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Security_Secur06/Hardwarew_Secur06_06.exe</a>	2.3	20100326 13:19:51	2.3	Up-to-date	Baseline 17.1	None	09/05/2010 21:38:02	86748	TELM-06	1	Pass	0	0	9
M_TCP_Security	m_Security07	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Security_Secur07/Hardwarew_Secur07_07.exe</a>	2.6	20100603 18:54:21	2.6	Up-to-date	Baseline 17.1	None	09/11/2010 04:12:06	51037	TELM-06	1	Pass	0	0	119
M_TCP_Security	m_Security08	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Security_Secur08/Hardwarew_Secur08_08.exe</a>	2.9	20100607 13:02:07	2.9	Up-to-date	Baseline 17.1	None	09/10/2010 19:01:04	167401	TELM-06	1	Pass	0	0	170
M_TCP_Security	m_Security09	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Security_Secur09/Hardwarew_Secur09_09.exe</a>	2.9	20100610 14:11:31	2.9	Up-to-date	Baseline 17.1	None	09/10/2010 16:53:24	569845	TELM-06	1	Pass	0	0	145
M_TCP_Security	m_Security40	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Security_Secur040/Hardwarew_Secur040_40.exe</a>	2.3	20100603 20:43:31	2.3	Up-to-date	Baseline 17.1	None	09/05/2010 21:29:52	278601	TELM-06	1	Pass	0	0	33
M_TCP_Security	m_Security01	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Security_Secur041/Hardwarew_Secur041_01.exe</a>	2.6	20100421 10:55:08	2.6	Up-to-date	Baseline 17.1	None	09/05/2010 21:25:53	65816	TELM-06	1	Pass	0	0	77
M_TCP_Security	m_Security02	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Security_Secur042/Hardwarew_Secur042_02.exe</a>	2.1	20100408 12:57:18	2.1	Up-to-date	Baseline 17.1	None	09/05/2010 21:22:35	58241	TELM-06	1	Pass	0	0	48
M_TCP_Security	m_Security03	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Security_Secur043/Hardwarew_Secur043_03.exe</a>	2.0	20100216 20:27:42	2.0	Up-to-date	Baseline 17.1	None	09/05/2010 21:19:48	68845	TELM-06	1	Pass	0	0	56
M_TCP_Security	m_Security04	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Security_Secur044/Hardwarew_Secur044_04.exe</a>	2.2	20100513 19:14:37	2.2	Up-to-date	Baseline 17.1	None	09/05/2010 21:16:33	70744	TELM-06	1	Pass	0	0	44
M_TCP_Security	m_Security05	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Security_Secur045/Hardwarew_Secur045_05.exe</a>	2.3	20100512 17:38:53	2.3	Up-to-date	Baseline 17.1	None	09/05/2010 21:10:08	71169	TELM-06	1	Pass	0	0	62
M_TCP_Security	m_Security06	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Security_Secur046/Hardwarew_Secur046_06.exe</a>	2.2	20100607 13:05:30	2.2	Up-to-date	Baseline 17.1	None	09/05/2010 21:05:21	3332	TELM-06	1	Pass	0	0	30
M_TCP_WirelessWakeUp	m_Wakeup001	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_WirelessWakeUp_WakeUp001/Hardwarew_WakeUp001_01.exe</a>	2.3	20100621 17:44:25	2.3	Up-to-date	Baseline 17.1	None	09/10/2010 21:22:59	291397	TELM-06	1	Pass	0	0	16
M_TCP_WirelessWakeUp	m_Wakeup002	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_WirelessWakeUp_WakeUp002/Hardwarew_WakeUp002_02.exe</a>	2.5	20100612 16:16:25	2.5	Up-to-date	Baseline 17.1	None	09/05/2010 23:24:17	35420	TELM-06	1	Pass	0	0	12
M_TCP_WirelessWakeUp	m_Wakeup003	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_WirelessWakeUp_WakeUp003/Hardwarew_WakeUp003_03.exe</a>	2.2	20100310 17:59:29	2.2	Up-to-date	Baseline 17.1	None	09/05/2010 23:20:39	14370	TELM-06	1	Pass	0	0	11
M_TCP_WirelessWakeUp	m_Wakeup004	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_WirelessWakeUp_WakeUp004/Hardwarew_WakeUp004_04.exe</a>	2.1	20091208 16:02:20	2.1	Up-to-date	Baseline 17.1	None	09/11/2010 04:15:00	19126	TELM-06	1	Pass	0	0	31
M_TCP_WirelessWakeUp	m_Wakeup005	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_WirelessWakeUp_WakeUp005/Hardwarew_WakeUp005_05.exe</a>	2.3	20100608 21:32:21	2.3	Up-to-date	Baseline 17.1	None	09/05/2010 23:17:32	20249	TELM-06	1	Pass	0	0	40
M_TCP_WirelessWakeUp	m_Wakeup006	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_WirelessWakeUp_WakeUp006/Hardwarew_WakeUp006_06.exe</a>	2.3	20100127 10:35:22	2.3	Up-to-date	Baseline 17.1	None	09/05/2010 23:15:50	10212	TELM-06	1	Pass	0	0	55
M_TCP_WirelessWakeUp	m_Wakeup007	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_WirelessWakeUp_WakeUp007/Hardwarew_WakeUp007_07.exe</a>	2.1	20091204 19:28:48	2.1	Up-to-date	Baseline 17.1	None	09/05/2010 23:14:54	12775	TELM-06	1	Pass	0	0	3
M_TCP_WirelessWakeUp	m_Wakeup008	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_WirelessWakeUp_WakeUp008/Hardwarew_WakeUp008_08.exe</a>	2.5	20100507 15:41:21	2.5	Up-to-date	Baseline 17.1	None	09/05/2010 23:12:42	54725	TELM-06	1	Pass	0	0	24
M_TCP_WirelessWakeUp	m_Wakeup009	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_WirelessWakeUp_WakeUp009/Hardwarew_WakeUp009_09.exe</a>	2.6	20100512 16:17:49	2.6	Up-to-date	Baseline 17.1	None	09/05/2010 23:10:36	52923	TELM-06	1	Pass	0	0	32
M_TCP_WirelessWakeUp	m_Wakeup010	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_WirelessWakeUp_WakeUp010/Hardwarew_WakeUp010_10.exe</a>	2.4	20100512 16:20:12	2.4	Up-to-date	Baseline 17.1	None	09/05/2010 23:07:25	45176	TELM-06	1	Pass	0	0	16
M_TCP_WirelessWakeUp	m_Wakeup011	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_WirelessWakeUp_WakeUp011/Hardwarew_WakeUp011_11.exe</a>	2.3	20100406 18:07:38	2.3	Up-to-date	Baseline 17.1	None	09/05/2010 23:04:12	28704	TELM-06	1	Pass	0	0	25
M_TCP_WirelessWakeUp	m_Wakeup012	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_WirelessWakeUp_WakeUp012/Hardwarew_WakeUp012_12.exe</a>	2.6	20100512 16:20:26	2.6	Up-to-date	Baseline 17.1	None	09/05/2010 23:02:35	47113	TELM-06	1	Pass	0	0	45
M_TCP_WirelessWakeUp	m_Wakeup013	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_WirelessWakeUp_WakeUp013/Hardwarew_WakeUp013_13.exe</a>	2.3	20100623 17:13:34	2.3	Up-to-date	Baseline 17.1	None	09/05/2010 22:58:02	12469	TELM-06	1	Pass	0	0	39
M_TCP_WirelessWakeUp	m_Wakeup014	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_WirelessWakeUp_WakeUp014/Hardwarew_WakeUp014_14.exe</a>	2.3	20100604 11:53:26	2.3	Up-to-date	Baseline 17.1	None	09/05/2010 22:55:74	74549	TELM-06	1	Pass	0	0	30
M_TCP_AntennaSelection	m_Antenna001	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_AntennaSelection_Antenna001/Hardwarew_Antenna001_01.exe</a>	2.4	20100616 12:31:48	2.4	Up-to-date	Baseline 17.1	None	09/10/2010 09:29:36	238627	TELM-06	1	Pass	0	0	127
M_TCP_AntennaSelection	m_Antenna002	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_AntennaSelection_Antenna002/Hardwarew_Antenna002_02.exe</a>	2.3	20100616 12:31:48	2.3	Up-to-date	Baseline 17.1	None	09/10/2010 09:28:39	281068	TELM-06	1	Pass	0	0	159
M_TCP_Channel	m_ChannelRecovery001	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery001/Hardwarew_ChannelRecovery001_01.exe</a>	2.5	20100408 14:29:25	2.5	Up-to-date	Baseline 17.1	None	09/05/2010 15:26:44	14994	TELM-06	1	Pass	0	0	26
M_TCP_Channel	m_ChannelRecovery002	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery002/Hardwarew_ChannelRecovery002_02.exe</a>	2.2	20091109 22:31:22	2.2	Up-to-date	Baseline 17.1	None	09/05/2010 15:25:49	17956	TELM-06	1	Pass	0	0	5
M_TCP_Channel	m_ChannelRecovery003	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery003/Hardwarew_ChannelRecovery003_03.exe</a>	2.2	20091109 22:32:21	2.2	Up-to-date	Baseline 17.1	None	09/05/2010 15:24:11	17489	TELM-06	1	Pass	0	0	5
M_TCP_Channel	m_ChannelRecovery004	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery004/Hardwarew_ChannelRecovery004_04.exe</a>	2.3	20100926 10:24:56	2.3	Up-to-date	Baseline 17.1	None	09/05/2010 15:22:14	45577	TELM-06	1	Pass	0	0	74
M_TCP_Channel	m_ChannelRecovery005	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery005/Hardwarew_ChannelRecovery005_05.exe</a>	2.5	20100621 18:44:25	2.5	Up-to-date	Baseline 17.1	None	09/05/2010 15:21:20	14383	TELM-06	1	Pass	0	0	37
M_TCP_Channel	m_ChannelRecovery006	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery006/Hardwarew_ChannelRecovery006_06.exe</a>	2.4	20100507 17:09:38	2.4	Up-to-date	Baseline 17.1	None	09/05/2010 15:20:10	15770	TELM-06	1	Pass	0	0	36
M_TCP_Channel	m_ChannelRecovery007	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery007/Hardwarew_ChannelRecovery007_07.exe</a>	2.6	20100511 17:05:29	2.6	Up-to-date	Baseline 17.1	None	09/05/2010 15:18:25	25261	TELM-06	1	Pass	0	0	62
M_TCP_Channel	m_ChannelRecovery008	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery008/Hardwarew_ChannelRecovery008_08.exe</a>	2.6	20100513 20:59:29	2.6	Up-to-date	Baseline 17.1	None	09/05/2010 15:16:05	26923	TELM-06	1	Pass	0	0	574
M_TCP_Channel	m_ChannelRecovery009	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery009/Hardwarew_ChannelRecovery009_09.exe</a>	2.6	20100622 15:16:16	2.6	Up-to-date	Baseline 17.1	None	09/05/2010 15:12:43	51091	TELM-06	1	Pass	0	0	342
M_TCP_Channel	m_ChannelRecovery010	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery010/Hardwarew_ChannelRecovery010_10.exe</a>	2.8	20100528 16:25:27	2.8	Up-to-date	Baseline 17.1	None	09/05/2010 15:10:15	19521	TELM-06	1	Pass	0	0	23
M_TCP_Channel	m_ChannelRecovery011	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery011/Hardwarew_ChannelRecovery011_11.exe</a>	2.5	20100513 22:31:10	2.5	Up-to-date	Baseline 17.1	None	09/05/2010 15:08:51	15975	TELM-06	1	Pass	0	0	15
M_TCP_Channel	m_ChannelRecovery012	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery012/Hardwarew_ChannelRecovery012_12.exe</a>	2.6	20100907 20:36:00	2.6	Up-to-date	Baseline 17.1	None	09/05/2010 15:06:35	40151	TELM-06	1	Pass	0	0	220
M_TCP_Channel	m_ChannelRecovery013	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery013/Hardwarew_ChannelRecovery013_13.exe</a>	2.2	20101005 19:17:24	2.2	Up-to-date	Baseline 17.1	None	09/05/2010 15:03:15	24874	TELM-06	1	Pass	0	0	8
M_TCP_Channel	m_ChannelRecovery014	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery014/Hardwarew_ChannelRecovery014_14.exe</a>	2.3	20100913 19:18:47	2.3	Up-to-date	Baseline 17.1	None	09/05/2010 15:01:53	53111	TELM-06	1	Pass	0	0	23
M_TCP_Channel	m_ChannelRecovery015	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery015/Hardwarew_ChannelRecovery015_15.exe</a>	2.6	20100603 18:01:04	2.6	Up-to-date	Baseline 17.1	None	09/05/2010 14:58:33	12715	TELM-06	1	Pass	0	0	88
M_TCP_Channel	m_ChannelRecovery016	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery016/Hardwarew_ChannelRecovery016_16.exe</a>	2.4	20100603 20:10:23	2.4	Up-to-date	Baseline 17.1	None	09/05/2010 14:56:48	37476	TELM-06	1	Pass	0	0	2
M_TCP_Channel	m_ChannelRecovery017	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery017/Hardwarew_ChannelRecovery017_17.exe</a>	2.3	20100623 17:44:25	2.3	Up-to-date	Baseline 17.1	None	09/05/2010 14:55:22	13603	TELM-06	1	Pass	0	0	4
M_TCP_Channel	m_ChannelRecovery018	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery018/Hardwarew_ChannelRecovery018_18.exe</a>	2.3	20100201 19:41:54	2.3	Up-to-date	Baseline 17.1	None	09/05/2010 14:54:21	18002	TELM-06	1	Pass	0	0	4
M_TCP_Channel	m_ChannelRecovery020	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery020/Hardwarew_ChannelRecovery020_20.exe</a>	2.7	20100623 17:42:40	2.7	Up-to-date	Baseline 17.1	None	09/05/2010 14:52:37	37956	TELM-06	1	Pass	0	0	109
M_TCP_Channel	m_ChannelRecovery021	<a href="#">Vdaipacefw/wimzar/fWTestFWT-FORMAL/TestMode3/Testing_nvfwzovrturum/TCP_Channel_ChannelRecovery02</a>														

M_TCP_Close	m_Close021	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Closem_Close021Hardwaraem_Close021.exe</a>	2.2	2009/09/21 12:28:28	2.0	Up-to-date	Baseline 17.1	None	09/20/2010 19:20:21	2630	TELM-06	1	Pass	0	0	0	1
M_TCP_Data	m_AR0001	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0001Hardwaraem_AR0001.exe</a>	2.2	2009/09/21 12:28:28	2.1	Up-to-date	Baseline 17.1	None	09/20/2010 19:11:11	12344	TELM-06	1	Pass	0	0	0	1
M_TCP_Data	m_AR0002	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0002Hardwaraem_AR0002.exe</a>	2.5	2010/06/29 15:20:36	2.5	Up-to-date	Baseline 17.1	None	09/20/2010 04:06:01	16694	TELM-06	1	Pass	0	0	0	78
M_TCP_Data	m_AR0002	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0002Hardwaraem_AR0002.exe</a>	2.0	2009/09/21 18:25:03	2.0	Up-to-date	Baseline 17.1	None	09/20/2010 04:04:44	7927	TELM-06	1	Pass	0	0	0	8
M_TCP_Data	m_AR0003	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0003Hardwaraem_AR0003.exe</a>	2.3	2009/09/24 12:22:02	2.3	Up-to-date	Baseline 17.1	None	09/20/2010 04:02:48	8529	TELM-06	1	Pass	0	0	0	148
M_TCP_Data	m_AR0005	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0005Hardwaraem_AR0005.exe</a>	2.1	2009/11/04 12:22:49	2.1	Up-to-date	Baseline 17.1	None	09/20/2010 04:11:30	8121	TELM-06	1	Pass	0	0	0	5
M_TCP_Data	m_AR0006	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0006Hardwaraem_AR0006.exe</a>	2.2	2009/12/31 12:26:32	2.2	Up-to-date	Baseline 17.1	None	09/20/2010 04:10:14	7520	TELM-06	1	Pass	0	0	0	9
M_TCP_Data	m_AR0006	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0006Hardwaraem_AR0006.exe</a>	2.1	2009/09/24 16:41:52	2.1	Up-to-date	Baseline 17.1	None	09/20/2010 03:58:28	8634	TELM-06	1	Pass	0	0	0	19
M_TCP_Data	m_AR0007	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0007Hardwaraem_AR0007.exe</a>	2.2	2009/09/21 12:22:49	2.2	Up-to-date	Baseline 17.1	None	09/20/2010 03:56:04	7428	TELM-06	1	Pass	0	0	0	2
M_TCP_Data	m_AR0008	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0008Hardwaraem_AR0008.exe</a>	2.0	2009/09/21 18:28:06	2.0	Up-to-date	Baseline 17.1	None	09/20/2010 03:53:18	10782	TELM-06	1	Pass	0	0	0	3
M_TCP_Data	m_AR0009	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0009Hardwaraem_AR0009.exe</a>	2.2	2010/02/24 13:08:24	2.2	Up-to-date	Baseline 17.1	None	09/20/2010 03:51:37	8699	TELM-06	1	Pass	0	0	0	5
M_TCP_Data	m_AR0010	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0010Hardwaraem_AR0010.exe</a>	2.4	2010/02/24 13:18:37	2.4	Up-to-date	Baseline 17.1	None	09/20/2010 03:49:31	8881	TELM-06	1	Pass	0	0	0	5
M_TCP_Data	m_AR0011	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0011Hardwaraem_AR0011.exe</a>	2.3	2010/02/21 13:30:26	2.3	Up-to-date	Baseline 17.1	None	09/20/2010 03:48:11	8115	TELM-06	1	Pass	0	0	0	9
M_TCP_Data	m_AR0012	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0012Hardwaraem_AR0012.exe</a>	2.3	2010/02/18 15:14:47	2.3	Up-to-date	Baseline 17.1	None	09/20/2010 03:46:53	8480	TELM-06	1	Pass	0	0	0	211
M_TCP_Data	m_AR0013	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0013Hardwaraem_AR0013.exe</a>	2.3	2010/02/23 16:28:29	2.3	Up-to-date	Baseline 17.1	None	09/20/2010 03:45:33	10326	TELM-06	1	Pass	0	0	0	15
M_TCP_Data	m_AR0014	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0014Hardwaraem_AR0014.exe</a>	2.4	2010/04/08 11:08:56	2.4	Up-to-date	Baseline 17.1	None	09/20/2010 03:44:03	8193	TELM-06	1	Pass	0	0	0	10
M_TCP_Data	m_AR0015	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0015Hardwaraem_AR0015.exe</a>	2.6	2010/06/08 15:25:41	2.6	Up-to-date	Baseline 17.1	None	09/20/2010 03:42:42	12798	TELM-06	1	Pass	0	0	0	3
M_TCP_Data	m_AR0016	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0016Hardwaraem_AR0016.exe</a>	2.3	2009/11/19 20:22:28	2.3	Up-to-date	Baseline 17.1	None	09/20/2010 03:38:23	9242	TELM-06	1	Pass	0	0	0	10
M_TCP_Data	m_AR0017	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0017Hardwaraem_AR0017.exe</a>	2.2	2009/09/30 15:01:03	2.2	Up-to-date	Baseline 17.1	None	09/20/2010 03:34:30	6613	TELM-06	1	Pass	0	0	0	66
M_TCP_Data	m_AR0018	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0018Hardwaraem_AR0018.exe</a>	2.7	2010/06/24 12:34:26	2.7	Up-to-date	Baseline 17.1	None	09/20/2010 03:32:44	10827	TELM-06	1	Pass	0	0	0	992
M_TCP_Data	m_AR0019	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0019Hardwaraem_AR0019.exe</a>	2.4	2010/06/08 16:07:58	2.4	Up-to-date	Baseline 17.1	None	09/20/2010 03:30:12	9988	TELM-06	1	Pass	0	0	0	132
M_TCP_Data	m_AR0020	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0020Hardwaraem_AR0020.exe</a>	2.2	2009/11/18 15:23:22	2.2	Up-to-date	Baseline 17.1	None	09/20/2010 03:27:47	7497	TELM-06	1	Pass	0	0	0	8
M_TCP_Data	m_AR0021	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0021Hardwaraem_AR0021.exe</a>	2.2	2009/11/18 18:43:52	2.2	Up-to-date	Baseline 17.1	None	09/20/2010 03:25:52	7482	TELM-06	1	Pass	0	0	0	6
M_TCP_Data	m_AR0022	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0022Hardwaraem_AR0022.exe</a>	2.3	2010/02/23 16:30:46	2.3	Up-to-date	Baseline 17.1	None	09/20/2010 03:24:44	8428	TELM-06	1	Pass	0	0	0	137
M_TCP_Data	m_AR0023	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0023Hardwaraem_AR0023.exe</a>	2.1	2010/01/20 19:12:36	2.1	Up-to-date	Baseline 17.1	None	09/20/2010 03:19:51	9749	TELM-06	1	Pass	0	0	0	63
M_TCP_Data	m_AR0024	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0024Hardwaraem_AR0024.exe</a>	2.3	2010/02/08 18:44:31	2.3	Up-to-date	Baseline 17.1	None	09/20/2010 03:17:18	9806	TELM-06	1	Pass	0	0	0	6
M_TCP_Data	m_AR0025	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0025Hardwaraem_AR0025.exe</a>	2.1	2009/09/25 14:20:39	2.1	Up-to-date	Baseline 17.1	None	09/20/2010 03:14:14	8816	TELM-06	1	Pass	0	0	0	6
M_TCP_Data	m_AR0026	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0026Hardwaraem_AR0026.exe</a>	2.1	2009/09/25 14:21:05	2.1	Up-to-date	Baseline 17.1	None	09/20/2010 03:11:50	8978	TELM-06	1	Pass	0	0	0	4
M_TCP_Data	m_AR0027	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0027Hardwaraem_AR0027.exe</a>	2.1	2009/09/25 14:21:27	2.1	Up-to-date	Baseline 17.1	None	09/20/2010 03:09:34	9032	TELM-06	1	Pass	0	0	0	4
M_TCP_Data	m_AR0028	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0028Hardwaraem_AR0028.exe</a>	2.4	2010/04/18 14:56:24	2.4	Up-to-date	Baseline 17.1	None	09/20/2010 03:00:37	18578	TELM-06	1	Pass	0	0	0	23
M_TCP_Data	m_AR0029	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR0029Hardwaraem_AR0029.exe</a>	2.1	2010/03/08 19:53:24	2.1	Up-to-date	Baseline 17.1	None	09/20/2010 02:56:06	29576	TELM-06	1	Pass	0	0	0	555
M_TCP_Data	m_AR003	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_AR003Hardwaraem_AR003.exe</a>	2.2	2010/06/08 15:05:48	2.2	Up-to-date	Baseline 17.1	None	09/20/2010 02:53:43	9165	TELM-06	1	Pass	0	0	0	485
M_TCP_Data	m_Data02	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_Data02Hardwaraem_Data02.exe</a>	2.4	2009/11/20 14:18:10	2.4	Up-to-date	Baseline 17.1	None	09/21/2010 05:45:42	42888	TELM-06	1	Pass	0	0	0	1
M_TCP_Data	m_Data03	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_Data03Hardwaraem_Data03.exe</a>	2.3	2010/02/23 15:41:24	2.3	Up-to-date	Baseline 17.1	None	09/20/2010 05:20:29	10287	TELM-06	1	Pass	0	0	0	35
M_TCP_Data	m_Data04	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_Data04Hardwaraem_Data04.exe</a>	2.3	2010/05/12 19:37:35	2.3	Up-to-date	Baseline 17.1	None	09/20/2010 02:45:24	92220	TELM-06	1	Pass	0	0	0	36
M_TCP_Data	m_Data05	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_Data05Hardwaraem_Data05.exe</a>	2.2	2010/02/23 16:58:48	2.2	Up-to-date	Baseline 17.1	None	09/20/2010 02:43:03	8793	TELM-06	1	Pass	0	0	0	26
M_TCP_Data	m_Data06	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_Data06Hardwaraem_Data06.exe</a>	2.2	2010/02/24 20:56:20	2.2	Up-to-date	Baseline 17.1	None	09/20/2010 02:38:17	90034	TELM-06	1	Pass	0	0	0	26
M_TCP_Data	m_Data07	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_Data07Hardwaraem_Data07.exe</a>	2.2	2010/02/24 22:21:41	2.2	Up-to-date	Baseline 17.1	None	09/20/2010 02:36:01	67644	TELM-06	1	Pass	0	0	0	30
M_TCP_Data	m_MemoryRead001	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_MemoryRead001Hardwaraem_MemoryRead001.exe</a>	2.2	2010/02/21 17:26:47	2.2	Up-to-date	Baseline 17.1	None	09/20/2010 02:34:48	11770	TELM-06	1	Pass	0	0	0	439
M_TCP_Data	m_MemoryRead002	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_MemoryRead002Hardwaraem_MemoryRead002.exe</a>	2.3	2009/11/05 15:03:23	2.3	Up-to-date	Baseline 17.1	None	09/20/2010 02:29:30	18654	TELM-06	1	Pass	0	0	0	31
M_TCP_Data	m_MemoryRead003	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_MemoryRead003Hardwaraem_MemoryRead003.exe</a>	2.3	2009/11/23 13:08:32	2.3	Up-to-date	Baseline 17.1	None	09/20/2010 02:26:42	20356	TELM-06	1	Pass	0	0	0	280
M_TCP_Data	m_MemoryRead004	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_MemoryRead004Hardwaraem_MemoryRead004.exe</a>	2.3	2010/03/19 18:10:23	2.3	Up-to-date	Baseline 17.1	None	09/20/2010 02:22:04	8382	TELM-06	1	Pass	0	0	0	1
M_TCP_Data	m_MemoryRead005	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_MemoryRead005Hardwaraem_MemoryRead005.exe</a>	2.3	2009/12/07 19:50:33	2.3	Up-to-date	Baseline 17.1	None	09/20/2010 02:19:30	48511	TELM-06	1	Pass	0	0	0	11
M_TCP_Data	m_MemoryRead006	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_MemoryRead006Hardwaraem_MemoryRead006.exe</a>	2.6	2009/10/29 21:05:35	2.6	Up-to-date	Baseline 17.1	None	09/20/2010 02:17:11	12123	TELM-06	1	Pass	0	0	0	37
M_TCP_Data	m_MemoryRead007	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_MemoryRead007Hardwaraem_MemoryRead007.exe</a>	2.1	2009/11/03 12:42:15	2.1	Up-to-date	Baseline 17.1	None	09/20/2010 02:15:29	10764	TELM-06	1	Pass	0	0	0	16
M_TCP_Data	m_MemoryRead008	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_MemoryRead008Hardwaraem_MemoryRead008.exe</a>	2.1	2009/09/30 18:09:14	2.1	Up-to-date	Baseline 17.1	None	09/20/2010 02:13:27	7579	TELM-06	1	Pass	0	0	0	4
M_TCP_Data	m_MemoryRead009	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_MemoryRead009Hardwaraem_MemoryRead009.exe</a>	2.1	2009/12/07 19:51:11	2.1	Up-to-date	Baseline 17.1	None	09/20/2010 02:10:16	11057	TELM-06	1	Pass	0	0	0	39
M_TCP_Data	m_MemoryRead010	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_MemoryRead010Hardwaraem_MemoryRead010.exe</a>	2.2	2009/09/30 17:33:37	2.2	Up-to-date	Baseline 17.1	None	09/20/2010 02:07:28	7406	TELM-06	1	Pass	0	0	0	23
M_TCP_Data	m_MemoryRead011	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_MemoryRead011Hardwaraem_MemoryRead011.exe</a>	2.2	2009/09/30 17:33:37	2.2	Up-to-date	Baseline 17.1	None	09/20/2010 02:05:08	7457	TELM-06	1	Pass	0	0	0	23
M_TCP_Data	m_MemoryRead012	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_MemoryRead012Hardwaraem_MemoryRead012.exe</a>	2.2	2009/09/30 17:32:03	2.2	Up-to-date	Baseline 17.1	None	09/20/2010 01:59:28	7454	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_MemoryRead013	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_MemoryRead013Hardwaraem_MemoryRead013.exe</a>	2.3	2009/09/30 17:33:37	2.3	Up-to-date	Baseline 17.1	None	09/20/2010 01:58:17	7638	TELM-06	1	Pass	0	0	0	57
M_TCP_Data	m_MemoryRead014	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_MemoryRead014Hardwaraem_MemoryRead014.exe</a>	2.2	2009/09/30 17:31:51	2.2	Up-to-date	Baseline 17.1	None	09/20/2010 01:54:28	7472	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_MemoryRead015	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_MemoryRead015Hardwaraem_MemoryRead015.exe</a>	2.2	2009/09/30 17:34:12	2.2	Up-to-date	Baseline 17.1	None	09/20/2010 01:49:37	7475	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_MemoryRead016	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_MemoryRead016Hardwaraem_MemoryRead016.exe</a>	2.1	2009/11/08 18:24:00	2.1	Up-to-date	Baseline 17.1	None	09/20/2010 01:48:01	7723	TELM-06	1	Pass	0	0	0	57
M_TCP_Data	m_MemoryRead017	<a href="#">VdtaipacefwlmzoarFWTestFWWT.FORMALTestMod4Testisam_nvfmnozarurium.TCP_Dataem_MemoryRead017Hardwaraem_MemoryRead017.exe</a>	2.1	2009/11/09 15:52:29	2.1	Up-to-date	Baseline 17.1	None	09/20/2010 01:45:16	7619	TELM-06	1	Pass	0	0	0	57
M_TCP																	



M_TCP_Emergency	m_Emergency018	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Emergency_Emergency018HardwareIn_Emergency018.exe</a>	2.3	20100629 153240	2.3	Up-to-date	Baseline 17. 1	None	09/09/2010 21:2543	7883	TELM-06	1	Pass	0	0	0	22
M_TCP_Emergency	m_Emergency019	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Emergency_Emergency019HardwareIn_Emergency019.exe</a>	2.2	20100701 192637	2.2	Up-to-date	Baseline 17. 1	None	09/09/2010 21:2222	18003	TELM-06	1	Pass	0	0	0	17
M_TCP_Emergency	m_Emergency020	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Emergency_Emergency020HardwareIn_Emergency020.exe</a>	2.6	20100316 174732	2.6	Up-to-date	Baseline 17. 1	None	09/05/2010 21:1935	10810	TELM-06	1	Pass	0	0	0	19
M_TCP_Emergency	m_Emergency021	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Emergency_Emergency021HardwareIn_Emergency021.exe</a>	2.3	20091221 192703	2.3	Up-to-date	Baseline 17. 1	None	09/09/2010 21:1621	10057	TELM-06	1	Pass	0	0	0	83
M_TCP_Emergency	m_Emergency022	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Emergency_Emergency022HardwareIn_Emergency022.exe</a>	2.2	20100701 185443	2.2	Up-to-date	Baseline 17. 1	None	09/09/2010 21:0955	10375	TELM-06	1	Pass	0	0	0	82
M_TCP_Emergency	m_Emergency023	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Emergency_Emergency023HardwareIn_Emergency023.exe</a>	2.2	20100629 194329	2.2	Up-to-date	Baseline 17. 1	None	09/09/2010 21:0828	10799	TELM-06	1	Pass	0	0	0	14
M_TCP_Emergency	m_Emergency029	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Emergency_Emergency029HardwareIn_Emergency029.exe</a>	2.2	20100320 175134	2.2	Up-to-date	Baseline 17. 1	None	09/09/2010 21:0307	15296	TELM-06	1	Pass	0	0	0	2
M_TCP_Emergency	m_Emergency030	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Emergency_Emergency030HardwareIn_Emergency030.exe</a>	2.0	20090929 145327	2.0	Up-to-date	Baseline 17. 1	None	09/09/2010 21:0101	14005	TELM-06	1	Pass	0	0	0	7
M_TCP_Emergency	m_Emergency041	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Emergency_Emergency041HardwareIn_Emergency041.exe</a>	2.2	20090929 145327	2.2	Up-to-date	Baseline 17. 1	None	09/09/2010 21:0101	14005	TELM-06	1	Pass	0	0	0	14
M_TCP_Emergency	m_Emergency042	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Emergency_Emergency042HardwareIn_Emergency042.exe</a>	2.0	20090929 145452	2.0	Up-to-date	Baseline 17. 1	None	09/09/2010 20:5602	4927	TELM-06	1	Pass	0	0	0	3
M_TCP_Emergency	m_Emergency043	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Emergency_Emergency043HardwareIn_Emergency043.exe</a>	2.4	20100421 171130	2.4	Up-to-date	Baseline 17. 1	None	09/09/2010 20:5116	10328	TELM-06	1	Pass	0	0	0	9
M_TCP_Emergency	m_Emergency044	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Emergency_Emergency044HardwareIn_Emergency044.exe</a>	2.5	20091110 141943	2.5	Up-to-date	Baseline 17. 1	None	09/11/2010 00:3258	42816	TELM-06	1	Pass	0	0	0	18
M_TCP_Emergency	m_Emergency045	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Emergency_Emergency045HardwareIn_Emergency045.exe</a>	2.2	20100511 121838	2.2	Up-to-date	Baseline 17. 1	None	09/09/2010 00:3434	19807	TELM-06	1	Pass	0	0	0	16
M_TCP_General	m_General003	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_General_Genera003HardwareIn_Genera003.exe</a>	2.2	20090113 145043	2.2	Up-to-date	Baseline 17. 1	None	09/09/2010 20:4522	67655	TELM-06	1	Pass	0	0	0	44744
M_TCP_General	m_General005	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_General_Genera005HardwareIn_Genera005.exe</a>	2.4	20090121 190220	2.4	Up-to-date	Baseline 17. 1	None	09/09/2010 20:4103	68285	TELM-06	1	Pass	0	0	0	19027
M_TCP_General	m_General015	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_General_Genera015HardwareIn_Genera015.exe</a>	2.3	20090119 192569	2.3	Up-to-date	Baseline 17. 1	None	09/09/2010 20:3733	37323	TELM-06	1	Pass	0	0	0	205990
M_TCP_General	m_General016	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_General_Genera016HardwareIn_Genera016.exe</a>	2.4	20100329 104322	2.4	Up-to-date	Baseline 17. 1	None	09/09/2010 20:3513	8566	TELM-06	1	Pass	0	0	0	2
M_TCP_General	m_General017	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_General_Genera017HardwareIn_Genera017.exe</a>	2.3	20090120 190328	2.3	Up-to-date	Baseline 17. 1	None	09/09/2010 20:3309	16507	TELM-06	1	Pass	0	0	0	10
M_TCP_General	m_General018	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_General_Genera018HardwareIn_Genera018.exe</a>	2.2	20100203 180727	2.2	Up-to-date	Baseline 17. 1	None	09/09/2010 20:2745	29733	TELM-06	1	Pass	0	0	0	9
M_TCP_General	m_General027	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_General_Genera027HardwareIn_Genera027.exe</a>	2.7	20100607 113947	2.7	Up-to-date	Baseline 17. 1	None	09/10/2010 16:3800	802172	TELM-06	1	Pass	0	0	0	21
M_TCP_General	m_General028	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_General_Genera028HardwareIn_Genera028.exe</a>	2.5	20100608 114852	2.5	Up-to-date	Baseline 17. 1	None	09/11/2010 00:2016	63763	TELM-06	1	Pass	0	0	0	9
M_TCP_General	m_General029	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_General_Genera029HardwareIn_Genera029.exe</a>	2.3	20100607 122726	2.3	Up-to-date	Baseline 17. 1	None	09/11/2010 00:2574	274293	TELM-06	1	Pass	0	0	0	12
M_TCP_General	m_General030	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_General_Genera030HardwareIn_Genera030.exe</a>	2.1	20100607 123050	2.1	Up-to-date	Baseline 17. 1	None	09/09/2010 20:2554	17223	TELM-06	1	Pass	0	0	0	12
M_TCP_General	m_General031	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_General_Genera031HardwareIn_Genera031.exe</a>	2.5	20100511 123353	2.5	Up-to-date	Baseline 17. 1	None	09/09/2010 20:2227	57884	TELM-06	1	Pass	0	0	0	12
M_TCP_General	m_General032	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_General_Genera032HardwareIn_Genera032.exe</a>	2.2	20100206 185606	2.2	Up-to-date	Baseline 17. 1	None	09/09/2010 20:2046	29743	TELM-06	1	Pass	0	0	0	11
M_TCP_General	m_General033	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_General_Genera033HardwareIn_Genera033.exe</a>	2.0	20100204 171262	2.0	Up-to-date	Baseline 17. 1	None	09/09/2010 20:1834	20936	TELM-06	1	Pass	0	0	0	4
M_TCP_General	m_General034	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_General_Genera034HardwareIn_Genera034.exe</a>	2.0	20100122 24534	2.0	Up-to-date	Baseline 17. 1	None	09/09/2010 20:1526	30285	TELM-06	1	Pass	0	0	0	2
M_TCP_Initalze	m_Initalze001	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Initalze_Initalze001HardwareIn_Initalze001.exe</a>	2.8	20100912 123438	2.8	Up-to-date	Baseline 17. 1	None	09/09/2010 17:3347	10625	TELM-06	1	Pass	0	0	0	9
M_TCP_Initalze	m_Initalze002	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Initalze_Initalze002HardwareIn_Initalze002.exe</a>	2.8	20090109 161237	2.8	Up-to-date	Baseline 17. 1	None	09/09/2010 17:3142	4266	TELM-06	1	Pass	0	0	0	11
M_TCP_Initalze	m_Initalze003	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Initalze_Initalze003HardwareIn_Initalze003.exe</a>	2.4	20100608 155716	2.4	Up-to-date	Baseline 17. 1	None	09/09/2010 17:2952	23996	TELM-06	1	Pass	0	0	0	6
M_TCP_Initalze	m_Initalze004	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Initalze_Initalze004HardwareIn_Initalze004.exe</a>	2.4	20100608 155744	2.4	Up-to-date	Baseline 17. 1	None	09/09/2010 17:2809	40022	TELM-06	1	Pass	0	0	0	30
M_TCP_MedicalEvent	m_MedicalEvent001	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MedicalEvent_MedicalEvent001HardwareIn_MedicalEvent001.exe</a>	2.4	20100116 124933	2.4	Up-to-date	Baseline 17. 1	None	09/10/2010 08:0254	12586	TELM-06	1	Pass	0	0	0	26
M_TCP_MedicalEvent	m_MedicalEvent002	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MedicalEvent_MedicalEvent002HardwareIn_MedicalEvent002.exe</a>	2.6	20100520 190338	2.6	Up-to-date	Baseline 17. 1	None	09/10/2010 08:0031	72357	TELM-06	1	Pass	0	0	0	23
M_TCP_MedicalEvent	m_MedicalEvent003	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MedicalEvent_MedicalEvent003HardwareIn_MedicalEvent003.exe</a>	2.4	20100311 211602	2.4	Up-to-date	Baseline 17. 1	None	09/10/2010 05:5823	18708	TELM-06	1	Pass	0	0	0	24
M_TCP_MedicalEvent	m_MedicalEvent004	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MedicalEvent_MedicalEvent004HardwareIn_MedicalEvent004.exe</a>	2.4	20100118 154434	2.4	Up-to-date	Baseline 17. 1	None	09/10/2010 05:5501	12043	TELM-06	1	Pass	0	0	0	12
M_TCP_MedicalEvent	m_MedicalEvent005	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MedicalEvent_MedicalEvent005HardwareIn_MedicalEvent005.exe</a>	2.2	20100118 154620	2.2	Up-to-date	Baseline 17. 1	None	09/10/2010 05:5046	8136	TELM-06	1	Pass	0	0	0	4
M_TCP_MedicalEvent	m_MedicalEvent010	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MedicalEvent_MedicalEvent010HardwareIn_MedicalEvent010.exe</a>	2.5	20100127 143044	2.5	Up-to-date	Baseline 17. 1	None	09/10/2010 05:4718	16638	TELM-06	1	Pass	0	0	0	5
M_TCP_MedicalEvent	m_MedicalEvent011	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MedicalEvent_MedicalEvent011HardwareIn_MedicalEvent011.exe</a>	2.5	20100127 143053	2.5	Up-to-date	Baseline 17. 1	None	09/10/2010 05:4618	16638	TELM-06	1	Pass	0	0	0	5
M_TCP_MedicalEvent	m_MedicalEvent012	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MedicalEvent_MedicalEvent012HardwareIn_MedicalEvent012.exe</a>	2.3	20100118 154755	2.3	Up-to-date	Baseline 17. 1	None	09/10/2010 05:4225	6095	TELM-06	1	Pass	0	0	0	3
M_TCP_MedicalEvent	m_MedicalEvent014	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MedicalEvent_MedicalEvent014HardwareIn_MedicalEvent014.exe</a>	2.5	20100908 132031	2.5	Up-to-date	Baseline 17. 1	None	09/10/2010 05:3746	15209	TELM-06	1	Pass	0	0	0	18
M_TCP_MedicalEvent	m_MedicalEvent015	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MedicalEvent_MedicalEvent015HardwareIn_MedicalEvent015.exe</a>	2.3	20100908 132041	2.3	Up-to-date	Baseline 17. 1	None	09/09/2010 05:3524	15206	TELM-06	1	Pass	0	0	0	18
M_TCP_MedicalEvent	m_MedicalEvent016	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MedicalEvent_MedicalEvent016HardwareIn_MedicalEvent016.exe</a>	2.9	20100512 143407	2.9	Up-to-date	Baseline 17. 1	None	09/10/2010 05:3023	28289	TELM-06	1	Pass	0	0	0	375
M_TCP_MedicalEvent	m_MedicalEvent017	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MedicalEvent_MedicalEvent017HardwareIn_MedicalEvent017.exe</a>	2.8	20100907 201730	2.8	Up-to-date	Baseline 17. 1	None	09/10/2010 05:2836	612345	TELM-06	1	Pass	0	0	0	13
M_TCP_MedicalEvent	m_MedicalEvent018	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MedicalEvent_MedicalEvent018HardwareIn_MedicalEvent018.exe</a>	2.5	20100118 155021	2.5	Up-to-date	Baseline 17. 1	None	09/10/2010 05:2750	272170	TELM-06	1	Pass	0	0	0	4627
M_TCP_MedicalEvent	m_MedicalEvent019	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MedicalEvent_MedicalEvent019HardwareIn_MedicalEvent019.exe</a>	2.5	20100118 155019	2.5	Up-to-date	Baseline 17. 1	None	09/10/2010 05:2650	7209	TELM-06	1	Pass	0	0	0	13
M_TCP_MedicalEvent	m_MedicalEvent020	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MedicalEvent_MedicalEvent020HardwareIn_MedicalEvent020.exe</a>	2.3	20100118 155130	2.3	Up-to-date	Baseline 17. 1	None	09/10/2010 05:2320	40559	TELM-06	1	Pass	0	0	0	9
M_TCP_MemoryTest	m_MemoryTest001	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MemoryTest_MemoryTest001HardwareIn_MemoryTest001.exe</a>	2.7	20100618 128283	2.7	Up-to-date	Baseline 17. 1	None	09/10/2010 05:1713	32905	TELM-06	1	Pass	0	0	0	33
M_TCP_MemoryTest	m_MemoryTest002	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MemoryTest_MemoryTest002HardwareIn_MemoryTest002.exe</a>	2.3	20100505 200849	2.3	Up-to-date	Baseline 17. 1	None	09/10/2010 05:1653	240603	TELM-06	1	Pass	0	0	0	75
M_TCP_MemoryTest	m_MemoryTest003	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MemoryTest_MemoryTest003HardwareIn_MemoryTest003.exe</a>	2.3	20100505 200858	2.3	Up-to-date	Baseline 17. 1	None	09/10/2010 04:2936	48014	TELM-06	1	Pass	0	0	0	75
M_TCP_MemoryTest	m_MemoryTest004	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MemoryTest_MemoryTest004HardwareIn_MemoryTest004.exe</a>	2.3	20100505 200949	2.3	Up-to-date	Baseline 17. 1	None	09/10/2010 04:2847	240203	TELM-06	1	Pass	0	0	0	75
M_TCP_MemoryTest	m_MemoryTest005	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_MemoryTest_MemoryTest005HardwareIn_MemoryTest005.exe</a>	2.3	20100505 200949	2.3	Up-to-date	Baseline 17. 1	None	09/10/2010 04:2837	47866	TELM-06	1	Pass	0	0	0	75
M_TCP_Network	m_Network001	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Network_Network001HardwareIn_Network001.exe</a>	2.6	20100521 154543	2.6	Up-to-date	Baseline 17. 1	None	09/09/2010 10:5254	24819	TELM-06	1	Pass	0	0	0	1461
M_TCP_Network	m_Network002	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Network_Network002HardwareIn_Network002.exe</a>	2.6	20100512 120117	2.6	Up-to-date	Baseline 17. 1	None	09/10/2010 10:5438	34731	TELM-06	1	Pass	0	0	0	82
M_TCP_Network	m_Network003	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Network_Network003HardwareIn_Network003.exe</a>	2.1	20090126 220728	2.1	Up-to-date	Baseline 17. 1	None	09/09/2010 10:4940	64697	TELM-06	1	Pass	0	0	0	86
M_TCP_Network	m_Network004	<a href="#">VdtspasefwwmzazfWTestFWWT.FORMALTestMode4TestSim_nvfmzozarvsm.TCP_Network_Network004HardwareIn_Network004.exe</a>	2.1	20090421 171424	2.1	Up-to-date	Baseline 17										



M_TCP_Polling	m_Polling024	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling024Hardware_Polling024.exe</a>	2.5	2009/12/01/26/205405	2.5	Up-to-date	Baseline 17.1	None	09/10/2010/08.0423	7837	TELM-06	1	Pass	0	0	0	10
M_TCP_Polling	m_Polling025	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling025Hardware_Polling025.exe</a>	2.1	2009/11/24/1825139	2.1	Up-to-date	Baseline 17.1	None	09/10/2010/08.0215	20592	TELM-06	1	Pass	0	0	0	2
M_TCP_Polling	m_Polling026	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling026Hardware_Polling026.exe</a>	2.2	2009/12/03/1455918	2.2	Up-to-date	Baseline 17.1	None	09/10/2010/08.0005	19476	TELM-06	1	Pass	0	0	0	4
M_TCP_Polling	m_Polling040	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling040Hardware_Polling040.exe</a>	2.1	2010/01/26/200614	2.1	Up-to-date	Baseline 17.1	None	09/10/2010/07.5550	6109	TELM-06	1	Pass	0	0	0	4
M_TCP_Polling	m_Polling045	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling045Hardware_Polling045.exe</a>	2.1	2010/01/26/200642	2.1	Up-to-date	Baseline 17.1	None	09/10/2010/07.4744	35156	TELM-06	1	Pass	0	0	0	2
M_TCP_Polling	m_Polling046	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling046Hardware_Polling046.exe</a>	2.1	2010/01/26/200645	2.1	Up-to-date	Baseline 17.1	None	09/10/2010/07.3614	47298	TELM-06	1	Pass	0	0	0	2
M_TCP_Polling	m_Polling047	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling047Hardware_Polling047.exe</a>	2.1	2010/01/26/200728	2.1	Up-to-date	Baseline 17.1	None	09/10/2010/07.2825	34998	TELM-06	1	Pass	0	0	0	2
M_TCP_Polling	m_Polling048	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling048Hardware_Polling048.exe</a>	2.3	2009/11/24/205300	2.3	Up-to-date	Baseline 17.1	None	09/10/2010/07.2256	10156	TELM-06	1	Pass	0	0	0	3
M_TCP_Polling	m_Polling050	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling050Hardware_Polling050.exe</a>	2.6	2010/03/18/134943	2.6	Up-to-date	Baseline 17.1	None	09/10/2010/07.1523	46124	TELM-06	1	Pass	0	0	0	2
M_TCP_Polling	m_Polling050	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling050Hardware_Polling050.exe</a>	2.6	2010/02/28/174457	2.6	Up-to-date	Baseline 17.1	None	09/10/2010/07.0852	22836	TELM-06	1	Pass	0	0	0	5
M_TCP_Polling	m_Polling065	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling065Hardware_Polling065.exe</a>	2.6	2010/06/09/185238	2.6	Up-to-date	Baseline 17.1	None	09/10/2010/07.0156	42326	TELM-06	1	Pass	0	0	0	4
M_TCP_Polling	m_Polling066	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling066Hardware_Polling066.exe</a>	2.3	2009/11/24/205300	2.3	Up-to-date	Baseline 17.1	None	09/10/2010/06.5420	52721	TELM-06	1	Pass	0	0	0	4
M_TCP_Polling	m_Polling067	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling067Hardware_Polling067.exe</a>	2.3	2009/10/22/142802	2.3	Up-to-date	Baseline 17.1	None	09/10/2010/06.4704	85015	TELM-06	1	Pass	0	0	0	11
M_TCP_Polling	m_Polling068	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling068Hardware_Polling068.exe</a>	2.3	2009/11/05/182327	2.3	Up-to-date	Baseline 17.1	None	09/10/2010/06.4530	6847	TELM-06	1	Pass	0	0	0	8
M_TCP_Polling	m_Polling076	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling076Hardware_Polling076.exe</a>	2.1	2009/11/03/155529	2.1	Up-to-date	Baseline 17.1	None	09/10/2010/06.4051	10147	TELM-06	1	Pass	0	0	0	1
M_TCP_Polling	m_Polling077	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling077Hardware_Polling077.exe</a>	2.1	2009/11/05/183438	2.1	Up-to-date	Baseline 17.1	None	09/10/2010/06.3729	52742	TELM-06	1	Pass	0	0	0	2
M_TCP_Polling	m_Polling080	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling080Hardware_Polling080.exe</a>	2.2	2009/11/05/182404	2.2	Up-to-date	Baseline 17.1	None	09/10/2010/06.3217	27478	TELM-06	1	Pass	0	0	0	2
M_TCP_Polling	m_Polling081	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling081Hardware_Polling081.exe</a>	2.3	2010/09/27/141911	2.3	Up-to-date	Baseline 17.1	None	09/10/2010/06.3030	24078	TELM-06	1	Pass	0	0	0	4
M_TCP_Polling	m_Polling082	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling082Hardware_Polling082.exe</a>	2.2	2009/11/02/182615	2.2	Up-to-date	Baseline 17.1	None	09/10/2010/06.3236	9473	TELM-06	1	Pass	0	0	0	1
M_TCP_Polling	m_Polling083	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling083Hardware_Polling083.exe</a>	2.3	2009/11/02/184507	2.3	Up-to-date	Baseline 17.1	None	09/10/2010/06.2917	19478	TELM-06	1	Pass	0	0	0	2
M_TCP_Polling	m_Polling085	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling085Hardware_Polling085.exe</a>	2.3	2010/09/22/135552	2.3	Up-to-date	Baseline 17.1	None	09/10/2010/06.2521	52951	TELM-06	1	Pass	0	0	0	2
M_TCP_Polling	m_Polling088	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling088Hardware_Polling088.exe</a>	2.5	2010/05/12/175919	2.5	Up-to-date	Baseline 17.1	None	09/10/2010/06.2610	23459	TELM-06	1	Pass	0	0	0	27
M_TCP_Polling	m_Polling089	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling089Hardware_Polling089.exe</a>	2.7	2010/09/11/192817	2.7	Up-to-date	Baseline 17.1	None	09/10/2010/06.1842	86524	TELM-06	1	Pass	0	0	0	26
M_TCP_Polling	m_Polling090	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling090Hardware_Polling090.exe</a>	2.6	2010/02/25/200242	2.6	Up-to-date	Baseline 17.1	None	09/10/2010/06.1510	77375	TELM-06	1	Pass	0	0	0	32
M_TCP_Polling	m_Polling091	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling091Hardware_Polling091.exe</a>	2.6	2010/02/25/200126	2.6	Up-to-date	Baseline 17.1	None	09/10/2010/06.1219	13091	TELM-06	1	Pass	0	0	0	13
M_TCP_Polling	m_Polling092	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling092Hardware_Polling092.exe</a>	2.1	2009/11/05/184135	2.1	Up-to-date	Baseline 17.1	None	09/10/2010/06.1129	27762	TELM-06	1	Pass	0	0	0	2
M_TCP_Polling	m_Polling093	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling093Hardware_Polling093.exe</a>	2.0	2009/11/09/181322	2.0	Up-to-date	Baseline 17.1	None	09/10/2010/06.0913	16759	TELM-06	1	Pass	0	0	0	1
M_TCP_Polling	m_Polling094	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Polling_Polling094Hardware_Polling094.exe</a>	2.0	2009/11/09/183040	2.0	Up-to-date	Baseline 17.1	None	09/10/2010/06.1328	30737	TELM-06	1	Pass	0	0	0	2
M_TCP_Powerhitbit	m_Power001	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Powerhitbit_Power001Hardware_Power001.exe</a>	2.2	2010/06/27/131006	2.2	Up-to-date	Baseline 17.1	None	09/10/2010/06.0800	69193	TELM-06	1	Pass	0	0	0	2
M_TCP_Powerhitbit	m_Power002	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Powerhitbit_Power002Hardware_Power002.exe</a>	2.2	2010/07/07/131006	2.2	Up-to-date	Baseline 17.1	None	09/10/2010/06.1652	58756	TELM-06	1	Pass	0	0	0	15
M_TCP_Powerhitbit	m_Power003	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Powerhitbit_Power003Hardware_Power003.exe</a>	2.2	2010/01/05/191526	2.2	Up-to-date	Baseline 17.1	None	09/10/2010/06.1524	10627	TELM-06	1	Pass	0	0	0	884
M_TCP_Powerhitbit	m_Power004	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Powerhitbit_Power004Hardware_Power004.exe</a>	2.3	2010/02/27/144438	2.3	Up-to-date	Baseline 17.1	None	09/10/2010/06.1242	54233	TELM-06	1	Pass	0	0	0	7
M_TCP_Powerhitbit	m_Power005	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Powerhitbit_Power005Hardware_Power005.exe</a>	2.3	2010/03/22/142621	2.3	Up-to-date	Baseline 17.1	None	09/10/2010/06.1119	17815	TELM-06	1	Pass	0	0	0	46
M_TCP_Powerhitbit	m_Power006	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Powerhitbit_Power006Hardware_Power006.exe</a>	2.6	2010/07/02/123405	2.6	Up-to-date	Baseline 17.1	None	09/10/2010/06.0852	109129	TELM-06	1	Pass	0	0	0	310
M_TCP_Powerhitbit	m_Power008	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Powerhitbit_Power008Hardware_Power008.exe</a>	2.6	2010/09/22/122746	2.6	Up-to-date	Baseline 17.1	None	09/10/2010/06.1012	19274	TELM-06	1	Pass	0	0	0	3124
M_TCP_Powerhitbit	m_Power009	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Powerhitbit_Power009Hardware_Power009.exe</a>	2.4	2009/12/14/164418	2.4	Up-to-date	Baseline 17.1	None	09/10/2010/06.0341	19162	TELM-06	1	Pass	0	0	0	3
M_TCP_Powerhitbit	m_Power010	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Powerhitbit_Power010Hardware_Power010.exe</a>	2.2	2009/12/14/164418	2.2	Up-to-date	Baseline 17.1	None	09/10/2010/06.0100	34705	TELM-06	1	Pass	0	0	0	15
M_TCP_Powerhitbit	m_Power011	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Powerhitbit_Power011Hardware_Power011.exe</a>	2.4	2010/07/01/150010	2.4	Up-to-date	Baseline 17.1	None	09/10/2010/06.0539	12179	TELM-06	1	Pass	0	0	0	9
M_TCP_Powerhitbit	m_Power012	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Powerhitbit_Power012Hardware_Power012.exe</a>	2.3	2010/03/22/144438	2.3	Up-to-date	Baseline 17.1	None	09/10/2010/06.0571	16766	TELM-06	1	Pass	0	0	0	109
M_TCP_Powerhitbit	m_Power011	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Powerhitbit_Power011Hardware_Power011.exe</a>	2.1	2010/03/11/190417	2.1	Up-to-date	Baseline 17.1	None	09/10/2010/06.0419	88835	TELM-06	1	Pass	0	0	0	116
M_TCP_RawMode01	m_RawMode001	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP RawMode_RawMode001Hardware_RawMode001.exe</a>	2.6	2010/01/26/200144	2.6	Up-to-date	Baseline 17.1	None	09/10/2010/06.2107	7483	TELM-06	1	Pass	0	0	0	7
M_TCP_RawMode02	m_RawMode002	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP RawMode_RawMode002Hardware_RawMode002.exe</a>	2.3	2010/02/27/130043	2.3	Up-to-date	Baseline 17.1	None	09/10/2010/06.2012	8542	TELM-06	1	Pass	0	0	0	87
M_TCP_RawMode03	m_RawMode003	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP RawMode_RawMode003Hardware_RawMode003.exe</a>	2.5	2010/01/27/130349	2.5	Up-to-date	Baseline 17.1	None	09/10/2010/06.2101	11293	TELM-06	1	Pass	0	0	0	11
M_TCP_RawMode04	m_RawMode004	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP RawMode_RawMode004Hardware_RawMode004.exe</a>	2.6	2010/01/27/130925	2.6	Up-to-date	Baseline 17.1	None	09/10/2010/06.2029	7143	TELM-06	1	Pass	0	0	0	2
M_TCP_RawMode05	m_RawMode005	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP RawMode_RawMode005Hardware_RawMode005.exe</a>	2.3	2010/01/26/201041	2.3	Up-to-date	Baseline 17.1	None	09/10/2010/06.2033	13334	TELM-06	1	Pass	0	0	0	9
M_TCP_RawMode06	m_RawMode006	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP RawMode_RawMode006Hardware_RawMode006.exe</a>	2.2	2010/01/26/201041	2.2	Up-to-date	Baseline 17.1	None	09/10/2010/06.1943	9135	TELM-06	1	Pass	0	0	0	9
M_TCP_RawMode07	m_RawMode007	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP RawMode_RawMode007Hardware_RawMode007.exe</a>	2.3	2010/06/09/210353	2.3	Up-to-date	Baseline 17.1	None	09/10/2010/06.2046	11179	TELM-06	1	Pass	0	0	0	11
M_TCP_RawMode08	m_RawMode008	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP RawMode_RawMode008Hardware_RawMode008.exe</a>	2.4	2010/01/27/131420	2.4	Up-to-date	Baseline 17.1	None	09/10/2010/06.2000	16167	TELM-06	1	Pass	0	0	0	4
M_TCP_RawMode09	m_RawMode009	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP RawMode_RawMode009Hardware_RawMode009.exe</a>	2.4	2009/12/14/164418	2.4	Up-to-date	Baseline 17.1	None	09/10/2010/06.2014	15774	TELM-06	1	Pass	0	0	0	7
M_TCP_RawMode10	m_RawMode010	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP RawMode_RawMode010Hardware_RawMode010.exe</a>	2.1	2010/09/27/173220	2.1	Up-to-date	Baseline 17.1	None	09/10/2010/06.1909	3241	TELM-06	1	Pass	0	0	0	3
M_TCP_RawMode11	m_RawMode011	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP RawMode_RawMode011Hardware_RawMode011.exe</a>	2.2	2010/02/01/161538	2.2	Up-to-date	Baseline 17.1	None	09/13/2010/06.0847	8878	TELM-06	1	Pass	0	0	0	3
M_TCP_RawMode12	m_RawMode012	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP RawMode_RawMode012Hardware_RawMode012.exe</a>	2.3	2010/02/28/131420	2.3	Up-to-date	Baseline 17.1	None	09/10/2010/06.1500	11598	TELM-06	1	Pass	0	0	0	3
M_TCP_Reset	m_Reset001	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Reset_Reset001Hardware_Reset001.exe</a>	2.3	2010/10/28/212612	2.3	Up-to-date	Baseline 17.1	None	09/10/2010/06.3046	8956	TELM-06	1	Pass	0	0	0	23
M_TCP_Reset	m_Reset002	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Reset_Reset002Hardware_Reset002.exe</a>	2.4	2010/10/28/212507	2.4	Up-to-date	Baseline 17.1	None	09/10/2010/06.2821	20387	TELM-06	1	Pass	0	0	0	39
M_TCP_Security	m_Security002	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Security_Security002Hardware_Security002.exe</a>	2.9	2010/06/03/161825	2.9	Up-to-date	Baseline 17.1	None	09/10/2010/06.1050	45758	TELM-06	1	Pass	0	0	0	154
M_TCP_Security	m_Security006	<a href="#">Vdtaipacelw/mzoanrf/WTestFW/T/FORMAL/TestMethod4/Testplan_nvm/mzoarvur/m TCP Security_Security006Hardware_Security006.exe</a>															



M_TCP_Data	m_ARO027	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_ARO027Hardwem_ARO027.exe</a>	2,1	2009/09/25 14:21:27	2,1	Up-to-date	Baseline 17, 1	None	09/30/2010 21:48:57	9201	TELM-06	1	Pass	0	0	6
M_TCP_Data	m_ARO028	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_ARO028Hardwem_ARO028.exe</a>	2,1	2009/10/16 13:55	2,4	Up-to-date	Baseline 17, 1	None	09/30/2010 21:42:47	18733	TELM-06	1	Pass	0	0	11
M_TCP_Data	m_ARO029	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_ARO029Hardwem_ARO029.exe</a>	2,1	2010/03/08 19:53:24	2,1	Up-to-date	Baseline 17, 1	None	09/30/2010 21:40:25	26548	TELM-06	1	Pass	0	0	555
M_TCP_Data	m_ARO030	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_ARO030Hardwem_ARO030.exe</a>	2,5	2010/06/03 18:57:25	2,5	Up-to-date	Baseline 17, 1	None	09/30/2010 09:59:56	17765	TELM-06	1	Pass	0	0	355
M_TCP_Data	m_ARO031	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_ARO031Hardwem_ARO031.exe</a>	2,3	2010/06/06 19:21:28	2,3	Up-to-date	Baseline 17, 1	None	09/30/2010 21:34:44	11816	TELM-06	1	Pass	0	0	560
M_TCP_Data	m_Data010	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_Data010Hardwem_Data010.exe</a>	2,3	2010/06/11 16:19:13	2,3	Up-to-date	Baseline 17, 1	None	09/31/2010 05:37:50	37796	TELM-06	1	Pass	0	0	19
M_TCP_Data	m_Data011	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_Data011Hardwem_Data011.exe</a>	2,3	2010/02/20 15:43:12	2,3	Up-to-date	Baseline 17, 1	None	09/30/2010 21:17:14	103980	TELM-06	1	Pass	0	0	335
M_TCP_Data	m_Data014	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_Data014Hardwem_Data014.exe</a>	2,3	2010/05/12 19:37:35	2,3	Up-to-date	Baseline 17, 1	None	09/30/2010 21:23:46	92624	TELM-06	1	Pass	0	0	36
M_TCP_Data	m_Data015	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_Data015Hardwem_Data015.exe</a>	2,3	2010/05/12 19:37:35	2,3	Up-to-date	Baseline 17, 1	None	09/30/2010 21:23:46	92624	TELM-06	1	Pass	0	0	14
M_TCP_Data	m_Data016	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_Data016Hardwem_Data016.exe</a>	2,2	2010/02/24 20:56:20	2,2	Up-to-date	Baseline 17, 1	None	09/30/2010 21:17:56	61767	TELM-06	1	Pass	0	0	26
M_TCP_Data	m_Data017	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_Data017Hardwem_Data017.exe</a>	2,2	2010/02/24 22:26:41	2,2	Up-to-date	Baseline 17, 1	None	09/30/2010 21:11:29	70700	TELM-06	1	Pass	0	0	30
M_TCP_Data	m_Data018	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_Data018Hardwem_Data018.exe</a>	2,2	2010/02/23 22:48:42	2,2	Up-to-date	Baseline 17, 1	None	09/30/2010 21:06:20	58966	TELM-06	1	Pass	0	0	19
M_TCP_Data	m_MemoryRead001	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead001Hardwem_MemoryRead001.exe</a>	2,2	2010/02/21 17:26:47	2,2	Up-to-date	Baseline 17, 1	None	09/30/2010 21:04:44	21388	TELM-06	1	Pass	0	0	439
M_TCP_Data	m_MemoryRead002	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead002Hardwem_MemoryRead002.exe</a>	2,3	2009/11/05 15:03:23	2,3	Up-to-date	Baseline 17, 1	None	09/30/2010 21:02:51	14018	TELM-06	1	Pass	0	0	36
M_TCP_Data	m_MemoryRead003	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead003Hardwem_MemoryRead003.exe</a>	2,4	2010/04/05 13:08:02	2,4	Up-to-date	Baseline 17, 1	None	09/30/2010 21:00:43	15514	TELM-06	1	Pass	0	0	320
M_TCP_Data	m_MemoryRead004	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead004Hardwem_MemoryRead004.exe</a>	2,1	2010/03/19 16:10:47	2,3	Up-to-date	Baseline 17, 1	None	09/30/2010 20:58:41	8430	TELM-06	1	Pass	0	0	1
M_TCP_Data	m_MemoryRead005	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead005Hardwem_MemoryRead005.exe</a>	2,3	2009/12/07 19:50:30	2,3	Up-to-date	Baseline 17, 1	None	09/30/2010 20:54:56	48639	TELM-06	1	Pass	0	0	11
M_TCP_Data	m_MemoryRead006	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead006Hardwem_MemoryRead006.exe</a>	2,6	2010/09/29 21:05:35	2,6	Up-to-date	Baseline 17, 1	None	09/30/2010 20:50:43	12380	TELM-06	1	Pass	0	0	37
M_TCP_Data	m_MemoryRead007	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead007Hardwem_MemoryRead007.exe</a>	2,1	2009/11/03 12:46:15	2,1	Up-to-date	Baseline 17, 1	None	09/30/2010 20:47:51	10807	TELM-06	1	Pass	0	0	16
M_TCP_Data	m_MemoryRead008	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead008Hardwem_MemoryRead008.exe</a>	2,1	2009/09/30 18:09:28	2,1	Up-to-date	Baseline 17, 1	None	09/30/2010 20:44:29	8012	TELM-06	1	Pass	0	0	4
M_TCP_Data	m_MemoryRead009	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead009Hardwem_MemoryRead009.exe</a>	2,1	2009/12/07 19:51:11	2,1	Up-to-date	Baseline 17, 1	None	09/30/2010 20:39:42	11809	TELM-06	1	Pass	0	0	39
M_TCP_Data	m_MemoryRead010	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead010Hardwem_MemoryRead010.exe</a>	2,2	2009/09/30 17:31:58	2,2	Up-to-date	Baseline 17, 1	None	09/30/2010 20:37:22	7643	TELM-06	1	Pass	0	0	23
M_TCP_Data	m_MemoryRead011	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead011Hardwem_MemoryRead011.exe</a>	2,2	2009/09/30 17:32:37	2,2	Up-to-date	Baseline 17, 1	None	09/30/2010 20:34:44	7568	TELM-06	1	Pass	0	0	23
M_TCP_Data	m_MemoryRead012	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead012Hardwem_MemoryRead012.exe</a>	2,2	2009/09/30 17:33:03	2,2	Up-to-date	Baseline 17, 1	None	09/30/2010 20:32:59	8158	TELM-06	1	Pass	0	0	40
M_TCP_Data	m_MemoryRead013	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead013Hardwem_MemoryRead013.exe</a>	2,2	2009/09/30 17:33:27	2,2	Up-to-date	Baseline 17, 1	None	09/30/2010 20:27:35	7788	TELM-06	1	Pass	0	0	57
M_TCP_Data	m_MemoryRead014	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead014Hardwem_MemoryRead014.exe</a>	2,2	2009/09/30 17:36:51	2,2	Up-to-date	Baseline 17, 1	None	09/30/2010 20:24:39	7756	TELM-06	1	Pass	0	0	40
M_TCP_Data	m_MemoryRead015	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead015Hardwem_MemoryRead015.exe</a>	2,2	2009/09/30 18:24:10	2,2	Up-to-date	Baseline 17, 1	None	09/30/2010 20:22:17	7750	TELM-06	1	Pass	0	0	40
M_TCP_Data	m_MemoryRead016	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead016Hardwem_MemoryRead016.exe</a>	2,1	2009/09/18 19:48:28	2,1	Up-to-date	Baseline 17, 1	None	09/30/2010 20:20:35	7783	TELM-06	1	Pass	0	0	57
M_TCP_Data	m_MemoryRead017	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead017Hardwem_MemoryRead017.exe</a>	2,1	2009/09/18 19:48:28	2,1	Up-to-date	Baseline 17, 1	None	09/30/2010 20:19:24	7805	TELM-06	1	Pass	0	0	22
M_TCP_Data	m_MemoryRead019	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead019Hardwem_MemoryRead019.exe</a>	2,3	2009/12/03 13:57:23	2,3	Up-to-date	Baseline 17, 1	None	09/30/2010 20:15:16	9427	TELM-06	1	Pass	0	0	8
M_TCP_Data	m_MemoryRead020	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead020Hardwem_MemoryRead020.exe</a>	2,4	2010/02/09 20:49:08	2,4	Up-to-date	Baseline 17, 1	None	09/30/2010 20:13:18	6887	TELM-06	1	Pass	0	0	2
M_TCP_Data	m_MemoryRead021	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead021Hardwem_MemoryRead021.exe</a>	2,2	2009/11/22 19:46:28	2,2	Up-to-date	Baseline 17, 1	None	09/30/2010 20:11:22	6265	TELM-06	1	Pass	0	0	6
M_TCP_Data	m_MemoryRead030	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead030Hardwem_MemoryRead030.exe</a>	2,3	2009/11/06 13:54:03	2,3	Up-to-date	Baseline 17, 1	None	09/30/2010 20:10:13	6837	TELM-06	1	Pass	0	0	2
M_TCP_Data	m_MemoryRead031	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead031Hardwem_MemoryRead031.exe</a>	2,3	2009/11/28 18:23:34	2,3	Up-to-date	Baseline 17, 1	None	09/30/2010 20:08:17	10053	TELM-06	1	Pass	0	0	43
M_TCP_Data	m_MemoryRead033	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead033Hardwem_MemoryRead033.exe</a>	2,3	2009/11/23 18:55:48	2,3	Up-to-date	Baseline 17, 1	None	09/30/2010 20:06:19	12079	TELM-06	1	Pass	0	0	39
M_TCP_Data	m_MemoryRead035	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead035Hardwem_MemoryRead035.exe</a>	2,4	2009/11/04 15:52:27	2,4	Up-to-date	Baseline 17, 1	None	09/30/2010 20:04:26	8114	TELM-06	1	Pass	0	0	10
M_TCP_Data	m_MemoryRead036	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead036Hardwem_MemoryRead036.exe</a>	2,4	2009/11/23 18:56:24	2,4	Up-to-date	Baseline 17, 1	None	09/30/2010 20:02:40	17346	TELM-06	1	Pass	0	0	22
M_TCP_Data	m_MemoryRead037	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead037Hardwem_MemoryRead037.exe</a>	2,2	2009/11/23 18:55:01	2,2	Up-to-date	Baseline 17, 1	None	09/30/2010 20:00:32	12206	TELM-06	1	Pass	0	0	12
M_TCP_Data	m_MemoryRead038	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead038Hardwem_MemoryRead038.exe</a>	2,1	2009/10/19 16:36:50	2,1	Up-to-date	Baseline 17, 1	None	09/30/2010 19:58:28	16153	TELM-06	1	Pass	0	0	30
M_TCP_Data	m_MemoryRead039	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead039Hardwem_MemoryRead039.exe</a>	2,1	2009/09/28 15:09:29	2,1	Up-to-date	Baseline 17, 1	None	09/30/2010 19:57:05	8528	TELM-06	1	Pass	0	0	2
M_TCP_Data	m_MemoryRead040	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead040Hardwem_MemoryRead040.exe</a>	2,6	2010/01/06 14:40:47	2,6	Up-to-date	Baseline 17, 1	None	09/30/2010 19:55:33	32488	TELM-06	1	Pass	0	0	10
M_TCP_Data	m_MemoryRead042	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead042Hardwem_MemoryRead042.exe</a>	2,2	2009/11/16 12:52:52	2,2	Up-to-date	Baseline 17, 1	None	09/30/2010 19:53:05	18317	TELM-06	1	Pass	0	0	22
M_TCP_Data	m_MemoryRead043	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead043Hardwem_MemoryRead043.exe</a>	2,3	2010/06/09 22:12:03	2,3	Up-to-date	Baseline 17, 1	None	09/30/2010 19:51:38	21715	TELM-06	1	Pass	0	0	41
M_TCP_Data	m_MemoryRead045	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead045Hardwem_MemoryRead045.exe</a>	2,2	2010/06 16:58:17	2,2	Up-to-date	Baseline 17, 1	None	09/30/2010 19:48:44	17346	TELM-06	1	Pass	0	0	4
M_TCP_Data	m_MemoryRead046	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead046Hardwem_MemoryRead046.exe</a>	2,0	2009/09/22 14:54:20	2,0	Up-to-date	Baseline 17, 1	None	09/30/2010 19:47:20	6784	TELM-06	1	Pass	0	0	2
M_TCP_Data	m_MemoryRead051	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead051Hardwem_MemoryRead051.exe</a>	2,0	2009/11/16 12:52:52	2,0	Up-to-date	Baseline 17, 1	None	09/30/2010 19:44:10	8883	TELM-06	1	Pass	0	0	2
M_TCP_Data	m_MemoryRead052	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead052Hardwem_MemoryRead052.exe</a>	2,1	2009/12/07 19:22:11	2,1	Up-to-date	Baseline 17, 1	None	09/30/2010 19:42:56	9759	TELM-06	1	Pass	0	0	7
M_TCP_Data	m_MemoryRead053	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead053Hardwem_MemoryRead053.exe</a>	2,3	2010/09/29 23:18:49	2,3	Up-to-date	Baseline 17, 1	None	09/30/2010 19:41:19	11118	TELM-06	1	Pass	0	0	4
M_TCP_Data	m_MemoryRead054	<a href="#">VldspacelwlinzarFWTestFWT.FORMALTestMod7-81</a>	<a href="#">Stetiam hvinnzarvmsm.TCP Dabim_MemoryRead054Hardwem_MemoryRead054.exe</a>	2,3	2009/12/07 19:22:11	2,3	Up-to-date	Baseline 17, 1	None	09/30/2010 19:39:28	9237	TELM-06	1	Pass	0	0	

M_TCP_Diagnostic	m_Diagnostic007	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic008/Hardware_Diagnostic006.exe	2.0	20090922 17:02:12	2.0	Up-to-date	Baseline 17_1	None	09/09/2010 15:52:52	14799	TELM-06	1	Pass	0	0	0	14
M_TCP_Diagnostic	m_Diagnostic008	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic009/Hardware_Diagnostic007.exe	2.1	20090922 17:03:20	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 16:48:31	15147	TELM-06	1	Pass	0	0	0	16
M_TCP_Diagnostic	m_Diagnostic009	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic010/Hardware_Diagnostic008.exe	2.0	20090922 17:03:20	2.0	Up-to-date	Baseline 17_1	None	09/09/2010 15:42:42	21381	TELM-06	1	Pass	0	0	0	17
M_TCP_Diagnostic	m_Diagnostic010	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic011/Hardware_Diagnostic009.exe	2.5	20100625 17:09:14	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 15:40:43	15765	TELM-06	1	Pass	0	0	0	23
M_TCP_Diagnostic	m_Diagnostic011	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic012/Hardware_Diagnostic010.exe	2.5	20100720 19:18:19	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 15:38:51	10610	TELM-06	1	Pass	0	0	0	10
M_TCP_Diagnostic	m_Diagnostic012	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic013/Hardware_Diagnostic011.exe	2.5	20091223 10:55:57	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 15:35:05	29539	TELM-06	1	Pass	0	0	0	19
M_TCP_Diagnostic	m_Diagnostic013	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic014/Hardware_Diagnostic012.exe	2.3	20100416 14:29:20	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 15:33:51	17260	TELM-06	1	Pass	0	0	0	14
M_TCP_Diagnostic	m_Diagnostic014	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic015/Hardware_Diagnostic013.exe	2.5	20100608 17:20:36	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 15:29:31	20640	TELM-06	1	Pass	0	0	0	15
M_TCP_Diagnostic	m_Diagnostic015	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic016/Hardware_Diagnostic014.exe	2.5	20091314 27:43:02	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 15:28:19	11365	TELM-06	1	Pass	0	0	0	18
M_TCP_Diagnostic	m_Diagnostic016	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic017/Hardware_Diagnostic015.exe	2.4	20100119 17:35:47	2.4	Up-to-date	Baseline 17_1	None	09/09/2010 15:27:31	25620	TELM-06	1	Pass	0	0	0	29
M_TCP_Diagnostic	m_Diagnostic017	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic018/Hardware_Diagnostic016.exe	2.0	20090922 17:09:46	2.0	Up-to-date	Baseline 17_1	None	09/09/2010 15:25:41	5825	TELM-06	1	Pass	0	0	0	1
M_TCP_Diagnostic	m_Diagnostic018	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic019/Hardware_Diagnostic017.exe	2.3	20091123 20:15:57	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 15:23:35	25074	TELM-06	1	Pass	0	0	0	32
M_TCP_Diagnostic	m_Diagnostic019	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic020/Hardware_Diagnostic018.exe	2.1	20091013 12:56:53	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 15:22:01	11920	TELM-06	1	Pass	0	0	0	9
M_TCP_Diagnostic	m_Diagnostic020	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic021/Hardware_Diagnostic019.exe	2.2	20091123 20:16:03	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 15:19:36	10291	TELM-06	1	Pass	0	0	0	3
M_TCP_Diagnostic	m_Diagnostic021	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic022/Hardware_Diagnostic020.exe	2.1	20100103 13:22:02	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 15:17:16	6223	TELM-06	1	Pass	0	0	0	2
M_TCP_Diagnostic	m_Diagnostic022	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic023/Hardware_Diagnostic021.exe	2.4	20100203 17:09:23	2.4	Up-to-date	Baseline 17_1	None	09/09/2010 15:15:29	12645	TELM-06	1	Pass	0	0	0	4
M_TCP_Diagnostic	m_Diagnostic023	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic024/Hardware_Diagnostic022.exe	2.2	20100203 14:24:24	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 15:13:35	39171	TELM-06	1	Pass	0	0	0	5
M_TCP_Diagnostic	m_Diagnostic024	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic025/Hardware_Diagnostic023.exe	2.5	20100203 14:04:47	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 15:08:46	15255	TELM-06	1	Pass	0	0	0	20
M_TCP_Diagnostic	m_Diagnostic025	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic026/Hardware_Diagnostic024.exe	2.1	20091015 19:32:14	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 15:08:25	6091	TELM-06	1	Pass	0	0	0	3
M_TCP_Diagnostic	m_Diagnostic026	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic027/Hardware_Diagnostic025.exe	2.2	20091102 13:03:48	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 15:06:31	2259	TELM-06	1	Pass	0	0	0	8
M_TCP_Diagnostic	m_Diagnostic027	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic028/Hardware_Diagnostic026.exe	2.4	20091116 20:37:37	2.4	Up-to-date	Baseline 17_1	None	09/09/2010 15:02:47	11921	TELM-06	1	Pass	0	0	0	1
M_TCP_Diagnostic	m_Diagnostic028	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic029/Hardware_Diagnostic027.exe	2.1	20091015 19:46:18	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 14:59:34	2734	TELM-06	1	Pass	0	0	0	2
M_TCP_Diagnostic	m_Diagnostic029	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic030/Hardware_Diagnostic028.exe	2.5	20100718 08:09	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 14:58:03	7445	TELM-06	1	Pass	0	0	0	277
M_TCP_Diagnostic	m_Diagnostic030	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic031/Hardware_Diagnostic029.exe	2.2	20091111 14:33:17	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 14:56:21	10880	TELM-06	1	Pass	0	0	0	3
M_TCP_Diagnostic	m_Diagnostic031	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic032/Hardware_Diagnostic030.exe	2.3	20091123 13:31:13	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 14:55:10	9252	TELM-06	1	Pass	0	0	0	19
M_TCP_Diagnostic	m_Diagnostic032	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic033/Hardware_Diagnostic031.exe	2.4	20091116 20:30:31	2.4	Up-to-date	Baseline 17_1	None	09/09/2010 14:53:52	9056	TELM-06	1	Pass	0	0	0	2
M_TCP_Diagnostic	m_Diagnostic033	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic034/Hardware_Diagnostic032.exe	2.2	20091223 13:31:44	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 14:51:59	7998	TELM-06	1	Pass	0	0	0	7
M_TCP_Diagnostic	m_Diagnostic034	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic035/Hardware_Diagnostic033.exe	2.2	20100313 11:16:44	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 14:50:29	8147	TELM-06	1	Pass	0	0	0	10
M_TCP_Diagnostic	m_Diagnostic035	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic036/Hardware_Diagnostic034.exe	2.4	20100313 10:23:35	2.4	Up-to-date	Baseline 17_1	None	09/09/2010 14:49:05	6885	TELM-06	1	Pass	0	0	0	8
M_TCP_Diagnostic	m_Diagnostic036	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Diagnostic_Diagnostic037/Hardware_Diagnostic035.exe	2.3	20100607 20:14:88	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 14:46:55	48986	TELM-06	1	Pass	0	0	0	18
M_TCP_Discover	m_DiscoverF000	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF000/Hardware_DiscoverF000.exe	2.6	20100521 14:21:38	2.6	Up-to-date	Baseline 17_1	None	09/09/2010 14:45:29	21483	TELM-06	1	Pass	0	0	0	33
M_TCP_Discover	m_DiscoverF001	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF001/Hardware_DiscoverF001.exe	2.6	20100315 18:02:47	2.6	Up-to-date	Baseline 17_1	None	09/09/2010 14:48:18	144672	TELM-06	1	Pass	0	0	0	1815
M_TCP_Discover	m_DiscoverF002	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF002/Hardware_DiscoverF002.exe	2.2	20100225 20:00:21	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 14:46:29	12109	TELM-06	1	Pass	0	0	0	58
M_TCP_Discover	m_DiscoverF003	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF003/Hardware_DiscoverF003.exe	2.2	20100205 21:19:43	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 13:51:41	270966	TELM-06	1	Pass	0	0	0	3713
M_TCP_Discover	m_DiscoverF004	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF004/Hardware_DiscoverF004.exe	2.3	20091029 16:53:17	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 14:44:08	1241	TELM-06	1	Pass	0	0	0	4
M_TCP_Discover	m_DiscoverF005	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF005/Hardware_DiscoverF005.exe	2.3	20100205 21:19:43	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 10:04:15	13966	TELM-06	1	Pass	0	0	0	1727
M_TCP_Discover	m_DiscoverF006	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF006/Hardware_DiscoverF006.exe	2.7	20091214 21:43:07	2.7	Up-to-date	Baseline 17_1	None	09/09/2010 11:42:37	13715	TELM-06	1	Pass	0	0	0	6
M_TCP_Discover	m_DiscoverF007	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF007/Hardware_DiscoverF007.exe	2.7	20100921 12:26:32	2.7	Up-to-date	Baseline 17_1	None	09/09/2010 11:44:58	7154	TELM-06	1	Pass	0	0	0	109
M_TCP_Discover	m_DiscoverF008	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF008/Hardware_DiscoverF008.exe	2.4	20100612 17:07:31	2.4	Up-to-date	Baseline 17_1	None	09/09/2010 11:38:18	7973	TELM-06	1	Pass	0	0	0	121
M_TCP_Discover	m_DiscoverF009	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF009/Hardware_DiscoverF009.exe	2.3	2010102 22:03:01	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 11:34:59	56802	TELM-06	1	Pass	0	0	0	9
M_TCP_Discover	m_DiscoverF010	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF010/Hardware_DiscoverF010.exe	2.8	20100928 12:27:30	2.8	Up-to-date	Baseline 17_1	None	09/10/2010 11:47:44	36629	TELM-06	1	Pass	0	0	0	17
M_TCP_Discover	m_DiscoverF011	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF011/Hardware_DiscoverF011.exe	2.3	20100918 16:03:45	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 11:32:26	42577	TELM-06	1	Pass	0	0	0	10
M_TCP_Discover	m_DiscoverF012	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF012/Hardware_DiscoverF012.exe	2.2	20100318 16:03:45	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 11:30:22	24541	TELM-06	1	Pass	0	0	0	15
M_TCP_Discover	m_DiscoverF013	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF013/Hardware_DiscoverF013.exe	2.1	20091123 16:09:48	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 11:29:04	7877	TELM-06	1	Pass	0	0	0	12
M_TCP_Discover	m_DiscoverF014	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF014/Hardware_DiscoverF014.exe	2.1	20091103 20:05:17	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 11:27:40	8245	TELM-06	1	Pass	0	0	0	7
M_TCP_Discover	m_DiscoverF015	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF015/Hardware_DiscoverF015.exe	2.1	20091103 20:05:17	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 11:26:02	12119	TELM-06	1	Pass	0	0	0	10
M_TCP_Discover	m_DiscoverF016	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF016/Hardware_DiscoverF016.exe	2.1	20091123 16:18:42	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 11:24:49	8407	TELM-06	1	Pass	0	0	0	6
M_TCP_Discover	m_DiscoverF017	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF017/Hardware_DiscoverF017.exe	2.1	20091123 16:18:42	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 11:23:23	11474	TELM-06	1	Pass	0	0	0	33
M_TCP_Discover	m_DiscoverF018	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF018/Hardware_DiscoverF018.exe	2.1	20091123 16:12:04	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 11:21:37	12592	TELM-06	1	Pass	0	0	0	7
M_TCP_Discover	m_DiscoverF019	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF019/Hardware_DiscoverF019.exe	2.1	20091123 16:12:04	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 11:20:05	9090	TELM-06	1	Pass	0	0	0	3
M_TCP_Discover	m_DiscoverF020	Vdtaipace/w/m/zar/F/West/FWT/FORMAL/TestMod7_8/Testitem_kv/m/zar/z/v/s/M_TCP_Discover_DiscoverF020/Hardware_DiscoverF020.exe	2.3	20100528 11:38:20	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 11:18:38	10290	TELM-06	1	Pass	0	0	0	3
M_TCP_Discover	m_DiscoverF021	Vdtaipace															

M_TCP_Test	M_TestID	M_TestName	M_TestType	M_TestCategory	M_TestStatus	M_TestDate	M_TestTime	M_TestUser	M_TestMachine	M_TestIP	M_TestPort	M_TestOS	M_TestApp	M_TestVer	M_TestLang	M_TestArch	M_TestCpu	M_TestMem	M_TestDisk	M_TestNet	M_TestOther						
M_TCP_Initiale	m_Initiale001	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Initiale	Initiale001	Hardware	Initiale001.exe	2.8	20100912	12:34:35	2.8	Up-to-date	Baseline	17_1	None	09/09/2010	10:17:15	10382	TELM-06	1	Pass	0	0	0	8
M_TCP_Initiale	m_Initiale002	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Initiale	Initiale002	Hardware	Initiale002.exe	2.2	20100912	15:45:43	2.2	Up-to-date	Baseline	17_1	None	09/09/2010	10:13:15	18918	TELM-06	1	Pass	0	0	0	11
M_TCP_Initiale	m_Initiale003	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Initiale	Initiale003	Hardware	Initiale003.exe	2.4	20100908	15:57:16	2.4	Up-to-date	Baseline	17_1	None	09/09/2010	10:20:23	24125	TELM-06	1	Pass	0	0	0	23
M_TCP_Initiale	m_Initiale004	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Initiale	Initiale004	Hardware	Initiale004.exe	2.4	20100908	15:57:44	2.4	Up-to-date	Baseline	17_1	None	09/09/2010	10:20:37	40192	TELM-06	1	Pass	0	0	0	30
M_TCP_MedicalEvent	m_MedicalEvent001	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MedicalEvent	MedicalEvent001	Hardware	MedicalEvent001.exe	2.4	20100118	15:44:53	2.4	Up-to-date	Baseline	17_1	None	09/09/2010	10:57:31	12589	TELM-06	1	Pass	0	0	0	36
M_TCP_MedicalEvent	m_MedicalEvent002	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MedicalEvent	MedicalEvent002	Hardware	MedicalEvent002.exe	2.6	20100118	15:47:08	2.6	Up-to-date	Baseline	17_1	None	09/09/2010	10:58:54	73371	TELM-06	1	Pass	0	0	0	44
M_TCP_MedicalEvent	m_MedicalEvent003	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MedicalEvent	MedicalEvent003	Hardware	MedicalEvent003.exe	2.4	20100311	21:16:02	2.4	Up-to-date	Baseline	17_1	None	09/09/2010	10:50:46	18753	TELM-06	1	Pass	0	0	0	24
M_TCP_MedicalEvent	m_MedicalEvent004	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MedicalEvent	MedicalEvent004	Hardware	MedicalEvent004.exe	2.4	20100118	15:44:34	2.4	Up-to-date	Baseline	17_1	None	09/09/2010	10:44:49	12033	TELM-06	1	Pass	0	0	0	12
M_TCP_MedicalEvent	m_MedicalEvent005	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MedicalEvent	MedicalEvent005	Hardware	MedicalEvent005.exe	2.4	20100118	15:47:08	2.4	Up-to-date	Baseline	17_1	None	09/09/2010	10:39:54	61268	TELM-06	1	Pass	0	0	0	4
M_TCP_MedicalEvent	m_MedicalEvent006	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MedicalEvent	MedicalEvent006	Hardware	MedicalEvent006.exe	2.2	20100118	15:46:20	2.2	Up-to-date	Baseline	17_1	None	09/09/2010	10:37:14	17078	TELM-06	1	Pass	0	0	0	4
M_TCP_MedicalEvent	m_MedicalEvent007	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MedicalEvent	MedicalEvent007	Hardware	MedicalEvent007.exe	2.5	20100127	14:50:44	2.5	Up-to-date	Baseline	17_1	None	09/09/2010	10:34:42	16716	TELM-06	1	Pass	0	0	0	5
M_TCP_MedicalEvent	m_MedicalEvent008	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MedicalEvent	MedicalEvent008	Hardware	MedicalEvent008.exe	2.4	20100118	15:47:08	2.4	Up-to-date	Baseline	17_1	None	09/09/2010	10:31:52	15196	TELM-06	1	Pass	0	0	0	11
M_TCP_MedicalEvent	m_MedicalEvent009	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MedicalEvent	MedicalEvent009	Hardware	MedicalEvent009.exe	2.2	20100118	15:47:08	2.2	Up-to-date	Baseline	17_1	None	09/09/2010	10:30:59	6186	TELM-06	1	Pass	0	0	0	3
M_TCP_MedicalEvent	m_MedicalEvent010	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MedicalEvent	MedicalEvent010	Hardware	MedicalEvent010.exe	2.5	20100908	13:50:31	2.5	Up-to-date	Baseline	17_1	None	09/09/2010	10:28:25	15263	TELM-06	1	Pass	0	0	0	18
M_TCP_MedicalEvent	m_MedicalEvent011	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MedicalEvent	MedicalEvent011	Hardware	MedicalEvent011.exe	2.9	20100907	20:16:18	2.9	Up-to-date	Baseline	17_1	None	09/09/2010	10:00:37	58476	TELM-06	1	Pass	0	0	0	152
M_TCP_MedicalEvent	m_MedicalEvent012	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MedicalEvent	MedicalEvent012	Hardware	MedicalEvent012.exe	2.9	20100912	18:44:37	2.9	Up-to-date	Baseline	17_1	None	09/10/2010	14:20:15	29369	TELM-06	1	Pass	0	0	0	375
M_TCP_MedicalEvent	m_MedicalEvent013	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MedicalEvent	MedicalEvent013	Hardware	MedicalEvent013.exe	2.8	20100907	20:17:30	2.8	Up-to-date	Baseline	17_1	None	09/09/2010	20:48:33	612642	TELM-06	1	Pass	0	0	0	13
M_TCP_MedicalEvent	m_MedicalEvent014	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MedicalEvent	MedicalEvent014	Hardware	MedicalEvent014.exe	2.5	20100118	15:50:21	2.5	Up-to-date	Baseline	17_1	None	09/10/2010	13:47:03	272164	TELM-06	1	Pass	0	0	0	4627
M_TCP_MedicalEvent	m_MedicalEvent015	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MedicalEvent	MedicalEvent015	Hardware	MedicalEvent015.exe	2.5	20100118	15:50:59	2.5	Up-to-date	Baseline	17_1	None	09/10/2010	10:28:51	7476	TELM-06	1	Pass	0	0	0	5
M_TCP_MedicalEvent	m_MedicalEvent016	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MedicalEvent	MedicalEvent016	Hardware	MedicalEvent016.exe	2.3	20100118	15:51:30	2.3	Up-to-date	Baseline	17_1	None	09/09/2010	10:21:32	40717	TELM-06	1	Pass	0	0	0	9
M_TCP_MedicalEvent	m_MedicalEvent017	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MedicalEvent	MedicalEvent017	Hardware	MedicalEvent017.exe	2.7	20100618	12:28:23	2.7	Up-to-date	Baseline	17_1	None	09/11/2010	01:04:51	32980	TELM-06	1	Pass	0	0	0	33
M_TCP_MemoryTest	m_MemoryTest001	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MemoryTest	MemoryTest001	Hardware	MemoryTest001.exe	2.4	20100505	19:48:21	2.4	Up-to-date	Baseline	17_1	None	09/09/2010	16:44:06	240725	TELM-06	1	Pass	0	0	0	79
M_TCP_MemoryTest	m_MemoryTest002	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MemoryTest	MemoryTest002	Hardware	MemoryTest002.exe	2.3	20100505	20:08:28	2.3	Up-to-date	Baseline	17_1	None	09/10/2010	15:58:42	478662	TELM-06	1	Pass	0	0	0	75
M_TCP_MemoryTest	m_MemoryTest003	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MemoryTest	MemoryTest003	Hardware	MemoryTest003.exe	2.3	20100505	20:09:49	2.3	Up-to-date	Baseline	17_1	None	09/09/2010	16:38:13	240134	TELM-06	1	Pass	0	0	0	75
M_TCP_MemoryTest	m_MemoryTest004	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	MemoryTest	MemoryTest004	Hardware	MemoryTest004.exe	2.3	20100505	20:20:28	2.3	Up-to-date	Baseline	17_1	None	09/10/2010	15:37:08	478665	TELM-06	1	Pass	0	0	0	75
M_TCP_Network	m_Network001	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network001	Hardware	Network001.exe	2.6	20100921	15:45:43	2.6	Up-to-date	Baseline	17_1	None	09/10/2010	07:47:18	24633	TELM-06	1	Pass	0	0	0	1461
M_TCP_Network	m_Network002	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network002	Hardware	Network002.exe	2.6	20100912	12:17:11	2.6	Up-to-date	Baseline	17_1	None	09/11/2010	00:19:39	34802	TELM-06	1	Pass	0	0	0	82
M_TCP_Network	m_Network003	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network003	Hardware	Network003.exe	2.1	20091216	22:00:27	2.1	Up-to-date	Baseline	17_1	None	09/10/2010	07:35:36	64790	TELM-06	1	Pass	0	0	0	86
M_TCP_Network	m_Network004	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network004	Hardware	Network004.exe	2.3	20100912	12:12:36	2.3	Up-to-date	Baseline	17_1	None	09/10/2010	07:28:20	291045	TELM-06	1	Pass	0	0	0	121
M_TCP_Network	m_Network005	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network005	Hardware	Network005.exe	2.3	20100612	12:02:18	2.3	Up-to-date	Baseline	17_1	None	09/10/2010	07:21:55	58315	TELM-06	1	Pass	0	0	0	50
M_TCP_Network	m_Network006	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network006	Hardware	Network006.exe	2.5	20100921	16:49:58	2.5	Up-to-date	Baseline	17_1	None	09/10/2010	07:15:03	15414	TELM-06	1	Pass	0	0	0	1421
M_TCP_Network	m_Network007	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network007	Hardware	Network007.exe	2.4	20100921	16:49:58	2.4	Up-to-date	Baseline	17_1	None	09/10/2010	07:08:34	15403	TELM-06	1	Pass	0	0	0	1421
M_TCP_Network	m_Network008	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network008	Hardware	Network008.exe	2.5	20100921	17:13:03	2.5	Up-to-date	Baseline	17_1	None	09/10/2010	07:01:43	10466	TELM-06	1	Pass	0	0	0	1380
M_TCP_Network	m_Network009	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network009	Hardware	Network009.exe	2.5	20100921	17:21:30	2.5	Up-to-date	Baseline	17_1	None	09/10/2010	06:54:16	10414	TELM-06	1	Pass	0	0	0	1381
M_TCP_Network	m_Network010	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network010	Hardware	Network010.exe	2.5	20100921	17:24:27	2.5	Up-to-date	Baseline	17_1	None	09/10/2010	06:46:52	10388	TELM-06	1	Pass	0	0	0	1381
M_TCP_Network	m_Network011	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network011	Hardware	Network011.exe	2.5	20100921	17:23:03	2.5	Up-to-date	Baseline	17_1	None	09/10/2010	06:41:58	10392	TELM-06	1	Pass	0	0	0	1381
M_TCP_Network	m_Network012	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network012	Hardware	Network012.exe	2.5	20100701	13:00:48	2.5	Up-to-date	Baseline	17_1	None	09/10/2010	06:38:26	141629	TELM-06	1	Pass	0	0	0	392
M_TCP_Network	m_Network013	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network013	Hardware	Network013.exe	2.5	20100612	12:06:29	2.5	Up-to-date	Baseline	17_1	None	09/10/2010	06:34:32	26840	TELM-06	1	Pass	0	0	0	12
M_TCP_Network	m_Network014	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network014	Hardware	Network014.exe	2.5	20100921	12:08:28	2.5	Up-to-date	Baseline	17_1	None	09/10/2010	06:31:50	24976	TELM-06	1	Pass	0	0	0	12
M_TCP_Network	m_Network015	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network015	Hardware	Network015.exe	2.1	20100512	12:09:43	2.1	Up-to-date	Baseline	17_1	None	09/10/2010	06:28:20	55464	TELM-06	1	Pass	0	0	0	262
M_TCP_Network	m_Network016	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network016	Hardware	Network016.exe	2.4	20100607	13:19:37	2.4	Up-to-date	Baseline	17_1	None	09/10/2010	06:25:56	12608	TELM-06	1	Pass	0	0	0	41
M_TCP_Network	m_Network017	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network017	Hardware	Network017.exe	2.5	20100607	14:28:09	2.5	Up-to-date	Baseline	17_1	None	09/10/2010	06:21:18	21781	TELM-06	1	Pass	0	0	0	11
M_TCP_Network	m_Network018	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network018	Hardware	Network018.exe	2.5	20100512	12:12:40	2.5	Up-to-date	Baseline	17_1	None	09/10/2010	06:16:11	56482	TELM-06	1	Pass	0	0	0	51
M_TCP_Network	m_Network019	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network019	Hardware	Network019.exe	2.5	20100921	12:11:57	2.5	Up-to-date	Baseline	17_1	None	09/10/2010	06:11:17	60372	TELM-06	1	Pass	0	0	0	67
M_TCP_Network	m_Network020	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network020	Hardware	Network020.exe	2.2	20100912	12:16:13	2.2	Up-to-date	Baseline	17_1	None	09/10/2010	06:08:10	60223	TELM-06	1	Pass	0	0	0	133
M_TCP_Network	m_Network021	vditapacef/w/m/zarf/W/TEST/FW/T/FORMAL/TEST/Mod7	8-Testiam	lv/r/n/m/zarf/v/m	TCP	Network	Network021	Hardware	Network021.exe	2.2	20100912	12:															

M_TCP_Polling	m_Polling04	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Polling_Polling04Hardware_Polling04.exe</a>	2.0	2009/11/09 18:30:49	2.0	Up-to-date	Baseline 17. 1	None	09/10/2010 15:17:01	307319	TELM-06	1	Pass	0	0	0	2
M_TCP_Polling	m_Polling05	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Polling_Polling05Hardware_Polling05.exe</a>	2.0	2009/11/09 18:31:27	2.0	Up-to-date	Baseline 17. 1	None	09/10/2010 14:24:24	6353	TELM-06	1	Pass	0	0	0	2
M_TCP_Powerhitbit	m_Power01	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Powerhitbit_Power01Hardware_Power01.exe</a>	2.0	2010/06/07 13:10:46	2.1	Up-to-date	Baseline 17. 1	None	09/10/2010 06:32:20	56894	TELM-06	1	Pass	0	0	0	2
M_TCP_Powerhitbit	m_Power02	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Powerhitbit_Power02Hardware_Power02.exe</a>	2.2	2010/10/15 15:15:46	2.2	Up-to-date	Baseline 17. 1	None	09/10/2010 06:30:20	1758	TELM-06	1	Pass	0	0	0	394
M_TCP_Powerhitbit	m_Power03	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Powerhitbit_Power03Hardware_Power03.exe</a>	2.4	2010/06/22 14:46:44	2.4	Up-to-date	Baseline 17. 1	None	09/10/2010 06:27:18	54002	TELM-06	1	Pass	0	0	0	13
M_TCP_Powerhitbit	m_Power04	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Powerhitbit_Power04Hardware_Power04.exe</a>	2.4	2010/09/22 14:06:29	2.4	Up-to-date	Baseline 17. 1	None	09/10/2010 06:23:37	14207	TELM-06	1	Pass	0	0	0	18
M_TCP_Powerhitbit	m_Power05	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Powerhitbit_Power05Hardware_Power05.exe</a>	2.6	2010/07/02 12:34:05	2.6	Up-to-date	Baseline 17. 1	None	09/10/2010 11:52:22	148979	TELM-06	1	Pass	0	0	0	310
M_TCP_Powerhitbit	m_Power06	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Powerhitbit_Power06Hardware_Power06.exe</a>	2.6	2010/06/22 12:27:46	2.6	Up-to-date	Baseline 17. 1	None	09/10/2010 06:18:32	193253	TELM-06	1	Pass	0	0	0	2744
M_TCP_Powerhitbit	m_Power07	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Powerhitbit_Power07Hardware_Power07.exe</a>	2.6	2010/09/21 19:58:07	2.6	Up-to-date	Baseline 17. 1	None	09/10/2010 06:19:07	14841	TELM-06	1	Pass	0	0	0	1325
M_TCP_Powerhitbit	m_Power08	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Powerhitbit_Power08Hardware_Power08.exe</a>	2.2	2009/12/14 16:44:18	2.2	Up-to-date	Baseline 17. 1	None	09/10/2010 06:07:15	34837	TELM-06	1	Pass	0	0	0	15
M_TCP_Powerhitbit	m_Power09	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Powerhitbit_Power09Hardware_Power09.exe</a>	2.4	2010/07/01 15:00:10	2.4	Up-to-date	Baseline 17. 1	None	09/10/2010 06:03:51	12118	TELM-06	1	Pass	0	0	0	9
M_TCP_Powerhitbit	m_Power10	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Powerhitbit_Power10Hardware_Power10.exe</a>	2.1	2010/05/19 12:22:18:45	2.1	Up-to-date	Baseline 17. 1	None	09/10/2010 06:00:26	11974	TELM-06	1	Pass	0	0	0	26
M_TCP_Powerhitbit	m_Power11	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Powerhitbit_Power11Hardware_Power11.exe</a>	2.1	2010/03/11 18:04:17	2.1	Up-to-date	Baseline 17. 1	None	09/10/2010 06:55:58	93934	TELM-06	1	Pass	0	0	0	116
M_TCP_RawMode01	m_RawMode01	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_RawMode01_RawMode01Hardware_RawMode01.exe</a>	2.4	2010/12/08 20:08:13	2.4	Up-to-date	Baseline 17. 1	None	09/10/2010 12:20:55	7616	TELM-06	1	Pass	0	0	0	7
M_TCP_RawMode02	m_RawMode02	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_RawMode02_RawMode02Hardware_RawMode02.exe</a>	2.6	2010/01/27 13:00:04	2.6	Up-to-date	Baseline 17. 1	None	09/10/2010 12:19:12	9551	TELM-06	1	Pass	0	0	0	87
M_TCP_RawMode03	m_RawMode03	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_RawMode03_RawMode03Hardware_RawMode03.exe</a>	2.5	2010/01/27 13:03:49	2.5	Up-to-date	Baseline 17. 1	None	09/10/2010 12:16:39	11458	TELM-06	1	Pass	0	0	0	11
M_TCP_RawMode04	m_RawMode04	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_RawMode04_RawMode04Hardware_RawMode04.exe</a>	2.6	2010/01/27 13:09:25	2.6	Up-to-date	Baseline 17. 1	None	09/10/2010 12:15:14	7342	TELM-06	1	Pass	0	0	0	2
M_TCP_RawMode05	m_RawMode05	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_RawMode05_RawMode05Hardware_RawMode05.exe</a>	2.3	2010/10/26 20:14:1	2.3	Up-to-date	Baseline 17. 1	None	09/10/2010 12:12:52	13380	TELM-06	1	Pass	0	0	0	9
M_TCP_RawMode06	m_RawMode06	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_RawMode06_RawMode06Hardware_RawMode06.exe</a>	2.2	2010/10/26 20:11:57	2.2	Up-to-date	Baseline 17. 1	None	09/10/2010 12:03:38	9112	TELM-06	1	Pass	0	0	0	4
M_TCP_RawMode07	m_RawMode07	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_RawMode07_RawMode07Hardware_RawMode07.exe</a>	2.3	2010/06/08 21:03:23	2.3	Up-to-date	Baseline 17. 1	None	09/10/2010 12:09:49	11364	TELM-06	1	Pass	0	0	0	11
M_TCP_RawMode08	m_RawMode08	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_RawMode08_RawMode08Hardware_RawMode08.exe</a>	2.4	2010/01/27 13:14:20	2.4	Up-to-date	Baseline 17. 1	None	09/10/2010 12:07:32	16147	TELM-06	1	Pass	0	0	0	4
M_TCP_RawMode09	m_RawMode09	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_RawMode09_RawMode09Hardware_RawMode09.exe</a>	2.2	2009/12/14 16:51:58	2.2	Up-to-date	Baseline 17. 1	None	09/10/2010 12:05:31	15728	TELM-06	1	Pass	0	0	0	7
M_TCP_RawMode10	m_RawMode10	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_RawMode10_RawMode10Hardware_RawMode10.exe</a>	2.1	2009/10/27 17:32:20	2.1	Up-to-date	Baseline 17. 1	None	09/10/2010 12:03:46	3333	TELM-06	1	Pass	0	0	0	3
M_TCP_RawMode11	m_RawMode11	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_RawMode11_RawMode11Hardware_RawMode11.exe</a>	2.2	2010/02/01 16:15:28	2.2	Up-to-date	Baseline 17. 1	None	09/10/2010 12:01:48	8996	TELM-06	1	Pass	0	0	0	3
M_TCP_RawMode12	m_RawMode12	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_RawMode12_RawMode12Hardware_RawMode12.exe</a>	2.3	2010/10/26 20:13:22	2.3	Up-to-date	Baseline 17. 1	None	09/10/2010 11:56:39	11660	TELM-06	1	Pass	0	0	0	3
M_TCP_Reset	m_Reset01	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Reset_Reset01Hardware_Reset01.exe</a>	2.3	2010/10/06 21:26:17	2.3	Up-to-date	Baseline 17. 1	None	09/10/2010 16:55:47	9033	TELM-06	1	Pass	0	0	0	23
M_TCP_Reset	m_Reset02	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Reset_Reset02Hardware_Reset02.exe</a>	2.4	2010/12/28 21:52:07	2.4	Up-to-date	Baseline 17. 1	None	09/10/2010 16:52:36	20469	TELM-06	1	Pass	0	0	0	39
M_TCP_Security	m_Secur002	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur002Hardware_Secur002.exe</a>	2.9	2010/06/03 15:18:25	2.9	Up-to-date	Baseline 17. 1	None	09/10/2010 16:39:48	457347	TELM-06	1	Pass	0	0	0	154
M_TCP_Security	m_Secur003	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur003Hardware_Secur003.exe</a>	2.9	2010/07/14 16:20:21	2.9	Up-to-date	Baseline 17. 1	None	09/10/2010 16:27:17	6127	TELM-06	1	Pass	0	0	0	12
M_TCP_Security	m_Secur004	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur004Hardware_Secur004.exe</a>	2.4	2010/02/15 15:01:04	2.4	Up-to-date	Baseline 17. 1	None	09/10/2010 02:00:36	253943	TELM-06	1	Pass	0	0	0	112
M_TCP_Security	m_Secur005	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur005Hardware_Secur005.exe</a>	2.2	2010/02/17 16:23:51	2.2	Up-to-date	Baseline 17. 1	None	09/10/2010 01:59:10	4199	TELM-06	1	Pass	0	0	0	72
M_TCP_Security	m_Secur006	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur006Hardware_Secur006.exe</a>	2.4	2010/02/17 16:23:51	2.4	Up-to-date	Baseline 17. 1	None	09/10/2010 01:55:49	42588	TELM-06	1	Pass	0	0	0	28
M_TCP_Security	m_Secur007	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur007Hardware_Secur007.exe</a>	2.6	2010/02/15 13:38:16	2.6	Up-to-date	Baseline 17. 1	None	09/10/2010 01:52:00	113194	TELM-06	1	Pass	0	0	0	128
M_TCP_Security	m_Secur008	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur008Hardware_Secur008.exe</a>	2.3	2010/02/17 16:28:05	2.3	Up-to-date	Baseline 17. 1	None	09/10/2010 01:48:31	6706	TELM-06	1	Pass	0	0	0	72
M_TCP_Security	m_Secur009	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur009Hardware_Secur009.exe</a>	2.3	2010/02/17 16:32:40	2.3	Up-to-date	Baseline 17. 1	None	09/10/2010 01:47:53	6023	TELM-06	1	Pass	0	0	0	36
M_TCP_Security	m_Secur010	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur010Hardware_Secur010.exe</a>	2.4	2010/02/17 16:32:40	2.4	Up-to-date	Baseline 17. 1	None	09/10/2010 01:44:36	6608	TELM-06	1	Pass	0	0	0	36
M_TCP_Security	m_Secur011	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur011Hardware_Secur011.exe</a>	2.5	2010/06/03 16:18:16	2.5	Up-to-date	Baseline 17. 1	None	09/10/2010 01:40:15	20029	TELM-06	1	Pass	0	0	0	58
M_TCP_Security	m_Secur012	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur012Hardware_Secur012.exe</a>	2.9	2010/02/18 15:14:18	2.9	Up-to-date	Baseline 17. 1	None	09/10/2010 01:33:23	4660	TELM-06	1	Pass	0	0	0	132
M_TCP_Security	m_Secur013	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur013Hardware_Secur013.exe</a>	2.9	2010/02/18 15:14:18	2.9	Up-to-date	Baseline 17. 1	None	09/10/2010 01:30:27	41771	TELM-06	1	Pass	0	0	0	62
M_TCP_Security	m_Secur014	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur014Hardware_Secur014.exe</a>	2.2	2010/06/03 18:21:27	2.2	Up-to-date	Baseline 17. 1	None	09/10/2010 04:55:32	15976	TELM-06	1	Pass	0	0	0	36
M_TCP_Security	m_Secur015	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur015Hardware_Secur015.exe</a>	2.4	2010/02/17 17:28:18	2.4	Up-to-date	Baseline 17. 1	None	09/10/2010 02:25:18	596197	TELM-06	1	Pass	0	0	0	34
M_TCP_Security	m_Secur016	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur016Hardware_Secur016.exe</a>	2.2	2010/06/02 17:58:24	2.2	Up-to-date	Baseline 17. 1	None	09/10/2010 01:28:22	10646	TELM-06	1	Pass	0	0	0	12
M_TCP_Security	m_Secur017	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur017Hardware_Secur017.exe</a>	2.2	2010/12/08 20:16:22	2.2	Up-to-date	Baseline 17. 1	None	09/10/2010 01:25:56	14850	TELM-06	1	Pass	0	0	0	39
M_TCP_Security	m_Secur018	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur018Hardware_Secur018.exe</a>	2.4	2010/03/18 16:05:37	2.4	Up-to-date	Baseline 17. 1	None	09/10/2010 01:21:39	40556	TELM-06	1	Pass	0	0	0	12
M_TCP_Security	m_Secur019	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur019Hardware_Secur019.exe</a>	2.3	2010/03/26 13:43:17	2.3	Up-to-date	Baseline 17. 1	None	09/10/2010 01:17:17	90548	TELM-06	1	Pass	0	0	0	1226
M_TCP_Security	m_Secur020	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur020Hardware_Secur020.exe</a>	2.3	2010/06/03 16:22:32	2.3	Up-to-date	Baseline 17. 1	None	09/10/2010 01:16:16	22198	TELM-06	1	Pass	0	0	0	62
M_TCP_Security	m_Secur021	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur021Hardware_Secur021.exe</a>	2.5	2010/06/03 18:37:52	2.5	Up-to-date	Baseline 17. 1	None	09/10/2010 01:11:51	40818	TELM-06	1	Pass	0	0	0	81
M_TCP_Security	m_Secur022	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur022Hardware_Secur022.exe</a>	2.9	2010/06/18 19:05:16	2.9	Up-to-date	Baseline 17. 1	None	09/10/2010 1:13:28	290901	TELM-06	1	Pass	0	0	0	55495
M_TCP_Security	m_Secur023	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur023Hardware_Secur023.exe</a>	2.12	2010/02/18 15:03:12	12	Up-to-date	Baseline 17. 1	None	09/10/2010 02:04:54	51580	TELM-06	1	Pass	0	0	0	19
M_TCP_Security	m_Secur024	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur024Hardware_Secur024.exe</a>	2.3	2010/03/26 13:06:23	2.3	Up-to-date	Baseline 17. 1	None	09/10/2010 18:19:58	30771	TELM-06	1	Pass	0	0	0	4
M_TCP_Security	m_Secur025	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur025Hardware_Secur025.exe</a>	2.3	2010/06/10 14:39:09	2.3	Up-to-date	Baseline 17. 1	None	09/10/2010 17:42:06	48431	TELM-06	1	Pass	0	0	0	158
M_TCP_Security	m_Secur026	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur026Hardware_Secur026.exe</a>	2.3	2010/02/17 17:28:18	2.3	Up-to-date	Baseline 17. 1	None	09/10/2010 01:07:50	60285	TELM-06	1	Pass	0	0	0	60
M_TCP_Security	m_Secur027	<a href="#">Vidta.pace/w/Inmarz/FWTestFWT/FORMAL/Team7/8-Testiam/InvmzoarvU/M_TCP_Security_Secur027Hardware_Secur027.exe</a>	2.1	2010/06/25 19:00:01	2.1	Up-to-date	Baseline 17. 1	None	09/10/2010 01:03:19	42310	TELM-06	1	Pass	0	0	0	60
M_TCP_Security	m_Secur028																



M_TCP_Data	m_MemoryRead016	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead016Hardware_MemoryRead016.exe</a>	2,1	2009/0118 182400	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 17:19:11	7646	TELM-06	1	Pass	0	0	0	57
M_TCP_Data	m_MemoryRead017	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead017Hardware_MemoryRead017.exe</a>	2,2	2009/0119 150148	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 17:19:42	7655	TELM-06	1	Pass	0	0	0	57
M_TCP_Data	m_MemoryRead019	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead019Hardware_MemoryRead019.exe</a>	2,3	2009/0203 1357 23	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 17:19:47	8098	TELM-06	1	Pass	0	0	2	2
M_TCP_Data	m_MemoryRead020	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead020Hardware_MemoryRead020.exe</a>	2,4	2010/0209 204306	2,4	Up-to-date	Baseline 17, 1	None	09/05/2010 17:19:40	6900	TELM-06	1	Pass	0	0	0	8
M_TCP_Data	m_MemoryRead021	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead021Hardware_MemoryRead021.exe</a>	2,2	2009/0223 134931	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 17:01:50	8442	TELM-06	1	Pass	0	0	0	6
M_TCP_Data	m_MemoryRead031	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead031Hardware_MemoryRead031.exe</a>	2,1	2009/0128 154403	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 16:55:03	8116	TELM-06	1	Pass	0	0	0	23
M_TCP_Data	m_MemoryRead033	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead033Hardware_MemoryRead033.exe</a>	2,3	2009/0128 182334	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 16:53:21	9917	TELM-06	1	Pass	0	0	0	43
M_TCP_Data	m_MemoryRead034	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead034Hardware_MemoryRead034.exe</a>	2,3	2009/0123 185548	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 16:49:26	11983	TELM-06	1	Pass	0	0	0	39
M_TCP_Data	m_MemoryRead035	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead035Hardware_MemoryRead035.exe</a>	2,3	2009/0119 173639	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 16:43:27	8016	TELM-06	1	Pass	0	0	0	28
M_TCP_Data	m_MemoryRead037	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead037Hardware_MemoryRead037.exe</a>	2,4	2009/0123 185623	2,4	Up-to-date	Baseline 17, 1	None	09/05/2010 16:36:55	11817	TELM-06	1	Pass	0	0	0	22
M_TCP_Data	m_MemoryRead038	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead038Hardware_MemoryRead038.exe</a>	2,2	2009/0123 185701	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 16:33:21	12320	TELM-06	1	Pass	0	0	0	12
M_TCP_Data	m_MemoryRead039	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead039Hardware_MemoryRead039.exe</a>	2,3	2010/0119 173639	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 16:30:43	14622	TELM-06	1	Pass	0	0	0	962
M_TCP_Data	m_MemoryRead040	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead040Hardware_MemoryRead040.exe</a>	2,6	2009/028 150929	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 16:28:19	8578	TELM-06	1	Pass	0	0	0	2
M_TCP_Data	m_MemoryRead041	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead041Hardware_MemoryRead041.exe</a>	2,6	2010/106 141407	2,6	Up-to-date	Baseline 17, 1	None	09/05/2010 16:25:09	32251	TELM-06	1	Pass	0	0	0	10
M_TCP_Data	m_MemoryRead043	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead043Hardware_MemoryRead043.exe</a>	2,2	2010/0628 152524	2,4	Up-to-date	Baseline 17, 1	None	09/05/2010 16:22:18	18221	TELM-06	1	Pass	0	0	0	22
M_TCP_Data	m_MemoryRead042	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead042Hardware_MemoryRead042.exe</a>	2,3	2009/1116 120057	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 16:20:32	26122	TELM-06	1	Pass	0	0	0	41
M_TCP_Data	m_MemoryRead044	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead044Hardware_MemoryRead044.exe</a>	2,2	2010/0208 165517	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 16:18:42	17725	TELM-06	1	Pass	0	0	0	4
M_TCP_Data	m_MemoryRead045	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead045Hardware_MemoryRead045.exe</a>	2,0	2009/0922 143222	2,0	Up-to-date	Baseline 17, 1	None	09/05/2010 16:16:16	6988	TELM-06	1	Pass	0	0	0	2
M_TCP_Data	m_MemoryRead049	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead049Hardware_MemoryRead049.exe</a>	2,1	2009/0207 192411	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 16:10:26	9632	TELM-06	1	Pass	0	0	0	7
M_TCP_Data	m_MemoryRead051	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead051Hardware_MemoryRead051.exe</a>	2,1	2009/0227 194830	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 16:10:26	9632	TELM-06	1	Pass	0	0	0	7
M_TCP_Data	m_MemoryRead052	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead052Hardware_MemoryRead052.exe</a>	2,0	2010/0629 231489	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 16:08:13	11035	TELM-06	1	Pass	0	0	0	4
M_TCP_Data	m_MemoryRead053	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead053Hardware_MemoryRead053.exe</a>	2,2	2009/0207 195207	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 16:06:38	8534	TELM-06	1	Pass	0	0	0	15
M_TCP_Data	m_MemoryRead059	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead059Hardware_MemoryRead059.exe</a>	2,0	2009/0922 144830	2,0	Up-to-date	Baseline 17, 1	None	09/05/2010 16:04:46	10438	TELM-06	1	Pass	0	0	0	7
M_TCP_Data	m_MemoryRead063	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead063Hardware_MemoryRead063.exe</a>	2,1	2009/0228 144341	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 16:00:33	10072	TELM-06	1	Pass	0	0	0	3
M_TCP_Data	m_MemoryRead065	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead065Hardware_MemoryRead065.exe</a>	2,2	2009/0218 190634	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 15:53:51	7829	TELM-06	1	Pass	0	0	0	186
M_TCP_Data	m_MemoryRead066	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead066Hardware_MemoryRead066.exe</a>	2,3	2009/0124 173337	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 15:50:37	11245	TELM-06	1	Pass	0	0	0	145
M_TCP_Data	m_MemoryRead070	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead070Hardware_MemoryRead070.exe</a>	2,1	2009/0228 150957	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 15:48:47	6777	TELM-06	1	Pass	0	0	0	9
M_TCP_Data	m_MemoryRead080	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead080Hardware_MemoryRead080.exe</a>	2,1	2010/0201 191134	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 15:43:05	7350	TELM-06	1	Pass	0	0	0	9
M_TCP_Data	m_MemoryRead081	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead081Hardware_MemoryRead081.exe</a>	2,1	2009/0228 150957	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 15:42:03	7953	TELM-06	1	Pass	0	0	0	9
M_TCP_Data	m_MemoryRead082	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead082Hardware_MemoryRead082.exe</a>	2,1	2009/0228 160033	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 15:40:04	7521	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_MemoryRead084	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead084Hardware_MemoryRead084.exe</a>	2,1	2009/0228 160734	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 15:37:12	7510	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_MemoryRead085	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead085Hardware_MemoryRead085.exe</a>	2,2	2009/0228 160636	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 15:32:03	12274	TELM-06	1	Pass	0	0	0	23
M_TCP_Data	m_MemoryRead086	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead086Hardware_MemoryRead086.exe</a>	2,1	2009/0228 162817	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 15:30:03	7482	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_MemoryRead088	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead088Hardware_MemoryRead088.exe</a>	2,1	2009/0228 162859	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 15:29:00	7538	TELM-06	1	Pass	0	0	0	40
M_TCP_Data	m_MemoryRead089	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead089Hardware_MemoryRead089.exe</a>	2,1	2009/0228 163630	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 15:27:20	7530	TELM-06	1	Pass	0	0	0	57
M_TCP_Data	m_MemoryRead090	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead090Hardware_MemoryRead090.exe</a>	2,1	2010/0201 211145	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 15:26:09	8116	TELM-06	1	Pass	0	0	0	280
M_TCP_Data	m_MemoryRead091	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead091Hardware_MemoryRead091.exe</a>	2,3	2010/0119 173737	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 15:24:01	8540	TELM-06	1	Pass	0	0	0	1521
M_TCP_Data	m_MemoryRead096	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead096Hardware_MemoryRead096.exe</a>	2,1	2009/0229 200605	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 15:22:27	6933	TELM-06	1	Pass	0	0	0	171
M_TCP_Data	m_MemoryRead098	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead098Hardware_MemoryRead098.exe</a>	2,2	2009/0229 154403	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 15:21:08	8116	TELM-06	1	Pass	0	0	0	3
M_TCP_Data	m_MemoryRead099	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead099Hardware_MemoryRead099.exe</a>	2,2	2009/0229 154400	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 15:20:00	7842	TELM-06	1	Pass	0	0	0	3
M_TCP_Data	m_MemoryRead102	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead102Hardware_MemoryRead102.exe</a>	2,3	2009/0117 182726	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 15:18:23	9294	TELM-06	1	Pass	0	0	0	4
M_TCP_Data	m_MemoryRead104	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead104Hardware_MemoryRead104.exe</a>	2,2	2010/0204 161518	2,4	Up-to-date	Baseline 17, 1	None	09/05/2010 15:16:43	20561	TELM-06	1	Pass	0	0	0	8
M_TCP_Data	m_MemoryRead105	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead105Hardware_MemoryRead105.exe</a>	2,2	2009/0124 171787	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 15:14:16	7958	TELM-06	1	Pass	0	0	0	5
M_TCP_Data	m_MemoryRead106	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead106Hardware_MemoryRead106.exe</a>	2,1	2009/0229 184712	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 15:10:41	10955	TELM-06	1	Pass	0	0	0	7
M_TCP_Data	m_MemoryRead109	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead109Hardware_MemoryRead109.exe</a>	2,2	2010/0201 200335	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 15:09:09	14014	TELM-06	1	Pass	0	0	0	15
M_TCP_Data	m_MemoryRead111	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead111Hardware_MemoryRead111.exe</a>	2,1	2010/0318 108408	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 15:07:26	9859	TELM-06	1	Pass	0	0	0	509
M_TCP_Data	m_MemoryRead113	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead113Hardware_MemoryRead113.exe</a>	2,1	2009/0229 184213	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 15:03:42	7244	TELM-06	1	Pass	0	0	0	23
M_TCP_Data	m_MemoryRead115	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead115Hardware_MemoryRead115.exe</a>	2,1	2010/0210 182202	2,1	Up-to-date	Baseline 17, 1	None	09/05/2010 15:01:50	9647	TELM-06	1	Pass	0	0	0	3
M_TCP_Data	m_MemoryRead116	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead116Hardware_MemoryRead116.exe</a>	2,2	2010/0210 182210	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 14:58:48	7673	TELM-06	1	Pass	0	0	0	6
M_TCP_Data	m_MemoryRead118	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead118Hardware_MemoryRead118.exe</a>	2,2	2010/0201 204537	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 14:57:28	13777	TELM-06	1	Pass	0	0	0	11
M_TCP_Data	m_MemoryRead120	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead120Hardware_MemoryRead120.exe</a>	2,2	2010/0210 173815	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 14:55:44	10275	TELM-06	1	Pass	0	0	0	981
M_TCP_Data	m_MemoryRead121	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead121Hardware_MemoryRead121.exe</a>	2,3	2010/0204 161518	2,3	Up-to-date	Baseline 17, 1	None	09/05/2010 14:54:13	12373	TELM-06	1	Pass	0	0	0	23
M_TCP_Data	m_MemoryRead124	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead124Hardware_MemoryRead124.exe</a>	2,2	2009/0111 181521	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 14:52:27	8113	TELM-06	1	Pass	0	0	0	96
M_TCP_Data	m_MemoryRead125	<a href="#">Vdtaipacefw/mzozar/FWTestFWT_FORMALTestMod99_10Testslam_nvfmzozarvfm TCP Dajain_MemoryRead125Hardware_MemoryRead125.exe</a>	2,2	2009/0111 183237	2,2	Up-to-date	Baseline 17, 1	None	09/05/2010 14:51:22	9021	TELM-06	1	Pass	0	0	0	11
M_TCP_Data	m_MemoryRead149	<a href="#">Vdtaipacefw/mz</a>															



M_TCP_Diagnostic	m_Diagnostic005	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Diagnostic_Diagnostic005Hardwarrn_Diagnostic005.exe	2.2	20091231/13211444	2.2	Up-to-date	Baseline 17_1	None	09/05/2010 12:17:23	7828	TELM-06	1	Pass	0	0	0	7
M_TCP_Diagnostic	m_Diagnostic006	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Diagnostic_Diagnostic006Hardwarrn_Diagnostic006.exe	2.3	20100310/15393201	2.3	Up-to-date	Baseline 17_1	None	08/09/2010 12:15:44	7007	TELM-06	1	Pass	0	0	0	8
M_TCP_Diagnostic	m_Diagnostic007	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Diagnostic_Diagnostic007Hardwarrn_Diagnostic007.exe	2.4	20100310/15393201	2.4	Up-to-date	Baseline 17_1	None	09/05/2010 13:14:24	7007	TELM-06	1	Pass	0	0	0	7
M_TCP_Diagnostic	m_Diagnostic008	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Diagnostic_Diagnostic008Hardwarrn_Diagnostic008.exe	2.3	20100607/192248	2.3	Up-to-date	Baseline 17_1	None	09/05/2010 12:11:59	48830	TELM-06	1	Pass	0	0	0	18
M_TCP_Discover	m_DiscoverFull001	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull001Hardwarrn_DiscoverFull001.exe	2.8	20100226/2116429	2.8	Up-to-date	Baseline 17_1	None	09/10/2010 04:12:00	44414	TELM-06	1	Pass	0	0	0	150
M_TCP_Discover	m_DiscoverFull002	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull002Hardwarrn_DiscoverFull002.exe	2.3	20100310/15393201	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 04:08:11	144997	TELM-06	1	Pass	0	0	0	181
M_TCP_Discover	m_DiscoverFull003	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull003Hardwarrn_DiscoverFull003.exe	2.4	20100225/20001	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 04:05:36	12114	TELM-06	1	Pass	0	0	0	58
M_TCP_Discover	m_DiscoverFull004	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull004Hardwarrn_DiscoverFull004.exe	2.2	20100205/211917	2.4	Up-to-date	Baseline 17_1	None	09/10/2010 13:24:24	270981	TELM-06	1	Pass	0	0	0	3713
M_TCP_Discover	m_DiscoverFull005	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull005Hardwarrn_DiscoverFull005.exe	2.3	20100129/165867	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 04:04:14	174326	TELM-06	1	Pass	0	0	0	8
M_TCP_Discover	m_DiscoverFull006	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull006Hardwarrn_DiscoverFull006.exe	2.3	20100205/211943	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 09:49:17	130855	TELM-06	1	Pass	0	0	0	1727
M_TCP_Discover	m_DiscoverFull007	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull007Hardwarrn_DiscoverFull007.exe	2.7	20091214/114307	2.7	Up-to-date	Baseline 17_1	None	09/10/2010 04:02:21	13874	TELM-06	1	Pass	0	0	0	6
M_TCP_Discover	m_DiscoverFull008	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull008Hardwarrn_DiscoverFull008.exe	2.4	20100121/102121	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 04:01:50	8106	TELM-06	1	Pass	0	0	0	65
M_TCP_Discover	m_DiscoverFull010	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull010Hardwarrn_DiscoverFull010.exe	2.4	20100512/170731	2.4	Up-to-date	Baseline 17_1	None	09/10/2010 03:59:52	8958	TELM-06	1	Pass	0	0	0	121
M_TCP_Discover	m_DiscoverFull011	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull011Hardwarrn_DiscoverFull011.exe	2.3	20091022/220301	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 03:57:22	56691	TELM-06	1	Pass	0	0	0	9
M_TCP_Discover	m_DiscoverFull012	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull012Hardwarrn_DiscoverFull012.exe	2.8	20100629/1200718	2.8	Up-to-date	Baseline 17_1	None	09/10/2010 10:05:12	366874	TELM-06	1	Pass	0	0	0	33
M_TCP_Discover	m_DiscoverFull013	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull013Hardwarrn_DiscoverFull013.exe	2.2	20100318/160309	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 03:55:09	42748	TELM-06	1	Pass	0	0	0	10
M_TCP_Discover	m_DiscoverFull014	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull014Hardwarrn_DiscoverFull014.exe	2.2	20100318/160345	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 03:52:42	24557	TELM-06	1	Pass	0	0	0	15
M_TCP_Discover	m_DiscoverFull015	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull015Hardwarrn_DiscoverFull015.exe	2.1	20091123/160649	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 03:51:14	7757	TELM-06	1	Pass	0	0	0	12
M_TCP_Discover	m_DiscoverFull016	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull016Hardwarrn_DiscoverFull016.exe	2.1	20091103/205807	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 03:49:06	8212	TELM-06	1	Pass	0	0	0	6
M_TCP_Discover	m_DiscoverFull017	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull017Hardwarrn_DiscoverFull017.exe	2.1	20091103/205847	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 03:47:46	12098	TELM-06	1	Pass	0	0	0	10
M_TCP_Discover	m_DiscoverFull022	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull022Hardwarrn_DiscoverFull022.exe	2.1	20091123/161112	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 03:46:25	8344	TELM-06	1	Pass	0	0	0	6
M_TCP_Discover	m_DiscoverFull023	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull023Hardwarrn_DiscoverFull023.exe	2.1	20091123/161142	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 03:45:05	11433	TELM-06	1	Pass	0	0	0	7
M_TCP_Discover	m_DiscoverFull024	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull024Hardwarrn_DiscoverFull024.exe	2.1	20091123/161204	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 03:44:14	12800	TELM-06	1	Pass	0	0	0	7
M_TCP_Discover	m_DiscoverFull025	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull025Hardwarrn_DiscoverFull025.exe	2.1	20091123/161232	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 03:42:25	9182	TELM-06	1	Pass	0	0	0	3
M_TCP_Discover	m_DiscoverFull029	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull029Hardwarrn_DiscoverFull029.exe	2.0	20091113/212759	2.0	Up-to-date	Baseline 17_1	None	09/10/2010 03:37:34	12324	TELM-06	1	Pass	0	0	0	3
M_TCP_Discover	m_DiscoverFull030	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull030Hardwarrn_DiscoverFull030.exe	2.3	20100528/113920	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 03:33:49	19166	TELM-06	1	Pass	0	0	0	10
M_TCP_Discover	m_DiscoverFull031	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull031Hardwarrn_DiscoverFull031.exe	2.3	20100528/123820	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 03:32:06	35290	TELM-06	1	Pass	0	0	0	22
M_TCP_Discover	m_DiscoverFull032	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull032Hardwarrn_DiscoverFull032.exe	2.0	20091113/212943	2.0	Up-to-date	Baseline 17_1	None	09/10/2010 03:29:41	9334	TELM-06	1	Pass	0	0	0	12
M_TCP_Discover	m_DiscoverFull033	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull033Hardwarrn_DiscoverFull033.exe	2.2	20091113/213014	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 03:27:15	9234	TELM-06	1	Pass	0	0	0	2
M_TCP_Discover	m_DiscoverFull034	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull034Hardwarrn_DiscoverFull034.exe	2.2	20100318/160421	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 03:26:14	11228	TELM-06	1	Pass	0	0	0	2
M_TCP_Discover	m_DiscoverFull035	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull035Hardwarrn_DiscoverFull035.exe	2.2	20100319/205533	2.2	Up-to-date	Baseline 17_1	None	09/11/2010 01:05:58	43617	TELM-06	1	Pass	0	0	0	31
M_TCP_Discover	m_DiscoverFull036	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull036Hardwarrn_DiscoverFull036.exe	2.2	20100317/142832	2.2	Up-to-date	Baseline 17_1	None	09/11/2010 02:46:26	22037	TELM-06	1	Pass	0	0	0	28
M_TCP_Discover	m_DiscoverFull037	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull037Hardwarrn_DiscoverFull037.exe	2.2	20100303/211836	2.4	Up-to-date	Baseline 17_1	None	09/11/2010 04:15:26	8481	TELM-06	1	Pass	0	0	0	4
M_TCP_Discover	m_DiscoverFull038	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Discoverm_DiscoverFull038Hardwarrn_DiscoverFull038.exe	2.1	20091201/204948	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 03:22:08	147073	TELM-06	1	Pass	0	0	0	7
M_TCP_EPRM000	m_EPRM000	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_EPRM00m_EPRM000Hardwarrn_EPRM000.exe	2.3	20091223/162339	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 19:40:31	11123	TELM-06	1	Pass	0	0	0	22
M_TCP_EPRM001	m_EPRM001	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_EPRM00m_EPRM001Hardwarrn_EPRM001.exe	2.2	20101219/210740	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 17:03:07	8942	TELM-06	1	Pass	0	0	0	1
M_TCP_EPRM003	m_EPRM003	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_EPRM00m_EPRM003Hardwarrn_EPRM003.exe	2.2	20100105/13927	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 10:07:03	16995	TELM-06	1	Pass	0	0	0	702
M_TCP_EPRM004	m_EPRM004	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_EPRM00m_EPRM004Hardwarrn_EPRM004.exe	2.2	20100125/192631	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 10:02:12	10908	TELM-06	1	Pass	0	0	0	583
M_TCP_EPRM005	m_EPRM005	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_EPRM00m_EPRM005Hardwarrn_EPRM005.exe	2.2	20100119/125433	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 08:57:03	9361	TELM-06	1	Pass	0	0	0	108
M_TCP_EPRM006	m_EPRM006	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_EPRM00m_EPRM006Hardwarrn_EPRM006.exe	2.2	20100528/125548	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 08:55:09	46951	TELM-06	1	Pass	0	0	0	6
M_TCP_EPRM007	m_EPRM007	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_EPRM00m_EPRM007Hardwarrn_EPRM007.exe	2.1	20100218/183833	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 09:53:16	5104	TELM-06	1	Pass	0	0	0	5
M_TCP_Emergency000	m_Emergency000	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Emergenym_Emergency000Hardwarrn_Emergency000.exe	2.3	20091103/215423	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 22:35:39	9480	TELM-06	1	Pass	0	0	0	108
M_TCP_Emergency001	m_Emergency001	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Emergenym_Emergency001Hardwarrn_Emergency001.exe	2.5	20100625/201936	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 22:11:31	12965	TELM-06	1	Pass	0	0	0	45
M_TCP_Emergency003	m_Emergency003	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Emergenym_Emergency003Hardwarrn_Emergency003.exe	2.3	20100629/141236	2.6	Up-to-date	Baseline 17_1	None	09/09/2010 23:08:54	28206	TELM-06	1	Pass	0	0	0	2564
M_TCP_Emergency004	m_Emergency004	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Emergenym_Emergency004Hardwarrn_Emergency004.exe	2.6	20100205/212943	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 23:06:34	18983	TELM-06	1	Pass	0	0	0	4
M_TCP_Emergency005	m_Emergency005	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Emergenym_Emergency005Hardwarrn_Emergency005.exe	2.1	20091110/192501	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 23:03:48	8204	TELM-06	1	Pass	0	0	0	2
M_TCP_Emergency006	m_Emergency006	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Emergenym_Emergency006Hardwarrn_Emergency006.exe	2.1	20091016/164407	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 23:00:21	9255	TELM-06	1	Pass	0	0	0	6
M_TCP_Emergency007	m_Emergency007	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Emergenym_Emergency007Hardwarrn_Emergency007.exe	2.1	20091016/164428	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 22:57:19	9354	TELM-06	1	Pass	0	0	0	33
M_TCP_Emergency009	m_Emergency009	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Emergenym_Emergency009Hardwarrn_Emergency009.exe	2.2	20091109/164282	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 22:54:56	82017	TELM-06	1	Pass	0	0	0	6
M_TCP_Emergency010	m_Emergency010	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Emergenym_Emergency010Hardwarrn_Emergency010.exe	2.2	20100806/155617	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 22:53:28	13309	TELM-06	1	Pass	0	0	0	6
M_TCP_Emergency011	m_Emergency011	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Emergenym_Emergency011Hardwarrn_Emergency011.exe	2.0	20091021/162523	2.0	Up-to-date	Baseline 17_1	None	09/09/2010 22:52:19	6741	TELM-06	1	Pass	0	0	0	2
M_TCP_Emergency012	m_Emergency012	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Emergenym_Emergency012Hardwarrn_Emergency012.exe	2.1	20091111/201834	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 22:51:14	9170	TELM-06	1	Pass	0	0	0	7
M_TCP_Emergency013	m_Emergency013	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Emergenym_Emergency013Hardwarrn_Emergency013.exe	2.1	20091111/140224	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 22:49:17	11509	TELM-06	1	Pass	0	0	0	26
M_TCP_Emergency014	m_Emergency014	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Emergenym_Emergency014Hardwarrn_Emergency014.exe	2.3	20091223/133336	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 22:48:09	8239	TELM-06	1	Pass	0	0	0	6
M_TCP_Emergency015	m_Emergency015	VdlaipacelwfmznarfWTestFWT/FORMALTestModes/10Testslam_nvfmzomvurMm_TCP_Emergenym_Emergency015Hardwarrn_Emergency015.exe	2.3	20091006/155640	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 22:45:53	8969	TELM-06	1	Pass	0	0	0	8
M_TCP_Emergency016	m_Emergency016	VdlaipacelwfmznarfWTestFWT/F															

M_TCP_Network	m_Network03	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network03HHardwareM_Network03.exe</a>	2,1	201009216 2227206	2,1	Up-to-date	Baseline 17, 1	None	09/09/2010 21:44:18	64790	TELM-06	1	Pass	0	0	0	86
M_TCP_Network	m_Network04	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network04HHardwareM_Network04.exe</a>	2,1	20100921 11:44:24	2,1	Up-to-date	Baseline 17, 1	None	09/09/2010 21:41:50	2361	TELM-06	1	Pass	0	0	0	5
M_TCP_Network	m_Network05	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network05HHardwareM_Network05.exe</a>	2,3	20100912 12:02:18	2,3	Up-to-date	Baseline 17, 1	None	09/09/2010 21:37:41	58135	TELM-06	1	Pass	0	0	0	5
M_TCP_Network	m_Network06	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network06HHardwareM_Network06.exe</a>	2,5	20100921 16:49:56	2,5	Up-to-date	Baseline 17, 1	None	09/09/2010 21:35:15	15254	TELM-06	1	Pass	0	0	0	1421
M_TCP_Network	m_Network07	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network07HHardwareM_Network07.exe</a>	2,5	20100921 17:09:04	2,5	Up-to-date	Baseline 17, 1	None	09/09/2010 21:29:23	10276	TELM-06	1	Pass	0	0	0	1421
M_TCP_Network	m_Network08	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network08HHardwareM_Network08.exe</a>	2,5	20100921 17:09:04	2,5	Up-to-date	Baseline 17, 1	None	09/09/2010 21:25:31	101457	TELM-06	1	Pass	0	0	0	1360
M_TCP_Network	m_Network09	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network09HHardwareM_Network09.exe</a>	2,5	20100921 17:21:30	2,5	Up-to-date	Baseline 17, 1	None	09/09/2010 21:22:10	10415	TELM-06	1	Pass	0	0	0	1381
M_TCP_Network	m_Network10	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network10HHardwareM_Network10.exe</a>	2,5	20100921 17:34:27	2,5	Up-to-date	Baseline 17, 1	None	09/09/2010 21:19:23	10276	TELM-06	1	Pass	0	0	0	1381
M_TCP_Network	m_Network11	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network11HHardwareM_Network11.exe</a>	2,5	20100921 17:34:27	2,5	Up-to-date	Baseline 17, 1	None	09/09/2010 21:16:48	205623	TELM-06	1	Pass	0	0	0	1381
M_TCP_Network	m_Network13	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network13HHardwareM_Network13.exe</a>	2,5	20100701 13:00:48	2,5	Up-to-date	Baseline 17, 1	None	09/09/2010 21:07:31	141819	TELM-06	1	Pass	0	0	0	392
M_TCP_Network	m_Network14	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network14HHardwareM_Network14.exe</a>	2,3	20100921 12:06:29	2,3	Up-to-date	Baseline 17, 1	None	09/09/2010 21:10:46	26650	TELM-06	1	Pass	0	0	0	12
M_TCP_Network	m_Network15	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network15HHardwareM_Network15.exe</a>	2,3	20100524 13:53:18	2,3	Up-to-date	Baseline 17, 1	None	09/09/2010 21:02:10	35725	TELM-06	1	Pass	0	0	0	25
M_TCP_Network	m_Network16	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network16HHardwareM_Network16.exe</a>	2,1	20100912 12:09:43	2,1	Up-to-date	Baseline 17, 1	None	09/09/2010 20:59:26	55337	TELM-06	1	Pass	0	0	0	262
M_TCP_Network	m_Network17	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network17HHardwareM_Network17.exe</a>	2,4	20100607 13:19:37	2,4	Up-to-date	Baseline 17, 1	None	09/09/2010 20:58:10	12750	TELM-06	1	Pass	0	0	0	41
M_TCP_Network	m_Network18	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network18HHardwareM_Network18.exe</a>	2,5	20100607 13:14:52	2,5	Up-to-date	Baseline 17, 1	None	09/09/2010 20:54:31	21581	TELM-06	1	Pass	0	0	0	11
M_TCP_Network	m_Network19	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network19HHardwareM_Network19.exe</a>	2,2	20100912 12:12:40	2,2	Up-to-date	Baseline 17, 1	None	09/09/2010 20:49:45	56005	TELM-06	1	Pass	0	0	0	51
M_TCP_Network	m_Network20	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network20HHardwareM_Network20.exe</a>	2,2	20100912 12:14:53	2,2	Up-to-date	Baseline 17, 1	None	09/09/2010 20:46:49	60302	TELM-06	1	Pass	0	0	0	67
M_TCP_Network	m_Network21	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network21HHardwareM_Network21.exe</a>	2,2	20100912 12:16:17	2,2	Up-to-date	Baseline 17, 1	None	09/09/2010 20:43:26	60362	TELM-06	1	Pass	0	0	0	133
M_TCP_Network	m_Network22	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network22HHardwareM_Network22.exe</a>	2,2	20100912 12:17:24	2,2	Up-to-date	Baseline 17, 1	None	09/09/2010 20:38:40	60371	TELM-06	1	Pass	0	0	0	175
M_TCP_Network	m_Network23	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network23HHardwareM_Network23.exe</a>	2,1	20100912 12:18:23	2,1	Up-to-date	Baseline 17, 1	None	09/09/2010 20:36:32	19623	TELM-06	1	Pass	0	0	0	454
M_TCP_Network	m_Network24	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network24HHardwareM_Network24.exe</a>	2,2	20100924 14:41:01	2,2	Up-to-date	Baseline 17, 1	None	09/09/2010 20:33:56	47546	TELM-06	1	Pass	0	0	0	46
M_TCP_Network	m_Network25	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network25HHardwareM_Network25.exe</a>	2,1	20100912 12:20:01	2,1	Up-to-date	Baseline 17, 1	None	09/09/2010 20:31:33	19500	TELM-06	1	Pass	0	0	0	178
M_TCP_Network	m_Network26	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network26HHardwareM_Network26.exe</a>	2,3	20100912 12:20:56	2,3	Up-to-date	Baseline 17, 1	None	09/09/2010 20:28:32	20491	TELM-06	1	Pass	0	0	0	178
M_TCP_Network	m_Network27	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network27HHardwareM_Network27.exe</a>	2,1	20100912 12:22:22	2,1	Up-to-date	Baseline 17, 1	None	09/09/2010 20:24:16	20988	TELM-06	1	Pass	0	0	0	7
M_TCP_Network	m_Network28	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network28HHardwareM_Network28.exe</a>	2,1	20100607 13:22:27	2,1	Up-to-date	Baseline 17, 1	None	09/09/2010 20:21:46	12978	TELM-06	1	Pass	0	0	0	22
M_TCP_Network	m_Network29	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_NetworkM_Network29HHardwareM_Network29.exe</a>	2,4	20100209 21:17	2,4	Up-to-date	Baseline 17, 1	None	09/09/2010 15:31:52	271665	TELM-06	1	Pass	0	0	0	48
M_TCP_Open	m_Open01	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open01HHardwareM_Open01.exe</a>	2,11	20100620 13:50:26	2,11	Up-to-date	Baseline 17, 1	None	09/09/2010 19:10:10	31634	TELM-06	1	Pass	0	0	0	335
M_TCP_Open	m_Open02	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open02HHardwareM_Open02.exe</a>	2,3	20100118 15:52:03	2,3	Up-to-date	Baseline 17, 1	None	09/09/2010 19:15:58	18560	TELM-06	1	Pass	0	0	0	31
M_TCP_Open	m_Open03	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open03HHardwareM_Open03.exe</a>	2,3	20100919 15:52:03	2,3	Up-to-date	Baseline 17, 1	None	09/09/2010 19:14:17	13733	TELM-06	1	Pass	0	0	0	31
M_TCP_Open	m_Open04	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open04HHardwareM_Open04.exe</a>	2,6	20100622 20:01:21	2,6	Up-to-date	Baseline 17, 1	None	09/09/2010 20:12:47	13119	TELM-06	1	Pass	0	0	0	21
M_TCP_Open	m_Open05	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open05HHardwareM_Open05.exe</a>	2,3	20100622 17:40:45	2,3	Up-to-date	Baseline 17, 1	None	09/09/2010 20:10:54	17073	TELM-06	1	Pass	0	0	0	4
M_TCP_Open	m_Open06	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open06HHardwareM_Open06.exe</a>	2,7	20100314 20:20:52	2,7	Up-to-date	Baseline 17, 1	None	09/09/2010 20:08:50	21101	TELM-06	1	Pass	0	0	0	203
M_TCP_Open	m_Open07	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open07HHardwareM_Open07.exe</a>	2,7	20100315 14:46:20	2,7	Up-to-date	Baseline 17, 1	None	09/09/2010 20:06:48	17486	TELM-06	1	Pass	0	0	0	1181
M_TCP_Open	m_Open08	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open08HHardwareM_Open08.exe</a>	2,1	20091030 14:23:08	2,1	Up-to-date	Baseline 17, 1	None	09/09/2010 20:04:58	7746	TELM-06	1	Pass	0	0	0	5
M_TCP_Open	m_Open09	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open09HHardwareM_Open09.exe</a>	2,7	20100616 10:36:52	2,7	Up-to-date	Baseline 17, 1	None	09/09/2010 20:03:18	12412	TELM-06	1	Pass	0	0	0	1268
M_TCP_Open	m_Open10	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open10HHardwareM_Open10.exe</a>	2,2	20100313 15:05:05	2,2	Up-to-date	Baseline 17, 1	None	09/09/2010 20:01:34	17360	TELM-06	1	Pass	0	0	0	5
M_TCP_Open	m_Open11	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open11HHardwareM_Open11.exe</a>	2,2	20100120 13:31:30	2,2	Up-to-date	Baseline 17, 1	None	09/09/2010 19:59:13	6291	TELM-06	1	Pass	0	0	0	4
M_TCP_Open	m_Open12	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open12HHardwareM_Open12.exe</a>	2,4	20100228 17:01:14	2,4	Up-to-date	Baseline 17, 1	None	09/09/2010 19:57:41	15407	TELM-06	1	Pass	0	0	0	10
M_TCP_Open	m_Open13	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open13HHardwareM_Open13.exe</a>	2,6	20100210 13:55:29	2,6	Up-to-date	Baseline 17, 1	None	09/09/2010 19:56:22	21410	TELM-06	1	Pass	0	0	0	101
M_TCP_Open	m_Open14	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open14HHardwareM_Open14.exe</a>	2,6	20100120 13:35:39	2,6	Up-to-date	Baseline 17, 1	None	09/09/2010 19:53:56	8622	TELM-06	1	Pass	0	0	0	101
M_TCP_Open	m_Open15	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open15HHardwareM_Open15.exe</a>	2,0	20100128 19:00:26	2,0	Up-to-date	Baseline 17, 1	None	09/09/2010 19:52:17	8925	TELM-06	1	Pass	0	0	0	9
M_TCP_Open	m_Open16	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open16HHardwareM_Open16.exe</a>	2,1	20100516 20:26:49	2,1	Up-to-date	Baseline 17, 1	None	09/09/2010 19:52:09	58182	TELM-06	1	Pass	0	0	0	16
M_TCP_Open	m_Open31	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open31HHardwareM_Open31.exe</a>	2,7	20091119 21:48:20	2,7	Up-to-date	Baseline 17, 1	None	09/09/2010 19:23:37	6377	TELM-06	1	Pass	0	0	0	42
M_TCP_Open	m_Open32	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open32HHardwareM_Open32.exe</a>	2,3	20100203 22:17:27	2,3	Up-to-date	Baseline 17, 1	None	09/09/2010 19:23:33	3244	TELM-06	1	Pass	0	0	0	18
M_TCP_Open	m_Open33	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open33HHardwareM_Open33.exe</a>	2,3	20100203 22:27:54	2,3	Up-to-date	Baseline 17, 1	None	09/09/2010 19:21:07	9899	TELM-06	1	Pass	0	0	0	5
M_TCP_Open	m_Open34	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open34HHardwareM_Open34.exe</a>	2,3	20100211 14:16:09	2,3	Up-to-date	Baseline 17, 1	None	09/09/2010 19:19:07	5733	TELM-06	1	Pass	0	0	0	42
M_TCP_Open	m_Open35	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open35HHardwareM_Open35.exe</a>	2,2	20100917 14:10:57	2,2	Up-to-date	Baseline 17, 1	None	09/09/2010 19:17:45	9933	TELM-06	1	Pass	0	0	0	32
M_TCP_Open	m_Open36	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open36HHardwareM_Open36.exe</a>	2,1	20090921 15:52:46	2,1	Up-to-date	Baseline 17, 1	None	09/09/2010 19:16:25	3627	TELM-06	1	Pass	0	0	0	16
M_TCP_Open	m_Open37	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open37HHardwareM_Open37.exe</a>	2,2	20100919 15:52:46	2,2	Up-to-date	Baseline 17, 1	None	09/09/2010 19:14:24	31234	TELM-06	1	Pass	0	0	0	9
M_TCP_Open	m_Open38	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open38HHardwareM_Open38.exe</a>	2,7	20100717 14:00:40	2,7	Up-to-date	Baseline 17, 1	None	09/09/2010 19:14:23	78354	TELM-06	1	Pass	0	0	0	46
M_TCP_Open	m_Open39	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open39HHardwareM_Open39.exe</a>	2,0	20091109 14:20:44	2,0	Up-to-date	Baseline 17, 1	None	09/09/2010 19:14:33	9120	TELM-06	1	Pass	0	0	0	1
M_TCP_Open	m_Open40	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open40HHardwareM_Open40.exe</a>	2,1	20100201 14:00:44	2,1	Up-to-date	Baseline 17, 1	None	09/09/2010 19:12:00	11208	TELM-06	1	Pass	0	0	0	1
M_TCP_Open	m_Open41	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open41HHardwareM_Open41.exe</a>	2,0	20091105 14:21:53	2,0	Up-to-date	Baseline 17, 1	None	09/09/2010 19:10:52	51932	TELM-06	1	Pass	0	0	0	1
M_TCP_Open	m_Open42	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_OpenM_Open42HHardwareM_Open42.exe</a>	2,4	20100702 12:38:07	2,4	Up-to-date	Baseline 17, 1	None	09/09/2010 19:09:31	16075	TELM-06	1	Pass	0	0	0	69
M_TCP_Polling	m_Polling16	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_Pollingm_Polling16HHardwareM_Polling16.exe</a>	2,0	20090923 19:25:05	2,0	Up-to-date	Baseline 17, 1	None	09/09/2010 09:37:43	4914	TELM-06	1	Pass	0	0	0	5
M_TCP_Polling	m_Polling17	<a href="#">VdaipaacefwwmzarfWTestFWT FORMALTesMod9e 10Testslam_nvfmzozarvum TCP_Pollingm_Polling17HHardwareM_Polling17.exe</a>	2,1														


M_TCP_Security	m_Security002	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur02\Hardwarem_Secur002.exe</a>	2.9	20100603 15:18:25	2.9	Up-to-date	Baseline 17_1	None	09/10/2010 17:34:11	457359	TELM-06	1	Pass	0	0	0	154
M_TCP_Security	m_Security003	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur03\Hardwarem_Secur003.exe</a>	2.4	20100217 16:20:41	2.4	Up-to-date	Baseline 17_1	None	09/10/2010 04:14:06	6949	TELM-06	1	Pass	0	0	0	73
M_TCP_Security	m_Security004	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur04\Hardwarem_Secur004.exe</a>	2.4	20100215 15:01:00	2.4	Up-to-date	Baseline 17_1	None	09/10/2010 03:07:34	253980	TELM-06	1	Pass	0	0	0	112
M_TCP_Security	m_Security005	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur05\Hardwarem_Secur005.exe</a>	2.2	20100217 16:23:51	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 03:06:51	4078	TELM-06	1	Pass	0	0	0	72
M_TCP_Security	m_Security006	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur06\Hardwarem_Secur006.exe</a>	2.4	20100217 14:44:38	2.4	Up-to-date	Baseline 17_1	None	09/10/2010 03:00:58	145599	TELM-06	1	Pass	0	0	0	108
M_TCP_Security	m_Security007	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur07\Hardwarem_Secur007.exe</a>	2.6	20100218 15:13:38	2.6	Up-to-date	Baseline 17_1	None	09/10/2010 02:56:56	97975	TELM-06	1	Pass	0	0	0	126
M_TCP_Security	m_Security008	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur08\Hardwarem_Secur008.exe</a>	2.3	20100217 16:28:05	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 02:54:46	6828	TELM-06	1	Pass	0	0	0	72
M_TCP_Security	m_Security009	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur09\Hardwarem_Secur009.exe</a>	2.3	20100217 16:32:40	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 02:52:52	6318	TELM-06	1	Pass	0	0	0	36
M_TCP_Security	m_Security010	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur10\Hardwarem_Secur010.exe</a>	2.6	20100218 15:14:43	2.6	Up-to-date	Baseline 17_1	None	09/10/2010 02:48:07	50658	TELM-06	1	Pass	0	0	0	113
M_TCP_Security	m_Security011	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur11\Hardwarem_Secur011.exe</a>	2.5	20100603 18:16:10	2.5	Up-to-date	Baseline 17_1	None	09/10/2010 02:43:38	20145	TELM-06	1	Pass	0	0	0	58
M_TCP_Security	m_Security012	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur12\Hardwarem_Secur012.exe</a>	2.9	20100218 15:14:18	2.9	Up-to-date	Baseline 17_1	None	09/10/2010 02:41:24	4884	TELM-06	1	Pass	0	0	0	132
M_TCP_Security	m_Security013	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur13\Hardwarem_Secur013.exe</a>	2.5	20100218 15:15:19	2.5	Up-to-date	Baseline 17_1	None	09/10/2010 02:35:46	11578	TELM-06	1	Pass	0	0	0	140
M_TCP_Security	m_Security014	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur14\Hardwarem_Secur014.exe</a>	2.2	20100603 18:21:27	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 04:14:18	14508	TELM-06	1	Pass	0	0	0	36
M_TCP_Security	m_Security015	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur15\Hardwarem_Secur015.exe</a>	2.4	20100217 17:58:26	2.4	Up-to-date	Baseline 17_1	None	09/10/2010 23:14:54	596197	TELM-06	1	Pass	0	0	0	34
M_TCP_Security	m_Security016	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur16\Hardwarem_Secur016.exe</a>	2.2	20100608 19:56:40	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 02:32:59	11128	TELM-06	1	Pass	0	0	0	146
M_TCP_Security	m_Security017	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur17\Hardwarem_Secur017.exe</a>	2.2	20091208 17:29:14	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 02:30:41	14646	TELM-06	1	Pass	0	0	0	39
M_TCP_Security	m_Security018	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur18\Hardwarem_Secur018.exe</a>	2.4	20100318 16:05:37	2.4	Up-to-date	Baseline 17_1	None	09/10/2010 02:28:01	40649	TELM-06	1	Pass	0	0	0	12
M_TCP_Security	m_Security019	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur19\Hardwarem_Secur019.exe</a>	2.3	20100328 13:43:17	2.3	Up-to-date	Baseline 17_1	None	09/13/2010 09:10:52	90632	TELM-06	1	Pass	0	0	0	1222
M_TCP_Security	m_Security020	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur20\Hardwarem_Secur020.exe</a>	2.3	20100603 18:22:30	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 02:21:41	22027	TELM-06	1	Pass	0	0	0	62
M_TCP_Security	m_Security021	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur21\Hardwarem_Secur021.exe</a>	2.5	20100603 18:37:52	2.5	Up-to-date	Baseline 17_1	None	09/10/2010 02:18:26	40870	TELM-06	1	Pass	0	0	0	81
M_TCP_Security	m_Security022	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur22\Hardwarem_Secur022.exe</a>	2.9	20100618 19:05:16	2.9	Up-to-date	Baseline 17_1	None	09/10/2010 11:13:09	290910	TELM-06	1	Pass	0	0	0	5505
M_TCP_Security	m_Security023	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur23\Hardwarem_Secur023.exe</a>	2.12	20100610 17:30:47	2.12	Up-to-date	Baseline 17_1	None	09/10/2010 02:03:25	51607	TELM-06	1	Pass	0	0	0	1119
M_TCP_Security	m_Security024	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur24\Hardwarem_Secur024.exe</a>	2.3	20100328 13:06:23	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 17:12:52	30656	TELM-06	1	Pass	0	0	0	4
M_TCP_Security	m_Security025	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur25\Hardwarem_Secur025.exe</a>	2.3	20100610 14:39:09	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 16:55:59	48458	TELM-06	1	Pass	0	0	0	158
M_TCP_Security	m_Security026	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur26\Hardwarem_Secur026.exe</a>	2.3	20100218 15:15:54	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 02:17:05	4160	TELM-06	1	Pass	0	0	0	60
M_TCP_Security	m_Security027	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur27\Hardwarem_Secur027.exe</a>	2.1	20100629 19:03:00	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 02:14:33	42290	TELM-06	1	Pass	0	0	0	35
M_TCP_Security	m_Security028	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur28\Hardwarem_Secur028.exe</a>	2.1	20100629 19:26:29	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 02:12:16	47163	TELM-06	1	Pass	0	0	0	35
M_TCP_Security	m_Security029	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur29\Hardwarem_Secur029.exe</a>	2.2	20100311 18:29:14	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 02:08:57	20601	TELM-06	1	Pass	0	0	0	46
M_TCP_Security	m_Security030	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur30\Hardwarem_Secur030.exe</a>	2.2	20100208 13:02:02	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 02:07:01	12462	TELM-06	1	Pass	0	0	0	44
M_TCP_Security	m_Security031	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur31\Hardwarem_Secur031.exe</a>	2.1	20100603 18:44:12	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 01:59:47	23053	TELM-06	1	Pass	0	0	0	16
M_TCP_Security	m_Security032	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur32\Hardwarem_Secur032.exe</a>	2.1	20100203 12:51:08	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 01:58:39	8150	TELM-06	1	Pass	0	0	0	11
M_TCP_Security	m_Security033	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur33\Hardwarem_Secur033.exe</a>	2.1	20100127 21:32:15	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 01:55:04	13934	TELM-06	1	Pass	0	0	0	12
M_TCP_Security	m_Security034	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur34\Hardwarem_Secur034.exe</a>	2.3	20100328 13:19:51	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 01:49:47	118709	TELM-06	1	Pass	0	0	0	15
M_TCP_Security	m_Security035	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur35\Hardwarem_Secur035.exe</a>	2.0	20100114 21:18:30	2.0	Up-to-date	Baseline 17_1	None	09/10/2010 01:48:11	17724	TELM-06	1	Pass	0	0	0	30
M_TCP_Security	m_Security036	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur36\Hardwarem_Secur036.exe</a>	2.5	20100607 14:41:43	2.5	Up-to-date	Baseline 17_1	None	09/10/2010 01:45:27	86768	TELM-06	1	Pass	0	0	0	10
M_TCP_Security	m_Security037	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur37\Hardwarem_Secur037.exe</a>	2.6	20100603 18:54:41	2.6	Up-to-date	Baseline 17_1	None	09/11/2010 04:11:14	51213	TELM-06	1	Pass	0	0	0	119
M_TCP_Security	m_Security038	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur38\Hardwarem_Secur038.exe</a>	2.9	20100607 13:02:07	2.9	Up-to-date	Baseline 17_1	None	09/10/2010 16:24:42	167462	TELM-06	1	Pass	0	0	0	170
M_TCP_Security	m_Security039	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur39\Hardwarem_Secur039.exe</a>	2.2	20100218 15:16:25	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 01:41:28	56729	TELM-06	1	Pass	0	0	0	55
M_TCP_Security	m_Security040	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur40\Hardwarem_Secur040.exe</a>	2.3	20100603 20:43:31	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 01:34:02	216558	TELM-06	1	Pass	0	0	0	33
M_TCP_Security	m_Security041	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur41\Hardwarem_Secur041.exe</a>	2.6	20100421 10:55:08	2.6	Up-to-date	Baseline 17_1	None	09/10/2010 01:32:04	65792	TELM-06	1	Pass	0	0	0	77
M_TCP_Security	m_Security042	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur42\Hardwarem_Secur042.exe</a>	2.1	20100408 12:57:18	2.1	Up-to-date	Baseline 17_1	None	09/10/2010 01:29:26	58063	TELM-06	1	Pass	0	0	0	48
M_TCP_Security	m_Security043	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur43\Hardwarem_Secur043.exe</a>	2.0	20100216 20:27:42	2.0	Up-to-date	Baseline 17_1	None	09/10/2010 01:26:37	68761	TELM-06	1	Pass	0	0	0	56
M_TCP_Security	m_Security044	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur44\Hardwarem_Secur044.exe</a>	2.2	20100513 19:14:37	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 01:23:16	70753	TELM-06	1	Pass	0	0	0	44
M_TCP_Security	m_Security045	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur45\Hardwarem_Secur045.exe</a>	2.3	20100512 17:38:53	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 01:19:54	71201	TELM-06	1	Pass	0	0	0	62
M_TCP_Security	m_Security046	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_Security\Secur46\Hardwarem_Secur046.exe</a>	2.2	20100607 13:05:30	2.2	Up-to-date	Baseline 17_1	None	09/10/2010 01:15:43	3341	TELM-06	1	Pass	0	0	0	30
M_TCP_WirelessWakeUp	m_WakeUp001	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_WirelessWakeUp\WakeUp001\Hardwarem_WakeUp001.exe</a>	2.3	20100621 17:44:25	2.3	Up-to-date	Baseline 17_1	None	09/10/2010 14:37:38	291273	TELM-06	1	Pass	0	0	0	16
M_TCP_WirelessWakeUp	m_WakeUp002	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_WirelessWakeUp\WakeUp002\Hardwarem_WakeUp002.exe</a>	2.5	20100512 16:16:45	2.5	Up-to-date	Baseline 17_1	None	09/09/2010 11:22:46	35491	TELM-06	1	Pass	0	0	0	12
M_TCP_WirelessWakeUp	m_WakeUp003	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_WirelessWakeUp\WakeUp003\Hardwarem_WakeUp003.exe</a>	2.2	20100310 17:59:29	2.2	Up-to-date	Baseline 17_1	None	09/09/2010 11:21:21	14645	TELM-06	1	Pass	0	0	0	11
M_TCP_WirelessWakeUp	m_WakeUp004	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_WirelessWakeUp\WakeUp004\Hardwarem_WakeUp004.exe</a>	2.1	20091208 16:08:20	2.1	Up-to-date	Baseline 17_1	None	09/11/2010 02:48:30	19480	TELM-06	1	Pass	0	0	0	31
M_TCP_WirelessWakeUp	m_WakeUp005	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_WirelessWakeUp\WakeUp005\Hardwarem_WakeUp005.exe</a>	2.3	20100608 21:32:21	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 11:19:43	20372	TELM-06	1	Pass	0	0	0	40
M_TCP_WirelessWakeUp	m_WakeUp006	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_WirelessWakeUp\WakeUp006\Hardwarem_WakeUp006.exe</a>	2.3	20100127 00:35:22	2.3	Up-to-date	Baseline 17_1	None	09/09/2010 11:18:26	10378	TELM-06	1	Pass	0	0	0	55
M_TCP_WirelessWakeUp	m_WakeUp007	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_WirelessWakeUp\WakeUp007\Hardwarem_WakeUp007.exe</a>	2.1	20091204 19:28:48	2.1	Up-to-date	Baseline 17_1	None	09/09/2010 11:17:14	12843	TELM-06	1	Pass	0	0	0	3
M_TCP_WirelessWakeUp	m_WakeUp008	<a href="#">Vdtsa\psa\fw\mozart\FWTest\FWTT FORMAL\TestMode9_10\Tssiam_nfv\mozart\vm\ TCP_WirelessWakeUp\WakeUp008\Hardwarem_WakeUp008.exe</a>	2.5	20100													

This is a description of the heading columns that are found under the "Tests" tab.

The intent is to provide more detailed information on what will be found.

	<b>Column Name</b>	<b>Description</b>
1	Feature	Common feature group, or sub-group, that test being run is related to.
2	Test	Name of the test (.cpp) that was run.
3	Test Path	Location of the executable (.exe) that was run.
4	Revision #	CVS Revision number extracted from test (.cpp) file.
5	Revision Date	Date of last check in to CVS of test (.cpp).
6	CVS Rev	Revision number of test (.cpp) file.
7	CVS State	Current CVS State of test (.cpp) being run.
8	TelM Firmware Revision	Version of Telemetry M Firmware under test.
9	RAMware	Version of RAMware for TelM
10	Sys Init Time	Time test (.exe) was started for Formal Run.
11	Test Time (mS)	Total time that test (.exe) was running.
12	Tester	What test station was used for the test execution.
13	Tester Rev	Revision number of the test station used for the test execution.
14	Status	Test Script execution - Pass or Fail
15	Warnings	Number of Warnings the executed test script had.
16	Errors	Number of Errors the executed test script had.
17	Fails	Number of Fail events the executed test script had.
18	Passes	Number of Pass events the executed test script had.



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			<b>PROJECT NAME</b> Telemetry M
			<b>EFFECTIVE UPON APPROVAL</b>
<b>TITLE</b>			<b>Mozart (Phase 1) Summary Specification to Test Requirements Traceability Report</b> <b>DHF Reference # 11.02 (5.11.10)</b>

**DHF Deliverable: Traceability Report**

VERSION	DESCRIPTION
2.0	Initial Release

<b>Author(s)</b>  <b>Reviewed and Approved By:</b>	Automatically Generated		
	<b>Name</b>	<b>Signatures &amp; Date</b>	
	Ken Kahle	<Electronic Signature>	



Tracing	Classification	Requirement Title	Test Case ID	Test Class	Test Class Name
SPEC DOC/REV	Decomp Class	TCP-C/H+ Title			



Tracing	Classification	Requirement Title		Test Case ID	Test Class	Test Class Name
TRACING	FWVT Tested	TLMC_IE_001 - DOWNLINK PACKET CONTROL BYTES	Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite006\memorywrite006
			Status:	<b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnostics001\diagnostics001
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch002\discovermatch002
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency002\emergency002
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open015\open015
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead031\memoryread031
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead033\memoryread033
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite046\memorywrite046
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnostics032\diagnostics032
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch001\discovermatch001
			Status:	<b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Open\Open001\open001
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close001\close001
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite005\memorywrite005
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General015\general015
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close002\close002
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ006\arq006
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead003\memoryread003
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode001\transfermode001
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName001\discovername001
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency038\emergency038
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General004\general004
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite010\memorywrite010
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode002\transfermode002
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency001\emergency001
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General016\general016
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite013\memorywrite013
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode003\transfermode003





Tracing	Classification	Requirement Title
Class	Decomp Title	Test Case ID Class Test Class Name
		Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_Discover\DiscoverFull002\discoverfull002
		Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_Discover\DiscoverName024\discovername024
		Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_Data\MemoryWrite047\memorywrite047
		Status: <b>Up-to-date</b> Rev: 2.2 Test: .\C_TCP_Discover\DiscoverFull001\discoverfull001
' FILE_NAME: 'datalink.fm' FILE_REV: '1.14' SECTION: '5.1.1 Downlink Packet Control Bytes ' Page No: ' 38'		



Tracing	Classification	Requirement Title				
Class	Decomp Title		Test Case ID	Test Case Class	Test Class Name	
TRACING	FWVT Tested	TLMC_IE_002 - UPLINK PACKET CONTROL BYTES	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead020\memoryread020	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead031\memoryread031	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General003\general003	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Open\Open001\open001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead001\memoryread001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead034\memoryread034	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode002\transfermode002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics003\diagnosics003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close005\close005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead003\memoryread003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead032\memoryread032	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite005\memorywrite005	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent001\medicalevent001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead015\memoryread015	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead033\memoryread033	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode003\transfermode003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency008\emergency008	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead014\memoryread014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite006\memorywrite006	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite046\memorywrite046	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode001\transfermode001	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Discover\DiscoverFull001\discoverfull001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General015\general015	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close001\close001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead010\memoryread010	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency001\emergency001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency002\emergency002	



Tracing Classification Requirement Title

Class	Decomp Title	Test Case ID	Test Class	Test Class Name
		Status: <b>Up-to-date</b> Rev: 2.1	Test: \C_TCP_Data\MemoryWrite045	memorywrite045
		Status: <b>Up-to-date</b> Rev: 2.2	Test: \C_TCP_Diagnostic\Diagnostics001	diagnostics001
		Status: <b>Up-to-date</b> Rev: 2.1	Test: \C_TCP_Discover\DiscoverName001	discovername001
		Status: <b>Up-to-date</b> Rev: 2.1	Test: \C_TCP_Discover\DiscoverMatch001	discovermatch001
		Status: <b>Up-to-date</b> Rev: 2.1	Test: \C_TCP_General\General005	general005

' FILE\_NAME: 'datalink.fm' FILE\_REV: '1.14' SECTION: '5.1.2 Uplink Packet Control Bytes ' Page No: ' 39'

TRACING	FWVT Tested	TLMC_IE_003 - PACKET TYPES	Test Case ID	Test Class	Test Class Name
		Status: <b>Up-to-date</b> Rev: 2.1	Test: \C_TCP_Data\MemoryWrite014	memorywrite014	
		Status: <b>Up-to-date</b> Rev: 2.1	Test: \C_TCP_Discover\DiscoverName001	discovername001	
		Status: <b>Up-to-date</b> Rev: 2.2	Test: \C_TCP_MedicalEvent\MedicalEvent001	medicalevent001	
		Status: <b>Up-to-date</b> Rev: 2.1	Test: \C_TCP_Data\MemoryRead020	memoryread020	
		Status: <b>Up-to-date</b> Rev: 2.1	Test: \C_TCP_Data\MemoryWrite006	memorywrite006	
		Status: <b>Up-to-date</b> Rev: 2.1	Test: \C_TCP_General\General015	general015	
		Status: <b>Up-to-date</b> Rev: 2.1	Test: \C_TCP_Data\ARQ006	arq006	
		Status: <b>Up-to-date</b> Rev: 2.2	Test: \C_TCP_Discover\DiscoverFull001	discoverfull001	
		Status: <b>Up-to-date</b> Rev: 2.1	Test: \C_TCP_General\General003	general003	
		Status: <b>Up-to-date</b> Rev: 2.2	Test: \C_TCP_Open\Open001	open001	
		Status: <b>Up-to-date</b> Rev: 2.1	Test: \C_TCP_Data\MemoryRead003	memoryread003	
		Status: <b>Up-to-date</b> Rev: 2.2	Test: \C_TCP_Diagnostic\Diagnostics001	diagnostics001	
		Status: <b>Up-to-date</b> Rev: 2.1	Test: \C_TCP_Close\Close001	close001	
		Status: <b>Up-to-date</b> Rev: 2.1	Test: \C_TCP_General\General005	general005	

' FILE\_NAME: 'datalink.fm' FILE\_REV: '1.14' SECTION: '5.1.3.4 Packet Type ' Page No: ' 41'



Tracing	Classification	Requirement Title				
Class	Decomp Title		Test Case ID	Test Class	Test Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_IE_004 - INSTRUMENT ID</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ006\arq006	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General015\general015	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite005\memorywrite005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite009\memorywrite009	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Discover\DiscoverFull001\discoverfull001	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Open\Open001\open001	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnostics001\diagnostics001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close001\close001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName001\discovername001	
			' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.4 General Requirements ' Page No: ' 46'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_IE_006 - EXTERNAL SERVICE REQUEST PROCESSING</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite005\memorywrite005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode002\rawmode002	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent001\medicalevent001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode001\rawmode001	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnostics001\diagnostics001	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling069\polling069	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnostics027\diagnostics027	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency001\emergency001	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Open\Open001\open001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close001\close001	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Diagnostic\Diagnostics014\diagnostics014	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Discover\DiscoverFull001\discoverfull001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency012\emergency012	
			' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.4 General Requirements ' Page No: ' 47'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_008 - IMPLANT INITIALIZE SERVICE REQUEST FROM C INTERFACE LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Initialize\Initialize001\initialize001	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Initialize\Initialize002\initialize002	
			' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.5.1 Requirements ' Page No: ' 53'			



Tracing	Classification	Requirement Title	Test Case ID	Test Class	Test Class Name
TRACING	FWVT Tested	TLMC_I_009 - INITIALIZE SERVICE RESPONSE TO C INTERFACE LAYER.			

' FILE\_NAME: 'external.fm' FILE\_REV: '1.41' SECTION: '5.2.5.1 Requirements ' Page No: ' 53'



Tracing	Classification	Requirement Title			Test Case ID	Test Class	Test Class Name
TRACING	FWVT Tested	TLMC_E_010 - DISCOVER SERVICE REQUEST FROM C INTERFACE LAYER	Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverMatch044\discovermatch044
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverName006\discovername006
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverMatch010\discovermatch010
			Status:	<b>Up-to-date</b>	Rev: 2.2	Test:	.\C_TCP_Discover\DiscoverFull001\discoverfull001
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverMatch005\discovermatch005
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverMatch007\discovermatch007
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverName001\discovername001
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverName007\discovername007
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverFull005\discoverfull005
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverMatch002\discovermatch002
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverMatch045\discovermatch045
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverName008\discovername008
			Status:	<b>Up-to-date</b>	Rev: 2.2	Test:	.\C_TCP_Discover\DiscoverFull027\discoverfull027
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverMatch001\discovermatch001
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverMatch004\discovermatch004
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverMatch009\discovermatch009
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverMatch042\discovermatch042
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverName004\discovername004
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverFull007\discoverfull007
			Status:	<b>Up-to-date</b>	Rev: 2.2	Test:	.\C_TCP_Discover\DiscoverFull028\discoverfull028
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverName002\discovername002
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverFull002\discoverfull002
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverFull004\discoverfull004
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverFull008\discoverfull008
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverMatch003\discovermatch003
Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverMatch043\discovermatch043			
Status:	<b>Up-to-date</b>	Rev: 2.1	Test:	.\C_TCP_Discover\DiscoverName003\discovername003			



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName005\discovername005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull003\discoverfull003	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.1 Requirements ' Page No: ' 65'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_011 - VALID IMPLANT ID WITH STOP ON MATCH</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch011\discovermatch011	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch001\discovermatch001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.1 Requirements ' Page No: ' 65'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_IE_012 - DISCOVER FULL - DISCOVER ID PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Discover\DiscoverFull001\discoverfull001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.2 Discover Full ' Page No: ' 66'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_013 - DISCOVER FULL - DOWNLINK DISCOVER ID REQUEST PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Discover\DiscoverFull001\discoverfull001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull006\discoverfull006	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.2 Discover Full ' Page No: ' 66'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_014 - DISCOVER FULL - RETRY DISCOVER ID REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull010\discoverfull010	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull011\discoverfull011	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull002\discoverfull002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull009\discoverfull009	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.2 Discover Full ' Page No: ' 66'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_015 - DISCOVER FULL - DISCOVER ID RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Discover\DiscoverFull001\discoverfull001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull011\discoverfull011	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull029\discoverfull029	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.2 Discover Full ' Page No: ' 66'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_016 - DISCOVER FULL - LISTEN BEFORE TALK TIMER DURING ID</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull002\discoverfull002	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.2 Discover Full ' Page No: ' 67'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_IE_017 - DISCOVER FULL - DISCOVER ID RESPONSE PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Discover\DiscoverFull001\discoverfull001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.2 Discover Full ' Page No: ' 67'				



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_IE_018 - DISCOVER FULL - DISCOVER NAME REQUEST PACKET FORMAT</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.2 Discover Full ' Page No: ' 67'	Status: <b>Up-to-date</b> Rev: 2.2	Test: .\C_TCP_Discover\DiscoverFull001\discoverfull001		
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_019 - DISCOVER FULL - DOWNLINK DISCOVER NAMEREQUEST PACKET</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.2 Discover Full ' Page No: ' 67'	Status: <b>Up-to-date</b> Rev: 2.2 Status: <b>Up-to-date</b> Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull001\discoverfull001 Test: .\C_TCP_Discover\DiscoverFull002\discoverfull002		
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_020 - DISCOVER FULL - RETRY DISCOVER NAME REQUEST</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.2 Discover Full ' Page No: ' 68'	Status: <b>Up-to-date</b> Rev: 2.1 Status: <b>Up-to-date</b> Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull012\discoverfull012 Test: .\C_TCP_Discover\DiscoverFull013\discoverfull013		
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_021 - DISCOVER FULL - DISCOVER NAME RESPONSE</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.2 Discover Full ' Page No: ' 68'	Status: <b>Up-to-date</b> Rev: 2.2 Status: <b>Up-to-date</b> Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull001\discoverfull001 Test: .\C_TCP_Discover\DiscoverFull013\discoverfull013		
<b>TRACING</b>	FWVT Tested	<b>TLMC_IE_022 - DISCOVER FULL - DISCOVER NAME RESPONSE PACKET FORMATS</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.2 Discover Full ' Page No: ' 68'	Status: <b>Up-to-date</b> Rev: 2.2	Test: .\C_TCP_Discover\DiscoverFull001\discoverfull001		
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_023 - DISCOVER FULL - UPLINK RESPONSE PARTITIONING</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.2 Discover Full ' Page No: ' 70'	Status: <b>Up-to-date</b> Rev: 2.2	Test: .\C_TCP_Discover\DiscoverFull001\discoverfull001		





Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_024 - DISCOVER FULL - RESPONSE TO C INTERFACE LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull015\discoverfull015	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull024\discoverfull024	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull005\discoverfull005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull025\discoverfull025	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull014\discoverfull014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull022\discoverfull022	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull023\discoverfull023	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName015\discovername015	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull016\discoverfull016	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Discover\DiscoverFull001\discoverfull001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull017\discoverfull017	
			' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.2 Discover Full' Page No: ' 70'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_025 - DISCOVER NAME - DOWNLINK REQUEST PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName002\discovername002	
			' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.3 Discover Name' Page No: ' 71'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_026 - DISCOVER NAME - RETRY DOWNLINK PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName009\discovername009	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName003\discovername003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName010\discovername010	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName002\discovername002	
			' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.3 Discover Name' Page No: ' 71'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_027 - DISCOVER NAME - LISTEN BEFORE TALK TIMER DURING ID</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName002\discovername002	
			' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.3 Discover Name' Page No: ' 71'			



Tracing	Classification	Requirement Title				
	Decomp			Test Case	Test	
Class	Title			ID	Class	Class Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_028 - DISCOVER NAME - RESPONSE TO C INTERFACE LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName002\discovername002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName011\discovername011	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName001\discovername001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName014\discovername014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName013\discovername013	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName015\discovername015	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName027\discovername027	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName028\discovername028	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName005\discovername005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName012\discovername012	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName025\discovername025	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName026\discovername026	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.3 Discover Name ' Page No: ' 72'						
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_029 - DISCOVER STOP ON MATCH - DISCOVER ID RESPONSE MATCH INSTR ID</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch013\discovermatch013	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch014\discovermatch014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch015\discovermatch015	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch012\discovermatch012	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.4 Discover Stop On Match ' Page No: ' 73'						
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_030 - DISCOVER STOP ON MATCH - DISCOVER NAME REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch004\discovermatch004	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch016\discovermatch016	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch013\discovermatch013	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.4 Discover Stop On Match ' Page No: ' 73'						
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_031 - DISCOVER STOP ON MATCH - MATCHING IMPLANT ID</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch001\discovermatch001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch002\discovermatch002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch017\discovermatch017	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.4 Discover Stop On Match ' Page No: ' 73'						



Tracing	Classification	Requirement Title				
	Decomp			Test Case	Test	
Class	Title		ID	Class	Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_034 - DISCOVER STOP ON MATCH - RESPONSE TO C INTERFACE LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch017\discovermatch017	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch005\discovermatch005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch018\discovermatch018	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch002\discovermatch002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch001\discovermatch001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch020\discovermatch020	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch040\discovermatch040	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch046\discovermatch046	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.7.4 Discover Stop On Match' Page No: ' 74'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_040 - OPEN - C INTERFACE LAYER PARAMETERS</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open003\open003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open005\open005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open002\open002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open004\open004	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Open\Open001\open001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.8.1 Open - General Requirements' Page No: ' 78'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_IE_041 - OPEN - DOWNLINK REQUEST PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open014\open014	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Open\Open001\open001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open020\open020	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.8.1 Open - General Requirements' Page No: ' 78'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_IE_042 - OPEN - UPLINK OPEN RESPONSE PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open014\open014	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Open\Open001\open001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.8.1 Open - General Requirements' Page No: ' 79'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_043 - OPEN - DOWNLINK REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open002\open002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open003\open003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open004\open004	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open005\open005	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.8.1 Open - General Requirements' Page No: ' 79'				



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_044 - OPEN - NO VALID UPLINK RESPONSE RETRY DOWNLINK REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open002\open002	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.8.1 Open - General Requirements ' Page No: ' 79'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_045 - OPEN - LISTEN BEFORE TALK TIMER OPERATIONS</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open022\open022	
		Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_Open\Open002\open002				
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.8.1 Open - General Requirements ' Page No: ' 79'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_046 - OPEN - UPLINK RESPONSE TO A VALID OPEN REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling073\polling073	
		Status: <b>Up-to-date</b> Rev: 2.3 Test: .\C_TCP_Polling\Polling076\polling076				
		Status: <b>Up-to-date</b> Rev: 2.2 Test: .\C_TCP_Polling\Polling077\polling077				
		Status: <b>Up-to-date</b> Rev: 2.3 Test: .\C_TCP_Polling\Polling074\polling074				
		Status: <b>Up-to-date</b> Rev: 2.2 Test: .\C_TCP_Open\Open001\open001				
		Status: <b>Up-to-date</b> Rev: 2.2 Test: .\C_TCP_Polling\Polling078\polling078				
		Status: <b>Up-to-date</b> Rev: 2.2 Test: .\C_TCP_Polling\Polling079\polling079				
		Status: <b>Up-to-date</b> Rev: 2.3 Test: .\C_TCP_Polling\Polling072\polling072				
		Status: <b>Up-to-date</b> Rev: 2.3 Test: .\C_TCP_Polling\Polling075\polling075				
		Status: <b>Up-to-date</b> Rev: 2.2 Test: .\C_TCP_Polling\Polling080\polling080				
		Status: <b>Up-to-date</b> Rev: 2.2 Test: .\C_TCP_Polling\Polling081\polling081				
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.8.1 Open - General Requirements ' Page No: ' 80'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_047 - OPEN - A VALID UPLINK RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Open\Open001\open001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.8.1 Open - General Requirements ' Page No: ' 80'				



Tracing	Classification	Requirement Title				
	Decomp			Test Case	Test	
Class	Title		ID	Class	Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_048 - OPEN - RESPONSE TO C INTERFACE LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open002\open002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open007\open007	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open019\open019	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open005\open005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open008\open008	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Open\Open001\open001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open018\open018	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.8.1 Open - General Requirements' Page No: ' 80'						
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_049 - DATA - C INTERFACE LAYER TO DATA LINK LAYER PARAMETERS</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite003\memorywrite003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite004\memorywrite004	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite007\memorywrite007	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite005\memorywrite005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead035\memoryread035	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite006\memorywrite006	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite049\memorywrite049	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite002\memorywrite002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite001\memorywrite001	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.9.2 Downlink Data' Page No: ' 87'						
<b>TRACING</b>	FWVT Tested	<b>TLMC_IE_050 - DATA - DOWNLINK REQUEST PACKET FORMAT(S)</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite005\memorywrite005	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.9.2 Downlink Data' Page No: ' 88'						
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_051 - DATA - DOWNLINK OF DATA PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite001\memorywrite001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite005\memorywrite005	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.9.2 Downlink Data' Page No: ' 89'						
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_052 - DATA - ACKNOWLEDGEMENT OF DOWNLINK DATA PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite002\memorywrite002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite006\memorywrite006	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.9.2 Downlink Data' Page No: ' 89'						



Tracing	Classification	Requirement Title				
Class	Decomp Title		Test Case ID	Class	Test Class Name	
TRACING	FWVT Tested	TLMC_E_053 - DATA - PACKETIZATION OF THE DOWNLINK DATA	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite005\memorywrite005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite013\memorywrite013	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite011\memorywrite011	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite014\memorywrite014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite012\memorywrite012	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite015\memorywrite015	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite009\memorywrite009	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite010\memorywrite010	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.9.2 Downlink Data' Page No: ' 89'						
TRACING	FWVT Tested	TLMC_E_054 - DATA - RETRANSMISSION OF DOWNLINK PACKET - NO ACK RECEIVED	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite018\memorywrite018	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite016\memorywrite016	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite017\memorywrite017	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite019\memorywrite019	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.9.2 Downlink Data' Page No: ' 90'						
TRACING	FWVT Tested	TLMC_I_055 - DATA - DOWNLINK PACKETS WITH DUPLICATE SEQUENCE NUMBERS	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead002\memoryread002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead001\memoryread001	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.9.2 Downlink Data' Page No: ' 90'						
TRACING	FWVT Tested	TLMC_I_056 - DATA - VALIDATION OF DOWNLINK DATA REQUEST	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead003\memoryread003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite008\memorywrite008	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite010\memorywrite010	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite018\memorywrite018	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite021\memorywrite021	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite050\memorywrite050	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite005\memorywrite005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite016\memorywrite016	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite020\memorywrite020	
Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead004\memoryread004				



Tracing	Classification	Requirement Title			
Class	Decomp	Title	Test Case ID	Class	Test Class Name
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.9.2 Downlink Data ' Page No: ' 90'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_057 - DATA - DOWNLINK PACKETS INTO TRANSACTION</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite006\memorywrite006
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.9.2 Downlink Data ' Page No: ' 90'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_058 - DATA - RESPONSE TO C INTERFACE LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead005\memoryread005
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite024\memorywrite024
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite025\memorywrite025
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Data\MemoryRead044\memoryread044
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead045\memoryread045
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite022\memorywrite022
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite026\memorywrite026
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite049\memorywrite049
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Data\MemoryRead043\memoryread043
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite023\memorywrite023
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite027\memorywrite027
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.9.2 Downlink Data ' Page No: ' 91'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_059 - DATA - UPLINK C INTERFACE LAYER PARAMETERS</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead006\memoryread006
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead001\memoryread001
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead008\memoryread008
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead007\memoryread007
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.9.3 Uplink Data ' Page No: ' 91'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_060 - DATA - UPLINK OF DATA PACKETS</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead009\memoryread009
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead006\memoryread006
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.9.3 Uplink Data ' Page No: ' 92'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_061 - DATA - UPLINK DATA PACKET FORMAT(S)</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead006\memoryread006
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.9.3 Uplink Data ' Page No: ' 93'			



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Test Class	Test Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_062 - DATA - PACKETIZATION OF UPLINK DATA</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead010\memoryread010	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead016\memoryread016	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead006\memoryread006	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead014\memoryread014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead017\memoryread017	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead012\memoryread012	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead015\memoryread015	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead018\memoryread018	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead011\memoryread011	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead013\memoryread013	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.9.3 Uplink Data ' Page No: ' 94'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_063 - DATA - RECEIPT OF AN INVALID UPLINK PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead009\memoryread009	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead003\memoryread003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead020\memoryread020	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead019\memoryread019	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead021\memoryread021	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.9.3 Uplink Data ' Page No: ' 94'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_064 - DATA - ASSEMBLING DATA PACKET INTO TRANSACTIONS</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead024\memoryread024	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead022\memoryread022	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead023\memoryread023	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.9.3 Uplink Data ' Page No: ' 94'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_065 - DATA - RESPONSE BEFORE DATA INDICATION</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite058\memorywrite058	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.9.3 Uplink Data ' Page No: ' 95'				





Tracing Classification Requirement Title

Class Decomp Title Test Case ID Class Test Class Name

Table with 6 columns: Tracing, Class, Decomp, Title, Test Case ID, Class, Test Class Name. Row 1: TRACING, FWVT Tested, TLMC\_E\_066 - DIAGNOSTIC SERVICE REQUEST FROM C INTERFACE LAYER, Status: Up-to-date, Rev: 2.3, Test: .\C\_TCP\_Diagnostic\Diagnosics013\diagnosics013...

' FILE\_NAME: 'external.fm' FILE\_REV: '1.41' SECTION: '5.2.10.1 Requirements ' Page No: ' 97'

Table with 6 columns: Tracing, Class, Decomp, Title, Test Case ID, Class, Test Class Name. Row 1: TRACING, FWVT Tested, TLMC\_E\_067 - REMOTE DIAGNOSTIC - DOWNLINK PACKET FORMAT, Status: Up-to-date, Rev: 2.2, Test: .\C\_TCP\_Diagnostic\Diagnosics001\diagnosics001...

' FILE\_NAME: 'external.fm' FILE\_REV: '1.41' SECTION: '5.2.10.2 Remote Diagnostic ' Page No: ' 97'

Table with 6 columns: Tracing, Class, Decomp, Title, Test Case ID, Class, Test Class Name. Row 1: TRACING, FWVT Tested, TLMC\_I\_068 - REMOTE DIAGNOSTIC - UPLINK PACKET FORMAT, Status: Up-to-date, Rev: 2.2, Test: .\C\_TCP\_Diagnostic\Diagnosics001\diagnosics001...

' FILE\_NAME: 'external.fm' FILE\_REV: '1.41' SECTION: '5.2.10.2 Remote Diagnostic ' Page No: ' 98'



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_069 - REMOTE DIAGNOSTIC - STATUS BYTE FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Diagnostic\Diagnostics030\diagnostics030	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnostics001\diagnostics001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnostics017\diagnostics017	
			' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.10.2 Remote Diagnostic ' Page No: ' 98'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_070 - REMOTE DIAGNOSTIC - UPLINK RESPONSE PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Diagnostic\Diagnostics009\diagnostics009	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnostics007\diagnostics007	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnostics006\diagnostics006	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnostics018\diagnostics018	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnostics008\diagnostics008	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.10.2 Remote Diagnostic ' Page No: ' 99'						
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_071 - REMOTE DIAGNOSTIC - DOWNLINK REQUEST RETRANSMISSION</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnostics018\diagnostics018	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnostics020\diagnostics020	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnostics001\diagnostics001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnostics033\diagnostics033	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnostics004\diagnostics004	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnostics035\diagnostics035	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnostics036\diagnostics036	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnostics019\diagnostics019	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.10.2 Remote Diagnostic ' Page No: ' 99'						



Tracing Classification Requirement Title

Class	Decomp Title	Test Case ID	Test Class	Test Class Name
<b>TRACING</b>	FWVT Tested <b>TLMC_E_072 - REMOTE DIAGNOSTIC - RESPONSE TO C INTERFACE LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnosics008\diagnosics008
		Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Diagnostic\Diagnosics009\diagnosics009
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics020\diagnosics020
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics021\diagnosics021
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics022\diagnosics022
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics024\diagnosics024
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics005\diagnosics005
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnosics007\diagnosics007
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics010\diagnosics010
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnosics006\diagnosics006
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics017\diagnosics017
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnosics018\diagnosics018
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics025\diagnosics025
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics026\diagnosics026
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnosics001\diagnosics001
Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics003\diagnosics003		
Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics034\diagnosics034		

' FILE\_NAME: 'external.fm' FILE\_REV: '1.41' SECTION: '5.2.10.2 Remote Diagnostic ' Page No: ' 99'

<b>TRACING</b>	FWVT Tested <b>TLMC_E_073 - LOCAL DIAGNOSTIC - RESPONSE TO C INTERFACE LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Diagnostic\Diagnosics014\diagnosics014
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics015\diagnosics015
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnosics012\diagnosics012
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnosics011\diagnosics011
		Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Diagnostic\Diagnosics013\diagnosics013

' FILE\_NAME: 'external.fm' FILE\_REV: '1.41' SECTION: '5.2.10.3 Local Diagnostic ' Page No: ' 101'



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Test Case Class	Test Class Name	
TRACING	FWVT Tested	TLMC_E_074 - MAPPING DIAGNOSTIC - RESPONSE TO C INTERFACE LAYER	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics025\diagnosics025	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics028\diagnosics028	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics016\diagnosics016	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics022\diagnosics022	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics023\diagnosics023	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics024\diagnosics024	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics029\diagnosics029	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics005\diagnosics005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics026\diagnosics026	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics027\diagnosics027	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.10.4 Mapping Diagnostic' Page No: ' 103'						
TRACING	FWVT Tested	TLMC_E_075 - DIAGNOSTIC FILLER - DOWNLINK FILLER PACKETS	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ020\arq020	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ012\arq012	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Diagnostic\Diagnosics030\diagnosics030	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.10.5 Diagnostic Filler Packet' Page No: ' 104'						
TRACING	FWVT Tested	TLMC_E_077 - EMERGENCY - C INTERFACE LAYER PARAMETERS	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency001\emergency001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency006\emergency006	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency043\emergency043	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency003\emergency003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency005\emergency005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency002\emergency002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency004\emergency004	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.11.2 Instrument' Page No: ' 106'						



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Class	Test Class	Name
TRACING	FWVT Tested	TLMC_E_078 - EMERGENCY - DOWNLINK OF EMERGENCY REQUEST	Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Discover\DiscoverMatch020\discovermatch020	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Emergency\Emergency003\emergency003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Data\MemoryWrite024\memorywrite024	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_RawMode\RawMode003\rawmode003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Data\MemoryRead030\memoryread030	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Diagnostic\Diagnostics031\diagnostics031	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Emergency\Emergency001\emergency001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Discover\DiscoverName014\discovername014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Emergency\Emergency007\emergency007	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Open\Open008\open008	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Discover\DiscoverFull017\discoverfull017	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Open\Open017\open017	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.11.2 Instrument ' Page No: ' 106'				
TRACING	FWVT Tested	TLMC_E_079 - EMERGENCY - DOWNLINK REQUEST NOT ACKNOWLEDGED	Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Emergency\Emergency003\emergency003	
					' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.11.2 Instrument ' Page No: ' 107'	
TRACING	FWVT Tested	TLMC_E_080 - EMERGENCY - DOWNLINK REQUEST ACKNOWLEDGED	Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Emergency\Emergency008\emergency008	
					' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.11.2 Instrument ' Page No: ' 107'	



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_081 - EMERGENCY - STATUS RESPONSE TO C INTERFACE LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency006\emergency006	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency040\emergency040	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency042\emergency042	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency010\emergency010	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency041\emergency041	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency039\emergency039	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency004\emergency004	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency009\emergency009	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency011\emergency011	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency002\emergency002	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.11.2 Instrument' Page No: ' 107'						
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_082 - RAW MODE - C INTERFACE LAYER DOWNLINK PARAMETERS</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode001\rawmode001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode003\rawmode003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode002\rawmode002	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.12.1 Requirements' Page No: ' 109'						
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_083 - RAW MODE - DOWNLINK ATTACHED OPERATION</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode002\rawmode002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode004\rawmode004	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.12.2 Raw Mode (Downlink Attached)' Page No: ' 109'						



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Class	Test Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_084 - RAW MODE - DOWNLINK ATTACHED UPLINK RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode010\rawmode010	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode008\rawmode008	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode009\rawmode009	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode006\rawmode006	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode012\rawmode012	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode002\rawmode002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode007\rawmode007	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode003\rawmode003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode005\rawmode005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode004\rawmode004	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode011\rawmode011	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.12.2 Raw Mode (Downlink Attached)' Page No: ' 110'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_085 - RAW MODE - ECHO ON STATUS TO C INTERFACE LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode001\rawmode001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.12.3 Raw Mode (Echo On)' Page No: ' 111'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_086 - RAW MODE - ECHO ON - DOWNLINK PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode013\rawmode013	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode014\rawmode014	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.12.3 Raw Mode (Echo On)' Page No: ' 111'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_087 - RAW MODE - ECHO ON - UPLINK PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode013\rawmode013	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode014\rawmode014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode015\rawmode015	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode017\rawmode017	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode016\rawmode016	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.12.3 Raw Mode (Echo On)' Page No: ' 112'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_088 - RAW MODE - ECHO OFF STATUS TO C INTERFACE LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode001\rawmode001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.12.4 Raw Mode (Echo Off)' Page No: ' 112'				



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_089 - CLOSE - C INTERFACE LAYER DOWNLINK PARAMETERS</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close004\close004	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close006\close006	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close002\close002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close005\close005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close018\close018	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close003\close003	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.13.1 Requirements 'Page No: ' 113'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_IE_090 - CLOSE - DOWNLINK PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close001\close001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.13.1 Requirements 'Page No: ' 113'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_IE_091 - CLOSE - UPLINK PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close001\close001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.13.1 Requirements 'Page No: ' 114'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_092 - CLOSE - DOWNLINK REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close002\close002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close001\close001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.13.1 Requirements 'Page No: ' 114'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_093 - CLOSE - RETRANSMISSION OF DOWNLINK REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close001\close001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close007\close007	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close005\close005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close008\close008	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.13.1 Requirements 'Page No: ' 114'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_094 - CLOSE - RECEIPT OF A VALID CLOSE REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close009\close009	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close010\close010	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.13.1 Requirements 'Page No: ' 114'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_095 - CLOSE - INDICATION TO IMPLANT C INTERFACE LAYER</b>				
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.13.1 Requirements 'Page No: ' 114'				





Tracing	Classification	Requirement Title						
	Decomp			Test Case	Test			
Class	Title			ID	Class	Class Name		
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_096 - CLOSE - RECEIPT OF A VALID RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close001\close001			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close002\close002			
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.13.1 Requirements' Page No: ' 115'						
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_097 - CLOSE - IMPLICITLY SUCCESSFUL</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close012\close012			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close013\close013			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close017\close017			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close014\close014			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close011\close011			
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.13.1 Requirements' Page No: ' 115'						
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_098 - CLOSE - RESPONSE TO C INTERFACE LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close008\close008			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close012\close012			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close013\close013			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close011\close011			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close001\close001			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close014\close014			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close007\close007			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close005\close005			
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.13.1 Requirements' Page No: ' 115'						
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_100 - ARQ - STOP AND WAIT DOWNLINK ACKNOWLEDGMENT</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ003\arq003			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite008\memorywrite008			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ005\arq005			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ001\arq001			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ004\arq004			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ002\arq002			
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite039\memorywrite039			
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.1.2 Instrument' Page No: ' 125'						



Tracing	Classification	Requirement Title				
Class	Decomp Title		Test Case ID	Test Case Class	Test Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_IE_101 - ARQ - DOWNLINK ARQ PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ006\arq006	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ009\arq009	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ007\arq007	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ008\arq008	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ010\arq010	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ011\arq011	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.1.2 Instrument ' Page No: ' 128'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_102 - ARQ - UPDATING OF ARQ INFORMATION</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ012\arq012	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.1.2 Instrument ' Page No: ' 129'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_103 - ARQ - MEMORY DATA UPLINK PACKET ACKNOWLEDGMENT</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ013\arq013	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ016\arq016	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ015\arq015	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ012\arq012	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ014\arq014	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.1.2 Instrument ' Page No: ' 129'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_104 - ARQ - UPLINK ACK NOT RECEIVED</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ018\arq018	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ016\arq016	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ017\arq017	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.1.2 Instrument ' Page No: ' 129'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_105 - ARQ - INITIATE DOUBLE-UP WAVEFORM</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ028\arq028	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ029\arq029	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.1.2 Instrument ' Page No: ' 129'				



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_106 - ARQ - STOP AND WAIT DOWNLINK PACKETS</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ017\arq017	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ020\arq020	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ019\arq019	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ012\arq012	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ021\arq021	
			' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.1.3 Implant' Page No: ' 129'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_107 - ARQ - RECEIPT OF AN ARQ PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ024\arq024	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ022\arq022	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ023\arq023	
			' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.1.3 Implant' Page No: ' 130'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_108 - ARQ - ARQ PACKET DOWNLINK NOT RECEIVED</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ017\arq017	
			' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.1.3 Implant' Page No: ' 130'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_109 - ARQ - IMPLICIT ACK OF A VALID MEMORY DATA UPLINK</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ026\arq026	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ023\arq023	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ025\arq025	
			' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.1.3 Implant' Page No: ' 130'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_111 - ARQ - RETRANSMIT WAVEFORM TRIGGER</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ030\arq030	
			' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.1.3 Implant' Page No: ' 130'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_112 - CH MAPPING - COLLECT MAPPING DATA</b>				
			' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.2.3 Requirements' Page No: ' 133'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_113 - CH MAPPING - PROCESS MAPPING DATA</b>				
			' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.2.3 Requirements' Page No: ' 133'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_114 - CH MAPPING - CALCULATE AVERAGES</b>				
			' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.2.3 Requirements' Page No: ' 133'			



Tracing	Classification	Requirement Title			
Class	Decomp	Title	Test Case ID	Test Class	Test Class Name
TRACING	FWVT Tested	<b>TLMC_E_115 - CH MAPPING - COLLECT MAPPING DATA</b> ' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.2.3 Requirements ' Page No: ' 135'			
TRACING	FWVT Tested	<b>TLMC_E_116 - CH MAPPING - EVALUATE COLLECTED DATA</b> ' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.2.3 Requirements ' Page No: ' 135'			
TRACING	FWVT Tested	<b>TLMC_E_117 - CH MAPPING - EVALUATION CONTROL</b> ' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.2.3 Requirements ' Page No: ' 135'			
TRACING	FWVT Tested	<b>TLMC_E_118 - CH MAPPING - DIAGNOSTIC DATA COLLECTION</b> ' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.2.4 Diagnostic Mapping ' Page No: ' 136'			
TRACING	FWVT Tested	<b>TLMC_E_119 - CH MAPPING - CALCULATE DIAGNOSTIC DATA AVERAGES</b> ' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.2.4 Diagnostic Mapping ' Page No: ' 136'			
TRACING	FWVT Tested	<b>TLMC_E_120 - CH RECOVERY - TRIGGER CHANNEL RECOVERY</b> Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_Channel\ChannelRecovery004\channelrecovery004 Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_Channel\ChannelRecovery033\channelrecovery033 Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_Channel\ChannelRecovery060\channelrecovery060 Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_Channel\ChannelRecovery002\channelrecovery002 Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_Channel\ChannelRecovery001\channelrecovery001 Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_Channel\ChannelRecovery003\channelrecovery003 Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_Channel\ChannelRecovery005\channelrecovery005 Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_Channel\ChannelRecovery010\channelrecovery010 ' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.2 Instrument ' Page No: ' 139'			



Tracing	Classification	Requirement Title				
Class	Decomp Title		Test Case ID	Class	Test Class Name	
TRACING	FWVT Tested	TLMC_E_121 - CH RECOVERY - START SAME CHANNEL RECOVERY	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery008\channelrecovery008	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery001\channelrecovery001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery006\channelrecovery006	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery007\channelrecovery007	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery032\channelrecovery032	
' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.2 Instrument ' Page No: ' 139'						
TRACING	FWVT Tested	TLMC_E_122 - CH RECOVERY - SAME CHANNEL RECOVERY OPEN DOWNLINK	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery010\channelrecovery010	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery013\channelrecovery013	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery009\channelrecovery009	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery011\channelrecovery011	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery012\channelrecovery012	
' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.2 Instrument ' Page No: ' 140'						
TRACING	FWVT Tested	TLMC_E_123 - CH RECOVERY - SAME CHANNEL RECOVERY SUCCESSFUL	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery014\channelrecovery014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery012\channelrecovery012	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery001\channelrecovery001	
' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.2 Instrument ' Page No: ' 140'						
TRACING	FWVT Tested	TLMC_E_124 - CH RECOVERY - SAME CHANNEL RECOVERY UNSUCCESSFUL	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery012\channelrecovery012	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery014\channelrecovery014	
' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.2 Instrument ' Page No: ' 140'						



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Class	Test Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_125 - CH RECOVERY - START UNSPECIFIED CHANNEL RECOVERY</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery012\channelrecovery012	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery016\channelrecovery016	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery017\channelrecovery017	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery038\channelrecovery038	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery015\channelrecovery015	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery043\channelrecovery043	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery020\channelrecovery020	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery018\channelrecovery018	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery042\channelrecovery042	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.2 Instrument ' Page No: ' 141'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_126 - REMAP CHANNEL - UNSPECIFIED CHANNEL RECOVERY TIMER EXPIRATION</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery020\channelrecovery020	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.2 Instrument ' Page No: ' 141'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_127 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY SUCCESSFUL</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery020\channelrecovery020	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.2 Instrument ' Page No: ' 142'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_128 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY UNSUCCESSFUL</b>				
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.2 Instrument ' Page No: ' 142'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_129 - CH RECOVERY - TRIGGER CHANNEL RECOVERY</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery023\channelrecovery023	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery014\channelrecovery014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery015\channelrecovery015	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery024\channelrecovery024	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery022\channelrecovery022	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery021\channelrecovery021	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.3 Implant ' Page No: ' 142'				



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_130 - CH RECOVERY - START SAME CHANNEL RECOVERY</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery028\channelrecovery028	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery029\channelrecovery029	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery026\channelrecovery026	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery025\channelrecovery025	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery027\channelrecovery027	
			' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.3 Implant' Page No: ' 142'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_131 - CH RECOVERY - SAME CHANNEL RECOVERY INVOKE SCAN</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Channel\ChannelRecovery040\channelrecovery040	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery001\channelrecovery001	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Channel\ChannelRecovery031\channelrecovery031	
			' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.3 Implant' Page No: ' 143'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_132 - CH RECOVERY - SAME CHANNEL RECOVERY SUCCESSFUL</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery001\channelrecovery001	
			' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.3 Implant' Page No: ' 143'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_133 - CH RECOVERY - SAME CHANNEL RECOVERY UNSUCCESSFUL</b>				
			' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.3 Implant' Page No: ' 143'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_134 - CH RECOVERY - START UNSPECIFIED CHANNEL RECOVERY</b>				
			' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.3 Implant' Page No: ' 143'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_135 - CH RECOVERY - UCR TIMER ACTIVE NON OPEN DOWNLINK REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery030\channelrecovery030	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery041\channelrecovery041	
			' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.3 Implant' Page No: ' 144'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_136 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY SUCCESSFUL</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery030\channelrecovery030	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Channel\ChannelRecovery040\channelrecovery040	
			' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.3 Implant' Page No: ' 144'			



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Test Class	Test Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_137 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY UNSUCCESSFUL</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery039\channelrecovery039	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Channel\ChannelRecovery031\channelrecovery031	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.3 Implant' Page No: ' 144'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_139 - DATA TRANSFER MODE - MODE TRANSITIONS</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode003\transfermode003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode002\transfermode002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode001\transfermode001	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.4.2 Instrument' Page No: ' 147'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_140 - DATA TRANSFER MODE - NOMINAL TO LOW ENERGY MODE TRANSITIONS.</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode010\transfermode010	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode001\transfermode001	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.4.2 Instrument' Page No: ' 147'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_141 - DATA TRANSFER MODE - NEGATIVE PREAMBLE RATIO IN LOW ENERGY MODE</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode001\transfermode001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode004\transfermode004	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.4.2 Instrument' Page No: ' 148'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_142 - DATA TRANSFER MODE - LOW ENERGY TO NOMINAL TRANSITION</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode001\transfermode001	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.4.2 Instrument' Page No: ' 148'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_143 - DATA TRANSFER MODE - TRANSITION TO NEW MODE ON DOWNLINK</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode009\transfermode009	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode008\transfermode008	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode001\transfermode001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode006\transfermode006	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode005\transfermode005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode007\transfermode007	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.4.2 Instrument' Page No: ' 148'				





Tracing Classification Requirement Title

Class	Decomp Title	Test Case ID	Test Class	Test Class Name
TRACING	FWVT Tested TLMC_E_158 - CIL - REQUEST-RESPONSE-DEFINITION	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General003\general003
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close001\close001
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite006\memorywrite006
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Discover\DiscoverFull001\discoverfull001
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Open\Open001\open001
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnostics027\diagnostics027
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency001\emergency001
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General017\general017
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnostics001\diagnostics001
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnostics011\diagnostics011
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName001\discovername001
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent001\medicalevent001
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open014\open014
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode002\rawmode002
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull014\discoverfull014
Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General001\general001		
Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode001\rawmode001		

' FILE\_NAME: 'c\_intfc.fm' FILE\_REV: '1.35' SECTION: '6.2 ICCM Commands ' Page No: ' 158'

TRACING	FWVT Tested TLMC_E_159 - CIL - ID ALL REQUEST AND RESPONSE VIA DISCOVER FULL	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Discover\DiscoverFull001\discoverfull001
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull018\discoverfull018
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull021\discoverfull021
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull009\discoverfull009
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull020\discoverfull020
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull002\discoverfull002
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull014\discoverfull014
Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull019\discoverfull019		

' FILE\_NAME: 'c\_intfc.fm' FILE\_REV: '1.35' SECTION: '6.2.1 ID All ' Page No: ' 159'



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Test Class	Test Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_161 - CIL - REQUEST ID WHEN DEVICE NAME NOT KNOWN</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName015\discovername015	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName022\discovername022	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName016\discovername016	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName017\discovername017	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName019\discovername019	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName018\discovername018	
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.3 Request ID String ' Page No: ' 159'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_162 - CIL - REQUEST ID STRING DEVICE NAME KNOWN</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName023\discovername023	
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.3 Request ID String ' Page No: ' 160'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_164 - CIL - OPEN IMMEDIATE REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Open\Open001\open001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open004\open004	
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.5 Open Immediate ' Page No: ' 160'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_165 - CIL - INVALID ICCO OPEN IMMEDIATE REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open009\open009	
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.5 Open Immediate ' Page No: ' 160'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_166 - CIL - OPEN WITH DEVICE FOUND REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch009\discovermatch009	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch022\discovermatch022	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch001\discovermatch001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch023\discovermatch023	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch024\discovermatch024	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch002\discovermatch002	
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.6 Open With Device Found ' Page No: ' 161'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_167 - CIL - INVALID OPEN WITH DEVICE FOUND REQUEST</b>				
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.6 Open With Device Found ' Page No: ' 161'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_217 - CIL - OPEN HIBERNATE REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open014\open014	
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.7 Waveform Disable ' Page No: ' 161'				



Tracing	Classification	Requirement Title			
Class	Decomp Title	Test Case ID	Test Class	Test Class Name	
TRACING	FWVT Tested	<b>TLMC_E_168 - CIL - TARGET DEVICE ID</b>			
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.9 Open And Target Device ID ' Page No: ' 162'			
TRACING	FWVT Tested	<b>TLMC_E_169 - CIL - VALIDATION OF TARGET DEVICE-ID</b>			
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.9 Open And Target Device ID ' Page No: ' 162'			
TRACING	FWVT Tested	<b>TLMC_E_170 - CIL - CLOSE REQUEST</b>	Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_Close\Close001\close001		
			Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_Close\Close002\close002		
			Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_Close\Close005\close005		
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.10 Close ' Page No: ' 163'			
TRACING	FWVT Tested	<b>TLMC_E_171 - CIL - DOWNLINK IN CLOSE REQUEST</b>			
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.10 Close ' Page No: ' 163'			
TRACING	FWVT Tested	<b>TLMC_E_172 - CIL - RESET SERIAL NUMBER AFTER CLOSE</b>	Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_Close\Close015\close015		
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.10 Close ' Page No: ' 163'			
TRACING	FWVT Tested	<b>TLMC_E_173 - CIL - EMERGENCY DURING CLOSE REQUEST</b>	Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_Close\Close016\close016		
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.10 Close ' Page No: ' 163'			
TRACING	FWVT Tested	<b>TLMC_E_174 - CIL - RAW MODE DOWNLINK (ATTACHED)</b>	Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_RawMode\RawMode003\rawmode003		
			Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_RawMode\RawMode002\rawmode002		
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.11.1 Downlink Attached ' Page No: ' 163'			
TRACING	FWVT Tested	<b>TLMC_E_175 - CIL - REJECT RAW MODE DOWNLINK ATTACHED</b>	Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_RawMode\RawMode002\rawmode002		
			Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_RawMode\RawMode018\rawmode018		
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.11.1 Downlink Attached ' Page No: ' 164'			
TRACING	FWVT Tested	<b>TLMC_E_176 - CIL - RAW MODE DOWNLINK (ECHO ON)</b>	Status: <b>Up-to-date</b> Rev: 2.1 Test: .\C_TCP_RawMode\RawMode001\rawmode001		
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.11.2 Raw Mode - Echo On ' Page No: ' 165'			



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Test Case Class	Test Class Name	
TRACING	FWVT Tested	<b>TLMC_E_177 - CIL - RAW MODE DOWNLINK TO APPLICATION LAYER (ECHO ON)</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode001\rawmode001	' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.11.2 Raw Mode - Echo On ' Page No: ' 165'
TRACING	FWVT Tested	<b>TLMC_E_178 - CIL - RAW MODE UPLINK DATA</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode001\rawmode001	' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.11.2 Raw Mode - Echo On ' Page No: ' 165'
TRACING	FWVT Tested	<b>TLMC_E_179 - CIL - RAW MODE DOWNLINK (ECHO OFF)</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode001\rawmode001	' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.11.2 Raw Mode - Echo On ' Page No: ' 165'
TRACING	FWVT Tested	<b>TLMC_E_180 - CIL - UPLINK DATA INDICATION TIMERS</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead003\memoryread003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead027\memoryread027	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead025\memoryread025	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead026\memoryread026	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead028\memoryread028	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead029\memoryread029	
						' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.12.3.1 Data Indication ' Page No: ' 167'
TRACING	FWVT Tested	<b>TLMC_E_181 - CIL - RESPONSE-APP-DATA-UPLINK</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General003\general003	' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.12.3.2 Unrequested Data Indication ' Page No: ' 167'
TRACING	FWVT Tested	<b>TLMC_E_182 - CIL - FINAL ICCC DOWNLINK REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite059\memorywrite059	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite030\memorywrite030	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite006\memorywrite006	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite060\memorywrite060	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite005\memorywrite005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite029\memorywrite029	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite007\memorywrite007	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite033\memorywrite033	
						' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.12.4.2 One ICCC Downlink Req, Multiple Uplink Data Indications ' Page No: ' 168'



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_183 - CIL - MULTIPLE TRANSACTION DOWNLINK - NOT FINAL</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite007\memorywrite007	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite036\memorywrite036	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite032\memorywrite032	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite061\memorywrite061	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite031\memorywrite031	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite062\memorywrite062	
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.12.4.3 Multiple ICCD Downlink Requests For One Message ' Page No: ' 169'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_184 - CIL - SERVICE DURATION TIMER</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite004\memorywrite004	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite034\memorywrite034	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite035\memorywrite035	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite036\memorywrite036	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite037\memorywrite037	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite033\memorywrite033	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite049\memorywrite049	
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.12.4.3 Multiple ICCD Downlink Requests For One Message ' Page No: ' 170'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_185 - CIL - EMERGENCY WHILE WAITING FOR DATA</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead030\memoryread030	
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.12.5 Emergency Request While Waiting For Data Indication ' Page No: ' 170'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_186 - CIL - MESSAGE TAG IN THE DOWNLINK MESSAGE</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite038\memorywrite038	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead047\memoryread047	
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.12.6 Downlink and uplink Message Tag ' Page No: ' 171'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_187 - CIL - UPLINK WITH NON-MATCHING TAG</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite038\memorywrite038	
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.12.6 Downlink and uplink Message Tag ' Page No: ' 171'				



Tracing	Classification	Requirement Title				
Class	Decomp Title	Test Case ID	Test Case Class	Test Class Name		
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_188 - CIL - EMERGENCY ICCC REQUEST DOWNLINK</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close016\close016	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open017\open017	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnostics020\diagnostics020	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead030\memoryread030	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName014\discovername014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull017\discoverfull017	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch020\discovermatch020	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open008\open008	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_RawMode\RawMode003\rawmode003	
			' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.13 Emergency ' Page No: ' 171'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_189 - CIL - ICCC EMERGENCY REQUEST DOWNLINK</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency001\emergency001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency003\emergency003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency002\emergency002	
			' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.13 Emergency ' Page No: ' 172'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_192 - CIL - SECOND ICCC EMERGENCY REQUEST WHILE PROCESSING FIRST</b>				
			' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.13 Emergency ' Page No: ' 172'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_193 - CIL - UPLINK EMERGENCY DATA INDICATION TIMEOUT</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency025\emergency025	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency001\emergency001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency027\emergency027	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency026\emergency026	
			' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.13.1 Emergency Timeout Indication ' Page No: ' 172'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_194 - CIL - RECOVERY-WHILE-WAITING-FO R-EMERGENCY</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency028\emergency028	
			' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.13.2 Channel Recovery During Emergency ' Page No: ' 173'			



Tracing	Classification	Requirement Title				
Class	Decomp Title		Test Case ID	Test Case Class	Test Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_195 - CIL - EMERGENCY COMPLETE REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency031\emergency031	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency035\emergency035	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency036\emergency036	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency029\emergency029	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency032\emergency032	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency037\emergency037	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency030\emergency030	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency033\emergency033	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency034\emergency034	
			' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.13.3 Emergency Complete ' Page No: ' 173'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_196 - CIL - EMERGENCY COMPLETE RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency002\emergency002	
			' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.13.3 Emergency Complete ' Page No: ' 173'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_197 - CIL - REMOTE STATISTICS ICCR REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnosics001\diagnosics001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics002\diagnosics002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics005\diagnosics005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics003\diagnosics003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics004\diagnosics004	
			' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.14.1 Remote Statistics ' Page No: ' 174'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_198 - CIL - LOCAL STATISTICS ICCR REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnosics011\diagnosics011	
			' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.14.2 Local Statistics ' Page No: ' 174'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_199 - CIL - MAPPING STATISTICS ICCR REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnosics027\diagnosics027	
			' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.15 Mapping Statistics ' Page No: ' 174'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_200 - CIL - TELEMETRY ON STATUS TO APPLICATION</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open014\open014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open016\open016	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Open\Open001\open001	
			' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.3.1 Telemetry On Status To Application ' Page No: ' 176'			



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_201 - CIL - TELEMETRY ON STATUS TO APPLICATION - CHANNEL RECOVERY</b> ' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.3.1 Telemetry On Status To Application ' Page No: ' 176'	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery001\channelrecovery001	
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_202 - CIL - TELEMETRY OFF MESSAGE APPLICATION</b> ' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.3.2 Telemetry Off Message To Application ' Page No: ' 176'	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close001\close001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open014\open014	
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_203 - CIL -TELEMETRY OFF MESSAGE DURING CHANNEL RECOVERY</b> ' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.3.2 Telemetry Off Message To Application ' Page No: ' 176'	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery012\channelrecovery012	
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_204 - CIL - CHART RECORDER DOWN ARROW - DOWNLINK STARTED</b> ' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.3.3 Chart Recorder - Downlink And Uplink Status ' Page No: ' 177'	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite051\memorywrite051	
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_205 - CIL - CHART RECORDER UP ARROW - UPLINK CONFIRMED</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull026\discoverfull026	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close012\close012	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch041\discovermatch041	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close001\close001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close013\close013	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close014\close014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull014\discoverfull014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open025\open025	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Diagnostic\Diagnostics001\diagnostics001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName029\discovername029	
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.3.4 Confirm Detected ' Page No: ' 177'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_206 - CIL - CONFIRM-DETECTED-STATE-CHANGE-2</b> ' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.3.4 Confirm Detected ' Page No: ' 177'	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead046\memoryread046	





Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_207 - CIL - CONFIRM-DETECTED-STATE-CHANGE-3</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency001\emergency001	' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.3.4 Confirm Detected' Page No: ' 177'
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_237 - SERVICE DURATION TOLERANCE</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite003\memorywrite003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Diagnostic\Diagnostics002\diagnostics002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull006\discoverfull006	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency003\emergency003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close002\close002	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Discover\DiscoverFull001\discoverfull001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch006\discovermatch006	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open016\open016	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName006\discovername006	' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.4 General Requirements' Page No: ' 48'
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_243 - UPLINK PACKET RESPONSE TIMEOUT</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch008\discovermatch008	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverMatch041\discovermatch041	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverName030\discovername030	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open020\open020	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery018\channelrecovery018	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Discover\DiscoverFull010\discoverfull010	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Open\Open021\open021	' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.4 General Requirements' Page No: ' 48'



Tracing	Classification	Requirement Title				
	Class	Decomp Title	Test Case ID	Test Case Class	Test Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_240 - POLLING OPERATION SCAN AND SLEEP TIMERS</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling016\polling016	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling050\polling050	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling040\polling040	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling017\polling017	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling025\polling025	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\C_TCP_Polling\Polling047\polling047	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Polling\Polling049\polling049	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling051\polling051	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\C_TCP_Polling\Polling046\polling046	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling024\polling024	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling039\polling039	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Polling\Polling048\polling048	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Polling\Polling018\polling018	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling026\polling026	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Polling\Polling045\polling045	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling052\polling052	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.6.1 Requirements' Page No: ' 55'						
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_241 - POLLING ENABLING CRITERIA</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Polling\Polling034\polling034	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Polling\Polling043\polling043	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Polling\Polling054\polling054	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling016\polling016	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Polling\Polling044\polling044	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Polling\Polling004\polling004	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Polling\Polling005\polling005	
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.6.1 Requirements' Page No: ' 55'						



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Class	Test Class	Test Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_242 - POLLING TERMINATION</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling041\polling041	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling042\polling042	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling058\polling058	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Polling\Polling006\polling006	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling057\polling057	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Polling\Polling007\polling007	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.6.1 Requirements' Page No: ' 55'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_218 - MEDICAL EVENT - C INTERFACE PARAMETERS</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent001\medicalevent001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_MedicalEvent\MedicalEvent002\medicalevent002	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_MedicalEvent\MedicalEvent003\medicalevent003	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.14.1 Requirements' Page No: ' 117'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_IE_219 - MEDICAL EVENT - UPLINK PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent001\medicalevent001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.14.1 Requirements' Page No: ' 117'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_220 - MEDICAL EVENT - MEDICAL EVENT REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent001\medicalevent001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.14.1 Requirements' Page No: ' 117'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_221 - MEDICAL EVENT - MEDICAL EVENT UPLINK</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent001\medicalevent001	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent004\medicalevent004	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.14.1 Requirements' Page No: ' 117'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_222 - MEDICAL EVENT - INVALID MEDICAL EVENT UPLINK</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent004\medicalevent004	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.14.1 Requirements' Page No: ' 117'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_223 - MEDICAL EVENT - ANTENNA TIMEOUT</b>				
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.14.1 Requirements' Page No: ' 117'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_224 - MEDICAL EVENT - LISTEN BEFORE TALK TIMEOUT</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent004\medicalevent004	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_MedicalEvent\MedicalEvent005\medicalevent005	



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Class	Test Class	Name
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.14.1 Requirements ' Page No: ' 118'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_228 - MEDICAL EVENT - RESPONSE TO C INTERFACE LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent001\medicalevent001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_MedicalEvent\MedicalEvent014\medicalevent014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_MedicalEvent\MedicalEvent010\medicalevent010	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_MedicalEvent\MedicalEvent013\medicalevent013	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_MedicalEvent\MedicalEvent008\medicalevent008	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_MedicalEvent\MedicalEvent009\medicalevent009	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_MedicalEvent\MedicalEvent011\medicalevent011	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_MedicalEvent\MedicalEvent012\medicalevent012	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.14.1 Requirements ' Page No: ' 118'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_231 - MEDICAL EVENT - INVALID OPEN DOWNLINK</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent016\medicalevent016	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.14.1 Requirements ' Page No: ' 118'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_232 - MEDICAL EVENT - MEDICAL EVENT DURATION</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent015\medicalevent015	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent017\medicalevent017	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent018\medicalevent018	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent016\medicalevent016	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.14.1 Requirements ' Page No: ' 119'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_236 - CIL - OPEN STOP HIBERNATE REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open014\open014	
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.8 Waveform Enable ' Page No: ' 162'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_235 - CIL - MEDICAL EVENT REQUEST AND RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_MedicalEvent\MedicalEvent003\medicalevent003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_MedicalEvent\MedicalEvent002\medicalevent002	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent001\medicalevent001	
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.3.6 Medical Event ' Page No: ' 179'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_244 - RF HEAD LEDS</b>				
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.4 RF Head LEDS For Telemetry C ' Page No: ' 152'				



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_IE_246 - CIL - PROGRAMMING HEAD PRESENCE OR ABSENCE STATUS</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Open\Open028\open028	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Open\Open029\open029	
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.3.5 Implant Programming Head Status ' Page No: ' 178'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_247 - CIL - PROGRAMMING HEAD STATUS TO APPLICATION LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Open\Open028\open028	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Open\Open001\open001	
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.3.5 Implant Programming Head Status ' Page No: ' 178'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_215 - OPEN - HIBERNATE DOWNLINK REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open023\open023	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open014\open014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open017\open017	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open024\open024	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open027\open027	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.8.2 Open - Hibernate Requirements ' Page No: ' 81'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_216 - OPEN - HIBERNATE UPLINK RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open023\open023	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Open\Open014\open014	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.8.2 Open - Hibernate Requirements ' Page No: ' 82'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_076 - DIAGNOSTIC FILLER - UPLINK FILLER PACKETS</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Diagnostic\Diagnostics030\diagnostics030	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.10.5 Diagnostic Filler Packet ' Page No: ' 104'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_099 - CLOSE - RECOVERY DURING CLOSE</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Close\Close008\close008	
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.13.1 Requirements ' Page No: ' 115'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_144 - DATA TRANSFER MODE - VALIDATE TRANSFER MODE AND RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\TransferMode001\transfermode001	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.4.3 Implant ' Page No: ' 150'				



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Class	Test Class	Name
TRACING	FWVT Tested	TLMC_E_145 - RESET SERVICE - DOWNLINK PACKET WITH RESET BIT	Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Data\MemoryRead035\memoryread035	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Data\MemoryRead036\memoryread036	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Data\MemoryRead049\memoryread049	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Data\MemoryRead037\memoryread037	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Data\MemoryRead048\memoryread048	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Data\MemoryWrite038\memorywrite038	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Data\MemoryWrite041\memorywrite041	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Emergency\Emergency014\emergency014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Emergency\Emergency015\emergency015	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Data\MemoryWrite048\memorywrite048	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Emergency\Emergency012\emergency012	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Data\MemoryWrite029\memorywrite029	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Data\MemoryRead050\memoryread050	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Data\MemoryRead051\memoryread051	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Data\MemoryWrite040\memorywrite040	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \C_TCP_Emergency\Emergency013\emergency013	

' FILE\_NAME: 'internal.fm' FILE\_REV: '1.42' SECTION: '5.3.5.1 Requirements 'Page No: ' 151'



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_146 - RESET SERVICE - DOWNLINK RESET REQUEST RETRANSMISSION</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead038\memoryread038	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency014\emergency014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead037\memoryread037	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite042\memorywrite042	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead039\memoryread039	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead040\memoryread040	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency011\emergency011	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead036\memoryread036	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite043\memorywrite043	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite044\memorywrite044	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite040\memorywrite040	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite041\memorywrite041	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency005\emergency005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency015\emergency015	

' FILE\_NAME: 'internal.fm' FILE\_REV: '1.42' SECTION: '5.3.5.1 Requirements 'Page No: ' 151'



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Class	Test Class	Name
TRACING	FWVT Tested	TLMC_I_147 - RESET SERVICE - DOWNLINK RESET REQUEST VALIDATION	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite055\memorywrite055	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead041\memoryread041	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite032\memorywrite032	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite038\memorywrite038	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite054\memorywrite054	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency016\emergency016	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency018\emergency018	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead035\memoryread035	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite029\memorywrite029	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency017\emergency017	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency019\emergency019	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead049\memoryread049	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite053\memorywrite053	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite052\memorywrite052	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryWrite056\memorywrite056	
' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.5.1 Requirements ' Page No: ' 151'						
TRACING	FWVT Tested	TLMC_E_148 - RESET SERVICE - OPERATION SUCCESSFUL	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead035\memoryread035	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency022\emergency022	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\MemoryRead042\memoryread042	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency013\emergency013	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency020\emergency020	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Emergency\Emergency021\emergency021	
' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.5.1 Requirements ' Page No: ' 152'						
TRACING	FWVT Tested	TLMC_E_156 - SIGNAL - STRENGTH INDICATOR	' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.4.1 Signal Strength Indicator ' Page No: ' 153'			
TRACING	FWVT Tested	TLMC_E_210 - CIL - DISABLE DOWNLINK ICCR REQUEST	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General001\general001	





Tracing	Classification	Requirement Title			
Class	Decomp	Title	Test Case ID	Class	Test Class Name
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.16 Enable/disable Downlinks ' Page No: ' 174'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_211 - CIL - ENABLE DOWNLINK ICCC REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General001\general001
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.16 Enable/disable Downlinks ' Page No: ' 175'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_035 - POLLING - SERVICE REQUEST FROM C INTERFACE LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling057\polling057
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling058\polling058
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.6.3 Requirements ' Page No: ' 56'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_036 - POLLING - SCANNING CHANNEL AND SERVICE DURATION TIME</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Polling\Polling045\polling045
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Polling\Polling062\polling062
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Polling\Polling034\polling034
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Polling\Polling059\polling059
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling060\polling060
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Polling\Polling061\polling061
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling016\polling016
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Polling\Polling043\polling043
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Polling\Polling054\polling054
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.6.3 Requirements ' Page No: ' 57'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_248 - CIL - REACTION TO APPLICATION SYSTEM ERROR</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General023\general023
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General022\general022
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General024\general024
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General025\general025
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.4 Application System Error ' Page No: ' 179'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_037 - POLLING - INVALID DOWNLINK PACKET RECEIVED</b>			
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.6.3 Requirements ' Page No: ' 57'			



Tracing	Classification	Requirement Title			
	Class	Decomp Title	Test Case ID	Test Class	Test Class Name
TRACING	FWVT Tested	TLMC_I_038 - POLLING - SCAN TERMINATION	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling051\polling051
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling058\polling058
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling025\polling025
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling040\polling040
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling057\polling057
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Polling\Polling066\polling066
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\C_TCP_Polling\Polling046\polling046
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Polling\Polling067\polling067
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling050\polling050
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling065\polling065
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Polling\Polling068\polling068
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\C_TCP_Polling\Polling047\polling047
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Polling\Polling063\polling063
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\C_TCP_Polling\Polling064\polling064
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.6.3 Requirements' Page No: ' 58'					
TRACING	FWVT Tested	TLMC_I_110 - ARQ - MEMORY DATA ACKNOWLEDGEMENT NOT RECEIVED	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ013\arq013
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\ARQ027\arq027
' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.1.3 Implant' Page No: ' 130'					
TRACING	FWVT Tested	TLMC_I_252 - POLLING - RESTART	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling084\polling084
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling086\polling086
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling082\polling082
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling085\polling085
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling083\polling083
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_Polling\Polling087\polling087
' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.6.1 Requirements' Page No: ' 55'					
TRACING	FWVT Tested	TLMC_I_256 - POLLING - ACKNOWLEDGEMENT RESPONSE TO C INTERFACE LAYER			



Tracing	Classification	Requirement Title	Test Case ID	Test Class	Test Class Name
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.6.3 Requirements ' Page No: ' 57'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_039 - POLLING - SERVICE RESPONSE TO C INTERFACE LAYER</b>			
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.6.3 Requirements ' Page No: ' 58'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_229 - MEDICAL EVENT - MEDICAL EVENT REQUEST RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent001\medicalevent001
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.14.1 Requirements ' Page No: ' 118'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_230 - MEDICAL EVENT - UPLINK TIMEOUT</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent004\medicalevent004
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent024\medicalevent024
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent015\medicalevent015
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.14.1 Requirements ' Page No: ' 118'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_257 - MEDICAL EVENT - RESPONSE TO C INTERFACE LAYER</b>			
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.14.1 Requirements ' Page No: ' 119'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_258 - PATIENT NAME REQUEST</b>			
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.15.1 Requirements ' Page No: ' 119'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_I_259 - PATIENT NAME ACKNOWLEDGEMENT RESPONSE TO C INTERFACE LAYER</b>			
		' FILE_NAME: 'external.fm' FILE_REV: '1.41' SECTION: '5.2.15.1 Requirements ' Page No: ' 120'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_245 - CIL - UPDATE DEVICE STATUS ICCR REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General020\general020
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General017\general017
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General021\general021
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General018\general018
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_General\General019\general019
		' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.2.17 Update Device Status ' Page No: ' 175'			



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_260 - CIL - MEDICAL EVENT UPLINK TO APPLICATION</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\C_TCP_MedicalEvent\MedicalEvent001\medicalevent001	
			' FILE_NAME: 'c_intfc.fm' FILE_REV: '1.35' SECTION: '6.3.5 Implant Programming Head Status ' Page No: ' 178'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_E_261 - CH RECOVERY - TOO MANY SAME CHANNEL RECOVERIES</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery053\channelrecovery053	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery058\channelrecovery058	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery048\channelrecovery048	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery050\channelrecovery050	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery057\channelrecovery057	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery045\channelrecovery045	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery052\channelrecovery052	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery047\channelrecovery047	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery055\channelrecovery055	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery046\channelrecovery046	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery049\channelrecovery049	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery051\channelrecovery051	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery054\channelrecovery054	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery056\channelrecovery056	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Channel\ChannelRecovery059\channelrecovery059	
			' FILE_NAME: 'internal.fm' FILE_REV: '1.42' SECTION: '5.3.3.2 Instrument ' Page No: ' 141'			



Tracing Classification Requirement Title

Class	Decomp Title	Test Case ID	Test Class	Test Class Name
TRACING	FWVT Tested TLMC_E_262 - CIL - RETRY DOWNLINK	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\Data004\data004
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\Data011\data011
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\Data006\data006
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\Data009\data009
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\Data001\data001
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\Data002\data002
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\Data007\data007
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\Data003\data003
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\Data005\data005
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\Data008\data008
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\C_TCP_Data\Data010\data010

' FILE\_NAME: 'c\_intfc.fm' FILE\_REV: '1.35' SECTION: '6.2.12.4.2 One ICCD Downlink Req, Multiple Uplink Data Indications '  
Page No: ' 169'

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Tracing Classification Requirement Title

Class	Decomp Title	Test Case ID	Test Class	Test Class Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_MS_003 - PACKET TYPES</b>		
		Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_General\m_General005\m_general005
		Status: <b>Up-to-date</b>	Rev: 2.11	Test: .\M_TCP_Open\m_Open001\m_open001
		Status: <b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_Close\m_Close001\m_close001
		Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Security\m_Security004\m_security004
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_ARQ006\m_arq006
		Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_General\m_General015\m_general015
		Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_MedicalEvent\m_MedicalEvent001\m_medicalevent001
		Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Security\m_Security011\m_security011
		Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_MemoryWrite006\m_memorywrite006
		Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Discover\m_DiscoverFull032\m_discoverfull032
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_General\m_General003\m_general003
		Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Security\m_Security021\m_security021
		Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Diagnostic\m_Diagnostics001\m_diagnostics001
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Security\m_Security020\m_security020
		Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Data\m_MemoryRead003\m_memoryread003
Status: <b>Up-to-date</b>	Rev: 2.7	Test: .\M_TCP_Discover\m_DiscoverFull001\m_discoverfull001		
Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Network\m_Network001\m_network001		

' FILE\_NAME: 'datalink.fm' FILE\_REV: '1.134' SECTION: '5.1.2.4 Packet Type' Page No: ' 98'

<b>TRACING</b>	FWVT Tested	<b>TLMC_M_100 - ARQ - STOP AND WAIT MASTER ACKNOWLEDGMENT</b>		
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_MemoryWrite039\m_memorywrite039
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_MemoryWrite008\m_memorywrite008
		Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Data\m_ARQ001\m_arq001
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_ARQ004\m_arq004
		Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_ARQ003\m_arq003
		Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Data\m_ARQ002\m_arq002
Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_ARQ005\m_arq005		

' FILE\_NAME: 'internal.fm' FILE\_REV: '1.131' SECTION: '5.3.1.2 MASTER' Page No: ' 277'



Tracing	Classification	Requirement Title				
Class	Decomp Title		Test Case ID	Class	Test Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_MS_101 - ARQ - MASTER ARQ PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Data\m_ARQ008\m_arq008	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_Data\m_ARQ015\m_arq015	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Data\m_ARQ007\m_arq007	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_ARQ011\m_arq011	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_ARQ010\m_arq010	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_ARQ009\m_arq009	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_ARQ006\m_arq006	
			' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.1.2 MASTER' Page No: ' 281'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_102 - ARQ - UPDATING OF ARQ INFORMATION</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_ARQ012\m_arq012	
			' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.1.2 MASTER' Page No: ' 281'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_103 - ARQ - SLAVE MEMORY DATA PACKET ACKNOWLEDGMENT</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Data\m_ARQ014\m_arq014	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_ARQ012\m_arq012	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_ARQ013\m_arq013	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_Data\m_ARQ015\m_arq015	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_ARQ016\m_arq016	
			' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.1.2 MASTER' Page No: ' 282'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_104 - ARQ - SLAVE ACK NOT RECEIVED</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_ARQ016\m_arq016	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_ARQ017\m_arq017	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_Data\m_ARQ018\m_arq018	
			' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.1.2 MASTER' Page No: ' 282'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_357 - CH MAPPING - SELECT CHANNEL</b>				
			' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.2.2 MAPPING SYSTEM PARTITIONING' Page No: ' 288'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_358 - CH MAPPING - DIAGNOSTIC COLLECTION</b>				
			' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.2.3 DIAGNOSTIC MAPPING' Page No: ' 288'			



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
TRACING	FWVT Tested	TLMC_M_120 - CH RECOVERY - TRIGGER CHANNEL RECOVERY	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Channel\m_ChannelRecovery001\m_channelrecovery001	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Channel\m_ChannelRecovery011\m_channelrecovery011	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Channel\m_ChannelRecovery002\m_channelrecovery002	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Channel\m_ChannelRecovery005\m_channelrecovery005	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Channel\m_ChannelRecovery009\m_channelrecovery009	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Channel\m_ChannelRecovery004\m_channelrecovery004	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Channel\m_ChannelRecovery003\m_channelrecovery003	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Channel\m_ChannelRecovery033\m_channelrecovery033	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.2 MASTER' Page No: ' 291'				
TRACING	FWVT Tested	TLMC_M_121 - CH RECOVERY - START SAME CHANNEL RECOVERY	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Channel\m_ChannelRecovery006\m_channelrecovery006	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Channel\m_ChannelRecovery001\m_channelrecovery001	
			Status: <b>Up-to-date</b>	Rev: 2.7	Test: \\M_TCP_Channel\m_ChannelRecovery007\m_channelrecovery007	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Channel\m_ChannelRecovery032\m_channelrecovery032	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_Channel\m_ChannelRecovery008\m_channelrecovery008	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.2 MASTER' Page No: ' 291'				
TRACING	FWVT Tested	TLMC_M_122 - CH RECOVERY - SAME CHANNEL RECOVERY OPEN MASTER PACKET	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Channel\m_ChannelRecovery009\m_channelrecovery009	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Channel\m_ChannelRecovery011\m_channelrecovery011	
			Status: <b>Up-to-date</b>	Rev: 2.8	Test: \\M_TCP_Channel\m_ChannelRecovery010\m_channelrecovery010	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Channel\m_ChannelRecovery012\m_channelrecovery012	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Channel\m_ChannelRecovery013\m_channelrecovery013	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.2 MASTER' Page No: ' 293'				
TRACING	FWVT Tested	TLMC_M_123 - CH RECOVERY - SAME CHANNEL RECOVERY SUCCESSFUL	Status: <b>Up-to-date</b>	Rev: 2.8	Test: \\M_TCP_Channel\m_ChannelRecovery014\m_channelrecovery014	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Channel\m_ChannelRecovery001\m_channelrecovery001	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Channel\m_ChannelRecovery012\m_channelrecovery012	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Channel\m_ChannelRecovery015\m_channelrecovery015	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.2 MASTER' Page No: ' 293'				





Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_124 - CH RECOVERY - SAME CHANNEL RECOVERY UNSUCCESSFUL</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Channel\m_ChannelRecovery012\m_channelrecovery012	
			Status: <b>Up-to-date</b>	Rev: 2.8	Test: \M_TCP_Channel\m_ChannelRecovery014\m_channelrecovery014	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_Channel\m_ChannelRecovery015\m_channelrecovery015	
			' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.2 MASTER' Page No: ' 295'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_359 - CH RECOVERY - WAKEUP TRANSMISSION</b>	Status: <b>Up-to-date</b>	Rev: 2.8	Test: \M_TCP_Channel\m_ChannelRecovery014\m_channelrecovery014	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_Channel\m_ChannelRecovery064\m_channelrecovery064	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Channel\m_ChannelRecovery068\m_channelrecovery068	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Channel\m_ChannelRecovery045\m_channelrecovery045	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_Channel\m_ChannelRecovery020\m_channelrecovery020	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Channel\m_ChannelRecovery069\m_channelrecovery069	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Channel\m_ChannelRecovery065\m_channelrecovery065	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Channel\m_ChannelRecovery066\m_channelrecovery066	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Channel\m_ChannelRecovery067\m_channelrecovery067	
' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.2 MASTER' Page No: ' 296'						
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_261 - CH RECOVERY - TOO MANY SAME CHANNEL RECOVERIES</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Channel\m_ChannelRecovery048\m_channelrecovery048	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Channel\m_ChannelRecovery053\m_channelrecovery053	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_Channel\m_ChannelRecovery055\m_channelrecovery055	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Channel\m_ChannelRecovery045\m_channelrecovery045	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Channel\m_ChannelRecovery047\m_channelrecovery047	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Channel\m_ChannelRecovery049\m_channelrecovery049	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Channel\m_ChannelRecovery050\m_channelrecovery050	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Channel\m_ChannelRecovery051\m_channelrecovery051	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Channel\m_ChannelRecovery046\m_channelrecovery046	
Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Channel\m_ChannelRecovery054\m_channelrecovery054				
' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.2 MASTER' Page No: ' 297'						



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Class	Test Class	Name
TRACING	FWVT Tested	TLMC_M_125 - CH RECOVERY - START UNSPECIFIED CHANNEL RECOVERY	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Channel\m_ChannelRecovery012\m_channelrecovery012	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Channel\m_ChannelRecovery015\m_channelrecovery015	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Channel\m_ChannelRecovery017\m_channelrecovery017	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_Channel\m_ChannelRecovery020\m_channelrecovery020	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Channel\m_ChannelRecovery016\m_channelrecovery016	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Channel\m_ChannelRecovery018\m_channelrecovery018	
' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.2 MASTER' Page No: ' 298'						
TRACING	FWVT Tested	TLMC_M_126 - REMAP CHANNEL - UNSPECIFIED CHANNEL RECOVERY TIMER EXPIRATION	Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_Channel\m_ChannelRecovery038\m_channelrecovery038	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_Channel\m_ChannelRecovery020\m_channelrecovery020	
' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.2 MASTER' Page No: ' 298'						
TRACING	FWVT Tested	TLMC_M_127 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY SUCCESSFUL	Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_Channel\m_ChannelRecovery020\m_channelrecovery020	
' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.2 MASTER' Page No: ' 299'						
TRACING	FWVT Tested	TLMM_M_360 - CH RECOVERY - NATIVE TIMEOUT	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Channel\m_ChannelRecovery073\m_channelrecovery073	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Channel\m_ChannelRecovery064\m_channelrecovery064	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Channel\m_ChannelRecovery072\m_channelrecovery072	
' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.2 MASTER' Page No: ' 299'						
TRACING	FWVT Tested	TLMC_M_128 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY UNSUCCESSFUL	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Channel\m_ChannelRecovery012\m_channelrecovery012	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Channel\m_ChannelRecovery042\m_channelrecovery042	
' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.2 MASTER' Page No: ' 299'						



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
TRACING	FWVT Tested	TLMC_S_129 - CH RECOVERY - TRIGGER CHANNEL RECOVERY	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Channel\m_ChannelRecovery021\m_channelrecovery021	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Channel\m_ChannelRecovery022\m_channelrecovery022	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Channel\m_ChannelRecovery023\m_channelrecovery023	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Channel\m_ChannelRecovery043\m_channelrecovery043	
			Status: <b>Up-to-date</b>	Rev: 2.8	Test: \M_TCP_Channel\m_ChannelRecovery014\m_channelrecovery014	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_PowerInhibit\m_Power005\m_power005	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Channel\m_ChannelRecovery009\m_channelrecovery009	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_Channel\m_ChannelRecovery024\m_channelrecovery024	
' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.3 SLAVE' Page No: ' 301'						
TRACING	FWVT Tested	TLMC_S_130 - CH RECOVERY - START SAME CHANNEL RECOVERY	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Channel\m_ChannelRecovery009\m_channelrecovery009	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Channel\m_ChannelRecovery043\m_channelrecovery043	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Channel\m_ChannelRecovery025\m_channelrecovery025	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Channel\m_ChannelRecovery026\m_channelrecovery026	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Channel\m_ChannelRecovery017\m_channelrecovery017	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Channel\m_ChannelRecovery027\m_channelrecovery027	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Channel\m_ChannelRecovery029\m_channelrecovery029	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Channel\m_ChannelRecovery028\m_channelrecovery028	
' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.3 SLAVE' Page No: ' 301'						
TRACING	FWVT Tested	TLMC_S_131 - CH RECOVERY - SAME CHANNEL RECOVERY INVOKE SCAN	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Channel\m_ChannelRecovery040\m_channelrecovery040	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_Channel\m_ChannelRecovery031\m_channelrecovery031	
			Status: <b>Up-to-date</b>	Rev: 2.8	Test: \M_TCP_Channel\m_ChannelRecovery010\m_channelrecovery010	
' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.3 SLAVE' Page No: ' 302'						
TRACING	FWVT Tested	TLMC_S_132 - CH RECOVERY - SAME CHANNEL RECOVERY SUCCESSFUL	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Channel\m_ChannelRecovery001\m_channelrecovery001	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_Channel\m_ChannelRecovery032\m_channelrecovery032	
			Status: <b>Up-to-date</b>	Rev: 2.8	Test: \M_TCP_Channel\m_ChannelRecovery010\m_channelrecovery010	
' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.3 SLAVE' Page No: ' 302'						



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_133 - CH RECOVERY - SAME CHANNEL RECOVERY UNSUCCESSFUL</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Channel\m_ChannelRecovery016\m_channelrecovery016	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Channel\m_ChannelRecovery012\m_channelrecovery012	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.3 SLAVE' Page No: ' 303'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_134 - CH RECOVERY - START UNSPECIFIED CHANNEL RECOVERY</b>	Status: <b>Up-to-date</b>	Rev: 2.9	Test: \\M_TCP_Channel\m_ChannelRecovery063\m_channelrecovery063	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Channel\m_ChannelRecovery061\m_channelrecovery061	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Channel\m_ChannelRecovery062\m_channelrecovery062	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.3 SLAVE' Page No: ' 303'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_135 - CH RECOVERY - UCR TIMER ACTIVE NON OPEN MASTER PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Channel\m_ChannelRecovery041\m_channelrecovery041	
			Status: <b>Up-to-date</b>	Rev: 2.10	Test: \\M_TCP_Channel\m_ChannelRecovery030\m_channelrecovery030	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.3 SLAVE' Page No: ' 303'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_136 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY SUCCESSFUL</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Channel\m_ChannelRecovery040\m_channelrecovery040	
			Status: <b>Up-to-date</b>	Rev: 2.8	Test: \\M_TCP_Channel\m_ChannelRecovery010\m_channelrecovery010	
			Status: <b>Up-to-date</b>	Rev: 2.10	Test: \\M_TCP_Channel\m_ChannelRecovery030\m_channelrecovery030	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_Channel\m_ChannelRecovery038\m_channelrecovery038	
			Status: <b>Up-to-date</b>	Rev: 2.9	Test: \\M_TCP_Channel\m_ChannelRecovery063\m_channelrecovery063	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.3 SLAVE' Page No: ' 304'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_361 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY UNSUCCESSFUL</b>	Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_Channel\m_ChannelRecovery031\m_channelrecovery031	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Channel\m_ChannelRecovery018\m_channelrecovery018	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Channel\m_ChannelRecovery071\m_channelrecovery071	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Channel\m_ChannelRecovery070\m_channelrecovery070	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Channel\m_ChannelRecovery039\m_channelrecovery039	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.3.3 SLAVE' Page No: ' 304'				



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_139 - DATA TRANSFER MODE - MODE TRANSITIONS</b>	Status: <b>Up-to-date</b>	Rev: 2.8	Test: .\M_TCP_Data\m_TransferMode001\m_transfermode001	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_TransferMode004\m_transfermode004	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Data\m_TransferMode003\m_transfermode003	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_TransferMode007\m_transfermode007	
			Status: <b>Up-to-date</b>	Rev: 2.7	Test: .\M_TCP_Data\m_TransferMode017\m_transfermode017	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_TransferMode002\m_transfermode002	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.4.2 MASTER' Page No: ' 307'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_140 - DATA TRANSFER MODE - NOMINAL TO LOW ENERGY MODE TRANSITIONS.</b>	Status: <b>Up-to-date</b>	Rev: 2.8	Test: .\M_TCP_Data\m_TransferMode001\m_transfermode001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_TransferMode010\m_transfermode010	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.4.2 MASTER' Page No: ' 307'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_141 - DATA TRANSFER MODE - NEGATIVE PREAMBLE RATIO IN LOW ENERGY MODE</b>	Status: <b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_Data\m_TransferMode018\m_transfermode018	
			Status: <b>Up-to-date</b>	Rev: 2.7	Test: .\M_TCP_Data\m_TransferMode017\m_transfermode017	
			Status: <b>Up-to-date</b>	Rev: 2.8	Test: .\M_TCP_Data\m_TransferMode001\m_transfermode001	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Data\m_TransferMode015\m_transfermode015	
			Status: <b>Up-to-date</b>	Rev: 2.8	Test: .\M_TCP_Data\m_TransferMode016\m_transfermode016	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_TransferMode004\m_transfermode004	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.4.2 MASTER' Page No: ' 308'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_142 - DATA TRANSFER MODE - LOW ENERGY TO NOMINAL TRANSITION</b>	Status: <b>Up-to-date</b>	Rev: 2.8	Test: .\M_TCP_Data\m_TransferMode001\m_transfermode001	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.4.2 MASTER' Page No: ' 308'				



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_143 - DATA TRANSFER MODE - TRANSITION TO NEW MODE ON MASTER PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Data\m_TransferMode006\m_transfermode006	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Data\m_TransferMode008\m_transfermode008	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_TransferMode009\m_transfermode009	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_Data\m_TransferMode019\m_transfermode019	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_TransferMode007\m_transfermode007	
			Status: <b>Up-to-date</b>	Rev: 2.8	Test: .\M_TCP_Data\m_TransferMode001\m_transfermode001	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Data\m_TransferMode005\m_transfermode005	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.4.2 MASTER' Page No: ' 308'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_144 - DATA TRANSFER MODE - VALIDATE TRANSFER MODE AND RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.8	Test: .\M_TCP_Data\m_TransferMode001\m_transfermode001	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_TransferMode011\m_transfermode011	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_TransferMode014\m_transfermode014	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Data\m_TransferMode005\m_transfermode005	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_TransferMode013\m_transfermode013	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_TransferMode012\m_transfermode012	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.4.3 SLAVE' Page No: ' 310'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_362 - RESET SERVICE - INVOKE SERVICE 1</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Reset\m_Reset001\m_reset001	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.5.1 Requirements' Page No: ' 311'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_363 - RESET SERVICE - INVOKE SERVICE 2</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Reset\m_Reset002\m_reset002	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.5.1 Requirements' Page No: ' 311'				



Tracing Classification Requirement Title

Class	Decomp Title	Test Case ID	Test Class	Test Class Name
TRACING	FWVT Tested TLMC_M_145 - RESET SERVICE - MASTER PACKET WITH RESET BIT	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Data\m_MemoryRead049\m_memoryread049
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Emergency\m_Emergency012\m_emergency012
		Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Emergency\m_Emergency014\m_emergency014
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_MemoryWrite029\m_memorywrite029
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_MemoryWrite041\m_memorywrite041
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Data\m_MemoryWrite038\m_memorywrite038
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Emergency\m_Emergency013\m_emergency013
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Emergency\m_Emergency015\m_emergency015
		Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Data\m_MemoryRead035\m_memoryread035
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_MemoryRead037\m_memoryread037
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Data\m_MemoryRead051\m_memoryread051
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_MemoryWrite040\m_memorywrite040
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_MemoryWrite048\m_memorywrite048

' FILE\_NAME: 'internal.fm' FILE\_REV: '1.131' SECTION: '5.3.5.1 Requirements ' Page No: ' 312'

TRACING	FWVT Tested TLMC_M_146 - RESET SERVICE - MASTER RESET REQUEST RETRANSMISSION	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Emergency\m_Emergency014\m_emergency014
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_MemoryRead037\m_memoryread037
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Emergency\m_Emergency015\m_emergency015
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_MemoryWrite042\m_memorywrite042
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_MemoryWrite040\m_memorywrite040
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Emergency\m_Emergency005\m_emergency005
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_MemoryWrite041\m_memorywrite041
		Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Data\m_MemoryRead038\m_memoryread038

' FILE\_NAME: 'internal.fm' FILE\_REV: '1.131' SECTION: '5.3.5.1 Requirements ' Page No: ' 312'



Tracing	Classification	Requirement Title			
Class	Decomp Title	Test Case ID	Test Class	Test Class Name	
TRACING	FWVT Tested	TLMC_S_147 - RESET SERVICE - RESET REQUEST VALIDATION	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Data\m_MemoryWrite032\m_memorywrite032
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Data\m_MemoryWrite052\m_memorywrite052
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Data\m_MemoryWrite055\m_memorywrite055
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_Data\m_MemoryWrite056\m_memorywrite056
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Emergency\m_Emergency017\m_emergency017
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_Data\m_MemoryRead035\m_memoryread035
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Data\m_MemoryWrite038\m_memorywrite038
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Data\m_MemoryWrite054\m_memorywrite054
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Emergency\m_Emergency018\m_emergency018
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_Data\m_MemoryRead041\m_memoryread041
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Data\m_MemoryWrite053\m_memorywrite053
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Data\m_MemoryWrite029\m_memorywrite029
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Emergency\m_Emergency016\m_emergency016
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Data\m_MemoryRead049\m_memoryread049
Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Emergency\m_Emergency019\m_emergency019			
' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.5.1 Requirements' Page No: ' 312'					
TRACING	FWVT Tested	TLMC_M_148 - RESET SERVICE - OPERATION SUCCESSFUL	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_Data\m_MemoryRead035\m_memoryread035
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Data\m_MemoryRead042\m_memoryread042
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Emergency\m_Emergency022\m_emergency022
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Emergency\m_Emergency013\m_emergency013
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Emergency\m_Emergency021\m_emergency021
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_Emergency\m_Emergency020\m_emergency020
' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.5.1 Requirements' Page No: ' 312'					
TRACING	FWVT Tested	TLMM_M_364 - WIRELESS WAKEUP - INITIATE INSTIGATOR WAKEUP	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_WirelessWakeup\m_Wakeup008\m_wakeup008
' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.2 Requirements' Page No: ' 317'					





Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Class	Test Class	Test Name
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_365 - WIRELESS WAKEUP - WAKEUP PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_WirelessWakeup\m_Wakeup011\m_wakeup011	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_WirelessWakeup\m_Wakeup008\m_wakeup008	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_WirelessWakeup\m_Wakeup002\m_wakeup002	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_WirelessWakeup\m_Wakeup012\m_wakeup012	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_WirelessWakeup\m_Wakeup009\m_wakeup009	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_WirelessWakeup\m_Wakeup010\m_wakeup010	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.4 Requirements' Page No: ' 318'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_366 - WIRELESS WAKEUP -WAKEUP HEADER BYTE</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_WirelessWakeup\m_Wakeup008\m_wakeup008	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_WirelessWakeup\m_Wakeup011\m_wakeup011	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_WirelessWakeup\m_Wakeup009\m_wakeup009	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.4 Requirements' Page No: ' 318'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_367 - WIRELESS WAKEUP -WAKEUP SEQUENCE NUMBER BYTES</b>				
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.4 Requirements' Page No: ' 320'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_368 - WIRELESS WAKEUP -WAKEUP STATION ID BYTES</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_WirelessWakeup\m_Wakeup002\m_wakeup002	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.4 Requirements' Page No: ' 320'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_369 - WIRELESS WAKEUP -WAKEUP RECEPTOR BIT MAP BYTE</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_WirelessWakeup\m_Wakeup010\m_wakeup010	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.4 Requirements' Page No: ' 321'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_370 - WIRELESS WAKEUP -WAKEUP CONFIGURATION BYTES</b>	Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_WirelessWakeup\m_Wakeup012\m_wakeup012	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.4 Requirements' Page No: ' 321'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_371 - WIRELESS WAKEUP -WAKEUP USER DATA BYTES</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_WirelessWakeup\m_Wakeup011\m_wakeup011	



Tracing	Classification	Requirement Title	Test Case ID	Test Class	Test Class Name
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.4 Requirements ' Page No: ' 322'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_373 - WIRELESS WAKEUP -WAKEUP INTERVAL SYNC START TIME</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_WirelessWakeup\m_Wakeup014\m_wakeup014
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.6 Requirements ' Page No: ' 324'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_374 - WIRELESS WAKEUP -WAKEUP INITIAL CCA</b>			
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.6 Requirements ' Page No: ' 324'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_375 - WIRELESS WAKEUP -WAKEUP WITH CCA BREAKS</b>			
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.6 Requirements ' Page No: ' 325'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_377 - WIRELESS WAKEUP - WAKEUP SNIFF FREQUENCY RANGE</b>			
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.8 Requirements ' Page No: ' 326'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_380 - WIRELESS WAKEUP - WAKEUP COMPLETE INDICATION</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_WirelessWakeup\m_Wakeup003\m_wakeup003
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.8 Requirements ' Page No: ' 327'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_381 - WIRELESS WAKEUP - WAKEUP IN PROGRESS USER DATA AVAILABLE INDICATION</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_WirelessWakeup\m_Wakeup006\m_wakeup006
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_WirelessWakeup\m_Wakeup005\m_wakeup005
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_WirelessWakeup\m_Wakeup007\m_wakeup007
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.8 Requirements ' Page No: ' 327'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_382 - WIRELESS WAKEUP - WAKEUP COMPLETE INDICATION ONLY</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_WirelessWakeup\m_Wakeup003\m_wakeup003
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_WirelessWakeup\m_Wakeup005\m_wakeup005
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.8 Requirements ' Page No: ' 328'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_383 - WIRELESS WAKEUP - INDICATIONS</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_WirelessWakeup\m_Wakeup006\m_wakeup006
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_WirelessWakeup\m_Wakeup005\m_wakeup005
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_WirelessWakeup\m_Wakeup004\m_wakeup004



Tracing	Classification	Requirement Title
Class	Decomp Title	Test Case ID Class Test Class Name
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.8 Requirements ' Page No: ' 328'
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_386 - ANTENNA SELECTION - TRANSMIT</b> Status: <b>Up-to-date</b> Rev: 2.0 Test: \M_TCP_AntennaSelection\m_Antenna002\m_antenna002 Status: <b>Up-to-date</b> Rev: 2.3 Test: \M_TCP_AntennaSelection\m_Antenna001\m_antenna001
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.7 ANTENNA SELECTION ' Page No: ' 329'
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_156 - SIGNAL - STRENGTH INDICATOR</b>
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.8 Signal Strength Indicator ' Page No: ' 330'
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_387 - SIGNAL STRENGTH INDICATOR SETUP</b>
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.8 Signal Strength Indicator ' Page No: ' 331'
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_391 - PLL LOCK ERROR</b>
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.9.1 REQUIREMENTS: ' Page No: ' 332'
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_392 - MASTER TRIM SUCCESS</b>
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.9.1 REQUIREMENTS: ' Page No: ' 332'
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_393 - SLAVE TRIM SUCCESS</b>
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.9.1 REQUIREMENTS: ' Page No: ' 333'
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_394 - MASTER TRIM FAIL</b>
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.9.1 REQUIREMENTS: ' Page No: ' 333'
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_395 - SLAVE TRIM FAIL</b>
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.9.1 REQUIREMENTS: ' Page No: ' 333'
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_396 - TELEMETRY CEASED INDICATION</b>
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.9.1 REQUIREMENTS: ' Page No: ' 334'
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_397 - TRIM FAILURE INDICATION</b>
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.9.1 REQUIREMENTS: ' Page No: ' 334'



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_415 - MEMORY TEST - RAM STRUCTURES</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_MemoryTest\m_MemoryTest004\m_memorytest004	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_MemoryTest\m_MemoryTest003\m_memorytest003	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_MemoryTest\m_MemoryTest005\m_memorytest005	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_MemoryTest\m_MemoryTest002\m_memorytest002	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.10.4 Requirements' Page No: ' 338'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_406 - EEPROM - NON-VOLATILE REGISTERS</b>				
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.2.4 READY INDICATION' Page No: ' 104'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_407 - EEPROM - LOAD RAMWARE APPLICATION</b>				
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.2.4 READY INDICATION' Page No: ' 104'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_262- READY INDICATION - INDICATION TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_EEPROM\m_Eeprom001\m_eeprom001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.2.4 READY INDICATION' Page No: ' 104'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_409 - EEPROM - FAILURE INDICATION</b>				
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.2.5 EEPROM FAILED indicationS' Page No: ' 105'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_MS_004 - STATION ID</b>	Status: <b>Up-to-date</b>	Rev: 2.7	Test: .\M_TCP_Discover\m_DiscoverFull001\m_discoverfull001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.6 General Requirements' Page No: ' 110'				



Tracing	Classification	Requirement Title		Test Case ID	Test Class	Test Class Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_MS_006 - EXTERNAL SERVICE REQUEST PROCESSING</b>	Status:	<b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Close\m_Close020\m_close020
			Status:	<b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Network\m_Network001\m_network001
			Status:	<b>Up-to-date</b>	Rev: 2.7	Test: \M_TCP_Discover\m_DiscoverFull001\m_discoverfull001
			Status:	<b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Diagnostic\m_Diagnostics001\m_diagnostics001
			Status:	<b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_Diagnostic\m_Diagnostics014\m_diagnostics014
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Emergency\m_Emergency012\m_emergency012
			Status:	<b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_RawMode\m_RawMode002\m_rawmode002
			Status:	<b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Security\m_Security013\m_security013
			Status:	<b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_MedicalEvent\m_MedicalEvent001\m_medicalevent001
			Status:	<b>Up-to-date</b>	Rev: 2.11	Test: \M_TCP_Open\m_Open001\m_open001
			Status:	<b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Data\m_MemoryWrite005\m_memorywrite005
			Status:	<b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Diagnostic\m_Diagnostics027\m_diagnostics027
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Discover\m_DiscoverFull015\m_discoverfull015
			Status:	<b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Security\m_Security010\m_security010
			Status:	<b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_Close\m_Close001\m_close001
			Status:	<b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Data\m_MemoryRead005\m_memoryread005
			Status:	<b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_Diagnostic\m_Diagnostics028\m_diagnostics028
			Status:	<b>Up-to-date</b>	Rev: 2.8	Test: \M_TCP_Initialize\m_Initialize001\m_initialize001
			Status:	<b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_RawMode\m_RawMode005\m_rawmode005
			Status:	<b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Emergency\m_Emergency001\m_emergency001
Status:	<b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Initialize\m_Initialize003\m_initialize003			
Status:	<b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_MedicalEvent\m_MedicalEvent014\m_medicalevent014			
Status:	<b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_Network\m_Network002\m_network002			
Status:	<b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Open\m_Open008\m_open008			

' FILE\_NAME: 'external.fm' FILE\_REV: '1.267' SECTION: '5.2.6 General Requirements ' Page No: ' 111'



Tracing	Classification	Requirement Title			
Class	Decomp Title		Test Case ID	Test Class	Test Class Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_237 - SERVICE DURATION TOLERANCE</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Security\m_Security015\m_security015
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Emergency\m_Emergency003\m_emergency003
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Close\m_Close002\m_close002
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Discover\m_DiscoverFull006\m_discoverfull006
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_MedicalEvent\m_MedicalEvent002\m_medicalevent002
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_RawMode\m_RawMode002\m_rawmode002
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Diagnostic\m_Diagnostics002\m_diagnostics002
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Data\m_MemoryWrite003\m_memorywrite003
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Network\m_Network005\m_network005
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Open\m_Open005\m_open005
			Status: <b>Up-to-date</b>	Rev: 2.7	Test: \\M_TCP_Discover\m_DiscoverFull001\m_discoverfull001
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.6 General Requirements' Page No: ' 112'		
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_404 - FAULT INDICATION - INDICATION TO UPPER LAYER</b>			
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.6.1 Fault indication' Page No: ' 118'		
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_263 - SHUTDOWN INDICATION - INDICATION TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.7	Test: \\M_TCP_General\m_General027\m_general027
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_General\m_General028\m_general028
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_General\m_General029\m_general029
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.6.2 SHUTDOWN INDICATION' Page No: ' 119'		
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_265 - INITIALIZE ADDRESS WITH VALUES</b>			
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.7 Initialize' Page No: ' 122'		
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_266 - MASTER INITIALIZE SERVICE REQUEST FROM UPPER LAYER</b>			
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.7.1 MASTER' Page No: ' 122'		
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_267 - MASTER INITIALIZE SERVICE RESPONSE TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Security\m_Security025\m_security025
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Initialize\m_Initialize004\m_initialize004



Tracing	Classification	Requirement Title	Test Case ID	Test Class	Test Class Name
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.7.1 MASTER ' Page No: ' 122'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_008 - SLAVE INITIALIZE SERVICE REQUEST FROM UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.8	Test: \M_TCP_Initialize\m_Initialize001\m_initialize001
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.7.2 SLAVE ' Page No: ' 124'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_009 - INITIALIZE SERVICE RESPONSE TO UPPER LAYER.</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Initialize\m_Initialize002\m_initialize002
			Status: <b>Up-to-date</b>	Rev: 2.8	Test: \M_TCP_Initialize\m_Initialize001\m_initialize001
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Initialize\m_Initialize003\m_initialize003
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Security\m_Security025\m_security025
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.7.2 SLAVE ' Page No: ' 124'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_241 - POLLING ENABLING CRITERIA</b>	Status: <b>Up-to-date</b>	Rev: 2.7	Test: \M_TCP_Polling\m_Polling089\m_polling089
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.8.1 REQUIREMENTS ' Page No: ' 127'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_035 - POLLING - SERVICE REQUEST FROM UPPER LAYER</b>			
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.8.1 REQUIREMENTS ' Page No: ' 128'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_256 - POLLING - SERVICE RESPONSE TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_Polling\m_Polling090\m_polling090
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_Polling\m_Polling091\m_polling091
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.8.1 REQUIREMENTS ' Page No: ' 128'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_268 - POLLING - VALID WAKEUP PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Polling\m_Polling088\m_polling088
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.8.1 REQUIREMENTS ' Page No: ' 131'			



Tracing	Classification	Requirement Title				
	Class	Decomp Title	Test Case ID	Test Class	Test Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_038 - POLLING - TERMINATION</b>	Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Polling\m_Polling094\m_polling094	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Polling\m_Polling024\m_polling024	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Polling\m_Polling095\m_polling095	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Polling\m_Polling066\m_polling066	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Polling\m_Polling093\m_polling093	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Polling\m_Polling068\m_polling068	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Polling\m_Polling065\m_polling065	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Polling\m_Polling067\m_polling067	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.8.1 REQUIREMENTS' Page No: ' 131'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_039 - POLLING INDICATION TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_Polling\m_Polling046\m_polling046	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.8.1 REQUIREMENTS' Page No: ' 131'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_010 - DISCOVER SERVICE REQUEST FROM UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.7	Test: \\M_TCP_Discover\m_DiscoverFull001\m_discoverfull001	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Discover\m_DiscoverFull005\m_discoverfull005	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.1 REQUIREMENTS' Page No: ' 136'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_011 - VALID SLAVE ID</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Discover\m_DiscoverFull031\m_discoverfull031	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Discover\m_DiscoverFull030\m_discoverfull030	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.1 REQUIREMENTS' Page No: ' 136'			





Tracing	Classification	Requirement Title				
Class	Decomp Title		Test Case ID	Class	Test Class Name	
TRACING	FWVT Tested	TLMC_M_024 - DISCOVER FULL - RESPONSE TO UPPER LAYER	Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Discover\m_DiscoverFull025\m_discoverfull025	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Discover\m_DiscoverFull005\m_discoverfull005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Discover\m_DiscoverFull016\m_discoverfull016	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Discover\m_DiscoverFull023\m_discoverfull023	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Discover\m_DiscoverFull017\m_discoverfull017	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \M_TCP_Discover\m_DiscoverFull033\m_discoverfull033	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Discover\m_DiscoverFull014\m_discoverfull014	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Discover\m_DiscoverFull022\m_discoverfull022	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Discover\m_DiscoverFull024\m_discoverfull024	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Discover\m_DiscoverFull015\m_discoverfull015	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL' Page No: ' 137'				
TRACING	FWVT Tested	TLMC_MS_012 - DISCOVER FULL - DISCOVER ID PACKET FORMAT	Status: <b>Up-to-date</b>	Rev: 2.7	Test: \M_TCP_Discover\m_DiscoverFull001\m_discoverfull001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL' Page No: ' 138'				
TRACING	FWVT Tested	TLMC_M_013 - DISCOVER FULL - DISCOVER ID REQUEST PACKET	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Discover\m_DiscoverFull006\m_discoverfull006	
			Status: <b>Up-to-date</b>	Rev: 2.7	Test: \M_TCP_Discover\m_DiscoverFull001\m_discoverfull001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL' Page No: ' 138'				
TRACING	FWVT Tested	TLMM_M_269 - DISCOVER FULL - DISCOVER ID RESPONSE WINDOW	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_Discover\m_DiscoverFull037\m_discoverfull037	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL' Page No: ' 139'				
TRACING	FWVT Tested	TLMM_M_270 - DISCOVER FULL - RESTART NATIVE MODE TIMER	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_Discover\m_DiscoverFull037\m_discoverfull037	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL' Page No: ' 139'				
TRACING	FWVT Tested	TLMC_M_014 - DISCOVER FULL - RETRY DISCOVER ID REQUEST	Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_Discover\m_DiscoverFull002\m_discoverfull002	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Discover\m_DiscoverFull003\m_discoverfull003	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Discover\m_DiscoverFull009\m_discoverfull009	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_Discover\m_DiscoverFull004\m_discoverfull004	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_Discover\m_DiscoverFull010\m_discoverfull010	



Tracing	Classification	Requirement Title				
	Decomp	Title	Test Case ID	Test Class	Test Class Name	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL ' Page No: ' 139'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_015 - DISCOVER FULL - DISCOVER ID RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.7	Test: \M_TCP_Discover\m_DiscoverFull001\m_discoverfull001	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \M_TCP_Discover\m_DiscoverFull029\m_discoverfull029	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Discover\m_DiscoverFull011\m_discoverfull011	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL ' Page No: ' 140'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_016 - DISCOVER FULL - LBT OR NATIVE MODE TIMEOUT</b>	Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_Discover\m_DiscoverFull002\m_discoverfull002	
			Status: <b>Up-to-date</b>	Rev: 2.7	Test: \M_TCP_Discover\m_DiscoverFull007\m_discoverfull007	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL ' Page No: ' 140'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_MS_017 - DISCOVER FULL - DISCOVER ID RESPONSE PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.7	Test: \M_TCP_Discover\m_DiscoverFull001\m_discoverfull001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL ' Page No: ' 140'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_MS_018 - DISCOVER FULL - DISCOVER NAME REQUEST PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.7	Test: \M_TCP_Discover\m_DiscoverFull001\m_discoverfull001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL ' Page No: ' 140'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_019 - DISCOVER FULL - DISCOVER NAME REQUEST PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.7	Test: \M_TCP_Discover\m_DiscoverFull001\m_discoverfull001	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_Discover\m_DiscoverFull002\m_discoverfull002	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL ' Page No: ' 141'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_020 - DISCOVER FULL - RETRY DISCOVER NAME REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Discover\m_DiscoverFull013\m_discoverfull013	
			Status: <b>Up-to-date</b>	Rev: 2.7	Test: \M_TCP_Discover\m_DiscoverFull012\m_discoverfull012	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL ' Page No: ' 141'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_021 - DISCOVER FULL - DISCOVER NAME RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.7	Test: \M_TCP_Discover\m_DiscoverFull001\m_discoverfull001	
			Status: <b>Up-to-date</b>	Rev: 2.7	Test: \M_TCP_Discover\m_DiscoverFull012\m_discoverfull012	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Discover\m_DiscoverFull013\m_discoverfull013	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL ' Page No: ' 142'				



Tracing	Classification	Requirement Title				
	Decomp			Test Case	Test	
Class	Title		ID	Class	Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_MS_022 - DISCOVER FULL - DISCOVER NAME RESPONSE PACKET FORMATS</b>	Status: <b>Up-to-date</b>	Rev: 2.7	Test: .\M_TCP_Discover\m_DiscoverFull001\m_discoverfull001	' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL' Page No: ' 142'
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_272 - DISCOVER FULL - SUCCESSFUL NAME</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Discover\m_DiscoverFull017\m_discoverfull017	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Discover\m_DiscoverFull014\m_discoverfull014	
			Status: <b>Up-to-date</b>	Rev: 2.7	Test: .\M_TCP_Discover\m_DiscoverFull001\m_discoverfull001	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Discover\m_DiscoverFull003\m_discoverfull003	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL' Page No: ' 143'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_023 - DISCOVER FULL - RESPONSE PARTITIONING</b>	Status: <b>Up-to-date</b>	Rev: 2.7	Test: .\M_TCP_Discover\m_DiscoverFull001\m_discoverfull001	' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL' Page No: ' 145'
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_273 - DISCOVER FULL - TIMEOUT INDICATION</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Discover\m_DiscoverFull035\m_discoverfull035	' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL' Page No: ' 145'
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_274 - DISCOVER FULL - STOP</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Discover\m_DiscoverFull036\m_discoverfull036	' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL' Page No: ' 145'
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_040 - OPEN - UPPER LAYER PARAMETERS</b>	Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Open\m_Open041\m_open041	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Open\m_Open039\m_open039	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Open\m_Open002\m_open002	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Open\m_Open004\m_open004	
			Status: <b>Up-to-date</b>	Rev: 2.11	Test: .\M_TCP_Open\m_Open001\m_open001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Open\m_Open040\m_open040	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.10.1 OPEN - GENERAL REQUIREMENTS' Page No: ' 150'			



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Test Class	Test Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_281 - OPEN - REQUEST PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.11	Test: .\M_TCP_Open\m_Open001\m_open001	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Open\m_Open003\m_open003	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Open\m_Open011\m_open011	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Open\m_Open012\m_open012	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Open\m_Open006\m_open006	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.10.1 OPEN - GENERAL REQUIREMENTS' Page No: ' 150'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_282 - OPEN - RESPONSE PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.11	Test: .\M_TCP_Open\m_Open001\m_open001	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Open\m_Open002\m_open002	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.10.1 OPEN - GENERAL REQUIREMENTS' Page No: ' 151'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_283 - OPEN - TRANSMIT MASTER PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Open\m_Open032\m_open032	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.10.1 OPEN - GENERAL REQUIREMENTS' Page No: ' 153'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_284 - OPEN - NO VALID SLAVE RESPONSE RETRY REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Open\m_Open032\m_open032	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.10.1 OPEN - GENERAL REQUIREMENTS' Page No: ' 153'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_285 - OPEN - LISTEN BEFORE TALK TIMER OPERATIONS</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Open\m_Open033\m_open033	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.10.1 OPEN - GENERAL REQUIREMENTS' Page No: ' 153'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_287 - OPEN - NO RESPONSE TO A VALID OPEN REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.7	Test: .\M_TCP_Open\m_Open031\m_open031	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.10.1 OPEN - GENERAL REQUIREMENTS' Page No: ' 154'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_288 - OPEN - RESPONSE TO A VALID OPEN UNSECURE REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Open\m_Open036\m_open036	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.10.1 OPEN - GENERAL REQUIREMENTS' Page No: ' 154'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_289 - OPEN - SESSION KEY COMPUTATION UPON VALID OPEN REQUEST</b>				



Tracing	Classification	Requirement Title				
	Decomp	Title	Test Case ID	Test Class	Test Class Name	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.10.1 OPEN - GENERAL REQUIREMENTS ' Page No: ' 155'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_290 - OPEN - RESPONSE SUCCESSFUL</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Open\m_Open037\m_open037	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.10.1 OPEN - GENERAL REQUIREMENTS ' Page No: ' 155'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_292 -OPEN - ENABLE SECURITY BLOCK</b>				
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.10.1 OPEN - GENERAL REQUIREMENTS ' Page No: ' 155'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_294 - OPEN - A VALID SLAVE RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Open\m_Open042\m_open042	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.10.1 OPEN - GENERAL REQUIREMENTS ' Page No: ' 157'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_295 - OPEN - RESPONSE WITHOUT KBAN OR KEBAN</b>	Status: <b>Up-to-date</b>	Rev: 2.7	Test: .\M_TCP_Open\m_Open038\m_open038	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.10.1 OPEN - GENERAL REQUIREMENTS ' Page No: ' 157'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_296 - OPEN - RESPONSE TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Open\m_Open035\m_open035	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Open\m_Open034\m_open034	
			Status: <b>Up-to-date</b>	Rev: 2.7	Test: .\M_TCP_Open\m_Open038\m_open038	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.10.1 OPEN - GENERAL REQUIREMENTS ' Page No: ' 158'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_MS_049 - DATA - UPPER LAYER TO DATA LINK LAYER PARAMETERS</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_MemoryWrite006\m_memorywrite006	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryRead001\m_memoryread001	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryWrite012\m_memorywrite012	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryWrite005\m_memorywrite005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_MemoryWrite007\m_memorywrite007	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.4 MASTER DATA ' Page No: ' 165'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_MS_050 - DATA - MASTER REQUEST PACKET FORMAT(S)</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryWrite005\m_memorywrite005	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.4 MASTER DATA ' Page No: ' 165'				



Tracing	Classification	Requirement Title				
Class	Decomp Title		Test Case ID	Class	Test Class Name	
TRACING	FWVT Tested	TLMC_M_051 - DATA - TRANSMISSION OF MASTER DATA PACKET	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryWrite005\m_memorywrite005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_MemoryWrite025\m_memorywrite025	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryWrite001\m_memorywrite001	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Emergency\m_Emergency002\m_emergency002	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryRead001\m_memoryread001	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.4 MASTER DATA ' Page No: ' 166'						
TRACING	FWVT Tested	TLMC_S_052 - DATA - ACKNOWLEDGEMENT OF MASTER DATA PACKET	Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Data\m_MemoryWrite002\m_memorywrite002	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_MemoryWrite006\m_memorywrite006	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.4 MASTER DATA ' Page No: ' 167'						
TRACING	FWVT Tested	TLMC_M_053 - DATA - PACKETIZATION OF THE MASTER DATA	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_MemoryWrite014\m_memorywrite014	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryWrite012\m_memorywrite012	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_MemoryWrite013\m_memorywrite013	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryWrite005\m_memorywrite005	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_MemoryWrite009\m_memorywrite009	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_MemoryWrite011\m_memorywrite011	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_MemoryWrite015\m_memorywrite015	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.4 MASTER DATA ' Page No: ' 167'						
TRACING	FWVT Tested	TLMC_M_054 - DATA - RETRANSMISSION OF MASTER PACKET - NO ACK RECEIVED	Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Data\m_MemoryWrite019\m_memorywrite019	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_MemoryWrite018\m_memorywrite018	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Data\m_MemoryWrite016\m_memorywrite016	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_MemoryWrite017\m_memorywrite017	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.4 MASTER DATA ' Page No: ' 167'						
TRACING	FWVT Tested	TLMC_S_055 - DATA - MASTER PACKETS WITH DUPLICATE SEQUENCE NUMBERS	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryRead001\m_memoryread001	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_MemoryRead002\m_memoryread002	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.4 MASTER DATA ' Page No: ' 167'						



Tracing	Classification	Requirement Title				
	Decomp			Test Case	Test	
Class	Title		ID	Class	Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_056 - DATA - VALIDATION OF MASTER DATA REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Data\m_MemoryWrite016\m_memorywrite016	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryWrite020\m_memorywrite020	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_MemoryWrite018\m_memorywrite018	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Data\m_MemoryRead003\m_memoryread003	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.4 MASTER DATA ' Page No: ' 168'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_057 - DATA - MASTER PACKETS INTO TRANSACTION</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryWrite005\m_memorywrite005	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryWrite001\m_memorywrite001	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_MemoryWrite006\m_memorywrite006	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.4 MASTER DATA ' Page No: ' 168'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_058 - DATA - RESPONSE TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Data\m_MemoryWrite049\m_memorywrite049	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_MemoryWrite022\m_memorywrite022	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_MemoryRead039\m_memoryread039	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryRead043\m_memoryread043	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Data\m_MemoryRead045\m_memoryread045	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_MemoryWrite025\m_memorywrite025	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_MemoryWrite006\m_memorywrite006	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Data\m_MemoryWrite023\m_memorywrite023	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_MemoryRead005\m_memoryread005	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryWrite012\m_memorywrite012	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryWrite024\m_memorywrite024	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.4 MASTER DATA ' Page No: ' 169'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_297 - DATA - WAIT FOR INDICATION</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_Data013\m_data013	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.4 MASTER DATA ' Page No: ' 171'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_298 - DATA - RECOVERY</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_Data014\m_data014	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.4 MASTER DATA ' Page No: ' 171'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_299 - DATA - REPLY TIMEOUT</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Data\m_Data012\m_data012	



Tracing	Classification	Requirement Title			
Class	Decomp	Title	Test Case ID	Class	Test Class Name
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.4 MASTER DATA ' Page No: ' 171'		
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_059 - DATA - SLAVE UPPER LAYER PARAMETERS</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Data\m_MemoryRead007\m_memoryread007
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Data\m_MemoryRead006\m_memoryread006
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Data\m_MemoryRead008\m_memoryread008
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Data\m_MemoryRead001\m_memoryread001
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.5 SLAVE DATA ' Page No: ' 172'		
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_058 - DATA - RESPONSE TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Data\m_MemoryWrite049\m_memorywrite049
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Data\m_MemoryRead005\m_memoryread005
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_Data\m_MemoryWrite023\m_memorywrite023
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Data\m_MemoryRead007\m_memoryread007
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Data\m_MemoryRead006\m_memoryread006
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Data\m_MemoryRead004\m_memoryread004
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_Data\m_MemoryRead040\m_memoryread040
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Data\m_MemoryWrite022\m_memorywrite022
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.5 SLAVE DATA ' Page No: ' 173'		
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_060 - DATA - SLAVE TRANSMISSION OF DATA PACKETS</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Data\m_MemoryRead052\m_memoryread052
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Data\m_MemoryRead009\m_memoryread009
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Data\m_MemoryRead006\m_memoryread006
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.5 SLAVE DATA ' Page No: ' 173'		
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_061 - DATA - SLAVE DATA PACKET FORMAT(S)</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Data\m_MemoryRead006\m_memoryread006
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.5 SLAVE DATA ' Page No: ' 174'		





Tracing	Classification	Requirement Title			
Class	Decomp Title	Test Case ID	Test Class	Test Class Name	
TRACING	FWVT Tested	TLMC_S_062 - DATA - PACKETIZATION OF SLAVE DATA	Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_MemoryRead014\m_memoryread014
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_MemoryRead011\m_memoryread011
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_MemoryRead013\m_memoryread013
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Data\m_MemoryRead006\m_memoryread006
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_MemoryRead012\m_memoryread012
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_MemoryRead010\m_memoryread010
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Data\m_MemoryRead016\m_memoryread016
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_MemoryRead017\m_memoryread017
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_MemoryRead015\m_memoryread015
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.5 SLAVE DATA ' Page No: ' 175'					
TRACING	FWVT Tested	TLMC_M_063 - DATA - RECEIPT OF AN INVALID SLAVE PACKET	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Data\m_MemoryRead003\m_memoryread003
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Data\m_MemoryRead009\m_memoryread009
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_MemoryRead021\m_memoryread021
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Data\m_MemoryRead020\m_memoryread020
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Data\m_MemoryRead019\m_memoryread019
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.5 SLAVE DATA ' Page No: ' 176'					
TRACING	FWVT Tested	TLMC_M_066 - DIAGNOSTIC SERVICE REQUEST FROM UPPER LAYER	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Diagnostic\m_Diagnostics001\m_diagnostics001
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Diagnostic\m_Diagnostics011\m_diagnostics011
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Diagnostic\m_Diagnostics006\m_diagnostics006
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Diagnostic\m_Diagnostics027\m_diagnostics027
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.12.1 REQUIREMENTS ' Page No: ' 178'					
TRACING	FWVT Tested	TLMC_M_067 - REMOTE DIAGNOSTIC - MASTER PACKET FORMAT	Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Diagnostic\m_Diagnostics002\m_diagnostics002
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Diagnostic\m_Diagnostics004\m_diagnostics004
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Diagnostic\m_Diagnostics001\m_diagnostics001
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Diagnostic\m_Diagnostics003\m_diagnostics003
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.12.2 REMOTE DIAGNOSTIC ' Page No: ' 179'					



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_068 - REMOTE DIAGNOSTIC - SLAVE PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Diagnostic\m_Diagnostics001\m_diagnostics001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.12.2 REMOTE DIAGNOSTIC ' Page No: ' 179'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_069 - REMOTE DIAGNOSTIC - STATUS BYTE FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Diagnostic\m_Diagnostics030\m_diagnostics030	
		Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Diagnostic\m_Diagnostics001\m_diagnostics001		
		Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Diagnostic\m_Diagnostics017\m_diagnostics017		
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.12.2 REMOTE DIAGNOSTIC ' Page No: ' 179'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_070 - REMOTE DIAGNOSTIC - SLAVE RESPONSE PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Diagnostic\m_Diagnostics007\m_diagnostics007	
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Diagnostic\m_Diagnostics018\m_diagnostics018		
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Diagnostic\m_Diagnostics002\m_diagnostics002		
		Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Diagnostic\m_Diagnostics038\m_diagnostics038		
		Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Diagnostic\m_Diagnostics006\m_diagnostics006		
		Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Diagnostic\m_Diagnostics008\m_diagnostics008		
		Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Diagnostic\m_Diagnostics009\m_diagnostics009		
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.12.2 REMOTE DIAGNOSTIC ' Page No: ' 180'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_071 - REMOTE DIAGNOSTIC - MASTER REQUEST RETRANSMISSION</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Diagnostic\m_Diagnostics019\m_diagnostics019	
		Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Diagnostic\m_Diagnostics036\m_diagnostics036		
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Diagnostic\m_Diagnostics020\m_diagnostics020		
		Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Diagnostic\m_Diagnostics037\m_diagnostics037		
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Diagnostic\m_Diagnostics018\m_diagnostics018		
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Diagnostic\m_Diagnostics035\m_diagnostics035		
		Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Diagnostic\m_Diagnostics001\m_diagnostics001		
		Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Diagnostic\m_Diagnostics004\m_diagnostics004		
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.12.2 REMOTE DIAGNOSTIC ' Page No: ' 180'				



Tracing Classification Requirement Title

Class	Decomp Title	Test Case ID	Test Class	Test Class Name
<b>TRACING</b>	FWVT Tested <b>TLMC_M_072 - REMOTE DIAGNOSTIC - RESPONSE TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Diagnostic\m_Diagnostics006\m_diagnostics006
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Diagnostic\m_Diagnostics007\m_diagnostics007
		Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Diagnostic\m_Diagnostics017\m_diagnostics017
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Diagnostic\m_Diagnostics021\m_diagnostics021
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Diagnostic\m_Diagnostics026\m_diagnostics026
		Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Diagnostic\m_Diagnostics028\m_diagnostics028
		Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Diagnostic\m_Diagnostics008\m_diagnostics008
		Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Diagnostic\m_Diagnostics010\m_diagnostics010
		Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Diagnostic\m_Diagnostics022\m_diagnostics022
		Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Diagnostic\m_Diagnostics001\m_diagnostics001
		Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Diagnostic\m_Diagnostics034\m_diagnostics034
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Diagnostic\m_Diagnostics018\m_diagnostics018
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Diagnostic\m_Diagnostics005\m_diagnostics005
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Diagnostic\m_Diagnostics020\m_diagnostics020
		Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Diagnostic\m_Diagnostics003\m_diagnostics003
Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Diagnostic\m_Diagnostics009\m_diagnostics009		
Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Diagnostic\m_Diagnostics024\m_diagnostics024		

' FILE\_NAME: 'external.fm' FILE\_REV: '1.267' SECTION: '5.2.12.2 REMOTE DIAGNOSTIC ' Page No: ' 181'

<b>TRACING</b>	FWVT Tested <b>TLMC_M_073 - LOCAL DIAGNOSTIC - RESPONSE TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Diagnostic\m_Diagnostics011\m_diagnostics011
		Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Diagnostic\m_Diagnostics012\m_diagnostics012
		Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Diagnostic\m_Diagnostics015\m_diagnostics015
		Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Diagnostic\m_Diagnostics024\m_diagnostics024
		Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Diagnostic\m_Diagnostics014\m_diagnostics014
		Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Diagnostic\m_Diagnostics013\m_diagnostics013
		Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Diagnostic\m_Diagnostics005\m_diagnostics005
		Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Diagnostic\m_Diagnostics017\m_diagnostics017

' FILE\_NAME: 'external.fm' FILE\_REV: '1.267' SECTION: '5.2.12.3 LOCAL DIAGNOSTIC ' Page No: ' 183'



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Class	Test Class Name	
TRACING	FWVT Tested	TLMC_M_074 - MAPPING DIAGNOSTIC - RESPONSE TO UPPER LAYER	Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Diagnostic\m_Diagnostics029\m_diagnostics029	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Diagnostic\m_Diagnostics016\m_diagnostics016	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Diagnostic\m_Diagnostics023\m_diagnostics023	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Diagnostic\m_Diagnostics024\m_diagnostics024	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Diagnostic\m_Diagnostics028\m_diagnostics028	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Diagnostic\m_Diagnostics005\m_diagnostics005	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Diagnostic\m_Diagnostics017\m_diagnostics017	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Diagnostic\m_Diagnostics022\m_diagnostics022	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Diagnostic\m_Diagnostics026\m_diagnostics026	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Diagnostic\m_Diagnostics027\m_diagnostics027	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.12.4 MAPPING DIAGNOSTIC' Page No: ' 185'						
TRACING	FWVT Tested	TLMC_M_075 - DIAGNOSTIC FILLER - MASTER FILLER PACKETS	Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_ARQ020\m_arq020	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Data\m_ARQ012\m_arq012	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Diagnostic\m_Diagnostics030\m_diagnostics030	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.12.5 DIAGNOSTIC FILLER PACKET' Page No: ' 186'						
TRACING	FWVT Tested	TLMC_S_076 - DIAGNOSTIC FILLER - SLAVE FILLER PACKETS	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Diagnostic\m_Diagnostics030\m_diagnostics030	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.12.5 DIAGNOSTIC FILLER PACKET' Page No: ' 186'						
TRACING	FWVT Tested	TLMC_M_077 - EMERGENCY - UPPER LAYER PARAMETERS	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Emergency\m_Emergency002\m_emergency002	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Emergency\m_Emergency001\m_emergency001	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.13.2 MASTER' Page No: ' 188'						



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Test Case Class	Test Class	Test Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_078 - EMERGENCY - TRANSMISSION OF EMERGENCY REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Data\m_MemoryWrite024\m_memorywrite024	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Diagnostic\m_Diagnostics031\m_diagnostics031	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_RawMode\m_RawMode003\m_rawmode003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Emergency\m_Emergency007\m_emergency007	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Open\m_Open008\m_open008	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Emergency\m_Emergency001\m_emergency001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Data\m_MemoryRead030\m_memoryread030	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Discover\m_DiscoverFull017\m_discoverfull017	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Emergency\m_Emergency003\m_emergency003	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Emergency\m_Emergency004\m_emergency004	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Security\m_Security029\m_security029	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.13.2 MASTER ' Page No: ' 189'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_079 - EMERGENCY - MASTER REQUEST NOT ACKNOWLEDGED</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Emergency\m_Emergency003\m_emergency003	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.13.2 MASTER ' Page No: ' 189'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_081 - EMERGENCY - STATUS RESPONSE TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Emergency\m_Emergency004\m_emergency004	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \M_TCP_Emergency\m_Emergency011\m_emergency011	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Emergency\m_Emergency039\m_emergency039	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Emergency\m_Emergency006\m_emergency006	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \M_TCP_Emergency\m_Emergency040\m_emergency040	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_Emergency\m_Emergency043\m_emergency043	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \M_TCP_Emergency\m_Emergency041\m_emergency041	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \M_TCP_Emergency\m_Emergency042\m_emergency042	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Emergency\m_Emergency001\m_emergency001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Emergency\m_Emergency009\m_emergency009	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \M_TCP_Emergency\m_Emergency010\m_emergency010	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.13.2 MASTER ' Page No: ' 189'			



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
TRACING	FWVT Tested	<b>TLMM_M_301 - EMERGENCY - WAIT FOR INDICATION</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.13.2 MASTER ' Page No: ' 191'	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Emergency\m_Emergency045\m_emergency045	
TRACING	FWVT Tested	<b>TLMM_M_302 - EMERGENCY - RECOVERY</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.13.2 MASTER ' Page No: ' 191'	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Emergency\m_Emergency045\m_emergency045	
TRACING	FWVT Tested	<b>TLMM_M_303 - EMERGENCY - REPLY TIMEOUT</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.13.2 MASTER ' Page No: ' 191'	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Emergency\m_Emergency044\m_emergency044	
TRACING	FWVT Tested	<b>TLMC_M_082 - RAW MODE - UPPER LAYER RAW MODE PARAMETERS</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.14.1 REQUIREMENTS ' Page No: ' 194'	Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_RawMode\m_RawMode002\m_rawmode002	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \M_TCP_RawMode\m_RawMode001\m_rawmode001	
TRACING	FWVT Tested	<b>TLMC_M_083 - RAW MODE - MASTER PACKET ATTACHED OPERATION</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.14.2 RAW MODE (MASTER PACKET ATTACHED) ' Page No: ' 194'	Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_RawMode\m_RawMode002\m_rawmode002	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_RawMode\m_RawMode004\m_rawmode004	
TRACING	FWVT Tested	<b>TLMC_M_089 - CLOSE - UPPER LAYER CLOSE PARAMETERS</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.15.1 REQUIREMENTS ' Page No: ' 197'	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Close\m_Close002\m_close002	
TRACING	FWVT Tested	<b>TLMC_MS_090 - CLOSE - MASTER PACKET FORMAT</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.15.1 REQUIREMENTS ' Page No: ' 197'	Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_Close\m_Close001\m_close001	
TRACING	FWVT Tested	<b>TLMC_MS_091 - CLOSE - SLAVE PACKET FORMAT</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.15.1 REQUIREMENTS ' Page No: ' 197'	Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_Close\m_Close001\m_close001	
TRACING	FWVT Tested	<b>TLMC_M_092 - CLOSE - MASTER REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_Close\m_Close001\m_close001	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Close\m_Close003\m_close003	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \M_TCP_Close\m_Close004\m_close004	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \M_TCP_Close\m_Close002\m_close002	



Tracing	Classification	Requirement Title			
Class	Decomp	Title	Test Case ID	Class	Test Class Name
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.15.1 REQUIREMENTS' Page No: ' 198'		
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_093 - CLOSE - RETRANSMISSION OF MASTER REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Close\m_Close005\m_close005
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_Close\m_Close001\m_close001
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Close\m_Close007\m_close007
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Close\m_Close008\m_close008
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.15.1 REQUIREMENTS' Page No: ' 198'		
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_094 - CLOSE - RECEIPT OF A VALID CLOSE REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Close\m_Close009\m_close009
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Close\m_Close010\m_close010
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.15.1 REQUIREMENTS' Page No: ' 198'		
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_095 - CLOSE - INDICATION TO SLAVE UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Close\m_Close006\m_close006
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_Close\m_Close001\m_close001
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Close\m_Close003\m_close003
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.15.1 REQUIREMENTS' Page No: ' 198'		
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_096 - CLOSE - RECEIPT OF A VALID RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_Close\m_Close002\m_close002
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_Close\m_Close001\m_close001
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.15.1 REQUIREMENTS' Page No: ' 198'		
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_097 - CLOSE - IMPLICITLY SUCCESSFUL</b>	Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Close\m_Close017\m_close017
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Close\m_Close012\m_close012
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Close\m_Close014\m_close014
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Close\m_Close011\m_close011
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Close\m_Close013\m_close013
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.15.1 REQUIREMENTS' Page No: ' 199'		



Tracing	Classification	Requirement Title				
	Decomp			Test Case	Test	
Class	Title		ID	Class	Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_098 - CLOSE - RESPONSE TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Close\m_Close014\m_close014	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Close\m_Close022\m_close022	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_Close\m_Close001\m_close001	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Close\m_Close007\m_close007	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Close\m_Close008\m_close008	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Close\m_Close011\m_close011	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Close\m_Close013\m_close013	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Close\m_Close020\m_close020	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Close\m_Close005\m_close005	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Close\m_Close021\m_close021	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Close\m_Close012\m_close012	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Close\m_Close019\m_close019	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.15.1 REQUIREMENTS' Page No: ' 199'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_099 - CLOSE - RECOVERY DURING CLOSE</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_Close\m_Close008\m_close008	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.15.1 REQUIREMENTS' Page No: ' 199'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_414 - MEDICAL EVENT - SLAVE PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_MedicalEvent\m_MedicalEvent001\m_medicalevent001	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.16.1 REQUIREMENTS' Page No: ' 202'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_229 - MEDICAL EVENT - REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_MedicalEvent\m_MedicalEvent002\m_medicalevent002	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.16.1 REQUIREMENTS' Page No: ' 202'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_418 - MEDICAL EVENT - RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_MedicalEvent\m_MedicalEvent014\m_medicalevent014	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_MedicalEvent\m_MedicalEvent002\m_medicalevent002	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_MedicalEvent\m_MedicalEvent012\m_medicalevent012	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_MedicalEvent\m_MedicalEvent011\m_medicalevent011	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_MedicalEvent\m_MedicalEvent008\m_medicalevent008	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.16.1 REQUIREMENTS' Page No: ' 203'			





Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_257 - MEDICAL EVENT - INDICATION TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_MedicalEvent\m_MedicalEvent003\m_medicalevent003	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_MedicalEvent\m_MedicalEvent002\m_medicalevent002	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.16.1 REQUIREMENTS' Page No: ' 204'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_230 - MEDICAL EVENT - HOST PARAMETERS</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_MedicalEvent\m_MedicalEvent001\m_medicalevent001	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.16.1 REQUIREMENTS' Page No: ' 205'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_231 - MEDICAL EVENT - RESPONSE TO HOST</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_MedicalEvent\m_MedicalEvent001\m_medicalevent001	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_MedicalEvent\m_MedicalEvent011\m_medicalevent011	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_MedicalEvent\m_MedicalEvent009\m_medicalevent009	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_MedicalEvent\m_MedicalEvent010\m_medicalevent010	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_MedicalEvent\m_MedicalEvent008\m_medicalevent008	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_MedicalEvent\m_MedicalEvent012\m_medicalevent012	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_MedicalEvent\m_MedicalEvent014\m_medicalevent014	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.16.1 REQUIREMENTS' Page No: ' 206'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_232 - MEDICAL EVENT - MEDICAL EVENT PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_MedicalEvent\m_MedicalEvent001\m_medicalevent001	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_MedicalEvent\m_MedicalEvent004\m_medicalevent004	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.16.1 REQUIREMENTS' Page No: ' 207'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_258 - PATIENT NAME REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_General\m_General017\m_general017	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.17.1 REQUIREMENTS' Page No: ' 209'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_259 - PATIENT NAME SERVICE RESPONSE TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_General\m_General018\m_general018	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_General\m_General017\m_general017	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.17.1 REQUIREMENTS' Page No: ' 209'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_309 - CONFIGURE NETWORK - UPPER LAYER PARAMETERS</b>				
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.3.1 CONFIGURE NETWORK service requirements' Page No: ' 213'				



Tracing	Classification	Requirement Title				
	Decomp			Test Case	Test	
	Class	Title		ID	Class	Class Name
TRACING	FWVT Tested	TLMM_MS_310 - CONFIGURE NETWORK - RESPONSE TO UPPER LAYER	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Network\m_Network003\m_network003	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Network\m_Network004\m_network004	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.3.1 CONFIGURE NETWORK service requirements ' Page No: ' 214'						
TRACING	FWVT Tested	TLMM_M_311 - NETWORK DATA - UPPER LAYER PARAMETERS	Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Network\m_Network001\m_network001	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Network\m_Network010\m_network010	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4 NETWORK DATA ' Page No: ' 215'						
TRACING	FWVT Tested	TLMM_M_312 - NETWORK DATA - REQUEST AND RESPONSE PACKET FORMAT	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Network\m_Network011\m_network011	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Network\m_Network005\m_network005	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Network\m_Network006\m_network006	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Network\m_Network008\m_network008	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Network\m_Network009\m_network009	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Network\m_Network007\m_network007	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Network\m_Network007\m_network007	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4 NETWORK DATA ' Page No: ' 220'						
TRACING	FWVT Tested	TLMM_S_313 - NETWORK DATA - FILLER PACKET FORMAT	Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Network\m_Network010\m_network010	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Network\m_Network005\m_network005	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Network\m_Network011\m_network011	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Network\m_Network006\m_network006	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Network\m_Network008\m_network008	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Network\m_Network009\m_network009	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Network\m_Network001\m_network001	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4 NETWORK DATA ' Page No: ' 225'						
TRACING	FWVT Tested	TLMM_M_314 - NETWORK DATA - TRANSMITTING REQUEST PACKETS	Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Network\m_Network029\m_network029	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Network\m_Network026\m_network026	



Tracing	Classification	Requirement Title	Test Case ID	Test Class	Test Class Name
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.2 MASTER ' Page No: ' 225'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_315 - NETWORK DATA - UPPER LAYER RESPONSE (MESSAGE LEVEL RESPONSE)</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Network\m_Network026\m_network026
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.2 MASTER ' Page No: ' 226'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_316 - NETWORK DATA - DATA LINK LAYER RESPONSE (PACKET LEVEL RESPONSE)</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Network\m_Network025\m_network025
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.2 MASTER ' Page No: ' 226'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_317 - NETWORK DATA - NO ACK</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Network\m_Network023\m_network023
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.2 MASTER ' Page No: ' 227'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_318 - NETWORK DATA - SUCCESSFUL RESPONSE TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_Network\m_Network002\m_network002
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.2 MASTER ' Page No: ' 227'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_319 - NETWORK DATA - UNSUCCESSFUL RESPONSE TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_Network\m_Network002\m_network002
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.2 MASTER ' Page No: ' 228'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_320 - NETWORK DATA - INDICATION TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Network\m_Network013\m_network013
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.2 MASTER ' Page No: ' 229'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_321 - NETWORK DATA - RESPONSE COMPLETE AT MASTER</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Network\m_Network013\m_network013
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.2 MASTER ' Page No: ' 231'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_322 - NETWORK DATA - NO ACK OF INVALID REQUEST PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Network\m_Network015\m_network015
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.3 SLAVE ' Page No: ' 232'			



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Test Case Class	Test Class Name	
TRACING	FWVT Tested	<b>TLMM_S_323 - NETWORK DATA - NO ACK OF REQUEST PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Network\m_Network015\m_network015	' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.3 SLAVE ' Page No: ' 232'
TRACING	FWVT Tested	<b>TLMM_S_324 - NETWORK DATA - ACK OF REQUEST PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Network\m_Network016\m_network016	' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.3 SLAVE ' Page No: ' 232'
TRACING	FWVT Tested	<b>TLMM_S_325 - NETWORK DATA - SERVICE INDICATION TO THE UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Network\m_Network016\m_network016	Status: <b>Up-to-date</b> Rev: 2.1 Test: .\M_TCP_Network\m_Network024\m_network024 ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.3 SLAVE ' Page No: ' 233'
TRACING	FWVT Tested	<b>TLMM_S_327 - NETWORK DATA - NETWORK DATA RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Network\m_Network014\m_network014	' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.3 SLAVE ' Page No: ' 234'
TRACING	FWVT Tested	<b>TLMM_S_328 - NETWORK DATA - RESPONSE TIME SLOT</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Network\m_Network020\m_network020	Status: <b>Up-to-date</b> Rev: 2.2 Test: .\M_TCP_Network\m_Network019\m_network019 Status: <b>Up-to-date</b> Rev: 2.2 Test: .\M_TCP_Network\m_Network021\m_network021 Status: <b>Up-to-date</b> Rev: 2.2 Test: .\M_TCP_Network\m_Network022\m_network022 ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.3 SLAVE ' Page No: ' 234'
TRACING	FWVT Tested	<b>TLMM_S_329 - NETWORK DATA - SEQUENCE NUMBER</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Network\m_Network016\m_network016	' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.3 SLAVE ' Page No: ' 235'
TRACING	FWVT Tested	<b>TLMM_S_330 - NETWORK DATA - INVALID RESPONSE TO INDICATION</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Network\m_Network027\m_network027	' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.3 SLAVE ' Page No: ' 235'
TRACING	FWVT Tested	<b>TLMM_MS_403 - SECURITY - UPPER LAYER PARAMETERS</b>	Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Security\m_Security035\m_security035	' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.1 SECURITY SERVICE - General Requirements ' Page No: ' 238'



Tracing	Classification	Requirement Title				
Class	Decomp Title		Test Case ID	Test Class	Test Class Name	
TRACING	FWVT Tested	<b>TLMM_MS_334 - SECURITY - CREATE BAN KEY/EPHEMERAL BAN KEY LOCAL</b>	Status: <b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_Security\m_Security007\m_security007	
			Status: <b>Up-to-date</b>	Rev: 2.9	Test: .\M_TCP_Security\m_Security012\m_security012	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Security\m_Security006\m_security006	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security008\m_security008	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security009\m_security009	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security010\m_security010	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Security\m_Security003\m_security003	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Security\m_Security013\m_security013	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security024\m_security024	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security026\m_security026	
			Status: <b>Up-to-date</b>	Rev: 2.9	Test: .\M_TCP_Security\m_Security002\m_security002	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Security\m_Security005\m_security005	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.2 CREATE BAN KEY / Ephemeral ban key Local ' Page No: ' 241'				
TRACING	FWVT Tested	<b>TLMM_MS_401 - SECURITY - MASTER/SLAVE REJECTS KEY REQUEST IF IT HAS NO BAN/EBAN KEY</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Security\m_Security014\m_security014	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.4 REQUEST BAN KEY/EPHEMERAL BAN KEY LOCAL ' Page No: ' 243'				
TRACING	FWVT Tested	<b>TLMM_M_337 - SECURITY - PROXIMITY SECURITY REQUEST PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Security\m_Security004\m_security004	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.5 REQUEST BAN KEY/EBAN key VIA proximity SWITCH ' Page No: ' 248'				
TRACING	FWVT Tested	<b>TLMM_S_338 - SECURITY - PROXIMITY RESPONSE PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Security\m_Security020\m_security020	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.5 REQUEST BAN KEY/EBAN key VIA proximity SWITCH ' Page No: ' 249'				



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Test Case Class	Test Class	Test Name
TRACING	FWVT Tested	<b>TLMM_M_339 - SECURITY - REQUEST BAN/EBAN key VIA PROXIMITY SWITCH REQUEST PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Security\m_Security011\m_security011	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.5 REQUEST BAN KEY/EBAN key VIA proximity SWITCH ' Page No: ' 249'				
TRACING	FWVT Tested	<b>TLMM_S_340 - SECURITY - REQUEST BAN/EBAN key VIA PROXIMITY SWITCH RESPONSE PACKET FORMAT</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Security\m_Security033\m_security033	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.5 REQUEST BAN KEY/EBAN key VIA proximity SWITCH ' Page No: ' 250'	Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Security\m_Security021\m_security021	
TRACING	FWVT Tested	<b>TLMM_M_341 - SECURITY - TRANSMIT PROXIMITY SECURITY REQUEST PACKET</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Security\m_Security016\m_security016	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.5.1 MASTER ' Page No: ' 251'				
TRACING	FWVT Tested	<b>TLMM_M_342 - SECURITY - NO RESPONSE TO PROXIMITY SECURITY REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Security\m_Security015\m_security015	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.5.1 MASTER ' Page No: ' 251'				
TRACING	FWVT Tested	<b>TLMM_M_343 - SECURITY - VALID RESPONSE TO PROXIMITY SECURITY REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Security\m_Security017\m_security017	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.5.1 MASTER ' Page No: ' 251'				
TRACING	FWVT Tested	<b>TLMM_M_344 - SECURITY - NO RESPONSE OR REJECTION TO REQUEST BAN/EBAN KEY VIA PROXIMITY SWITCH</b>	Status: <b>Up-to-date</b>	Rev: 2.12	Test: .\M_TCP_Security\m_Security023\m_security023	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.5.1 MASTER ' Page No: ' 251'	Status: <b>Up-to-date</b>	Rev: 2.7	Test: .\M_TCP_Security\m_Security022\m_security022	



Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Test Class	Test Class Name	
TRACING	FWVT Tested	TLMM_M_346 - SECURITY - REQUEST BAN/EBAN key VIA PROXIMITY SWITCH - RESPONSE TO UPPER LAYER	Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Security\m_Security028\m_security028	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Security\m_Security031\m_security031	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Security\m_Security029\m_security029	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Security\m_Security027\m_security027	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Security\m_Security030\m_security030	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Security\m_Security032\m_security032	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.5.1 MASTER' Page No: ' 252'						
TRACING	FWVT Tested	TLMM_M_347 - SECURITY - LBT TIMEOUT DURING REQUEST BAN/EBAN KEY EXCHANGE VIA PROXIMITY SWITCH SERVICE	Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Security\m_Security043\m_security043	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Security\m_Security044\m_security044	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Security\m_Security042\m_security042	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.5.1 MASTER' Page No: ' 252'						
TRACING	FWVT Tested	TLMM_S_348 - SECURITY - SLAVE RESPONSE TO A VALID PROXIMITY SWITCH SECURITY REQUEST PACKET	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Security\m_Security017\m_security017	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Security\m_Security018\m_security018	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.5.2 SLAVE' Page No: ' 252'						
TRACING	FWVT Tested	TLMM_S_349 - SECURITY - SLAVE REJECTS A VALID REQUEST BAN/EBAN KEY VIA PROXIMITY SWITCH REQUEST	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security019\m_security019	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.5.2 SLAVE' Page No: ' 253'						
TRACING	FWVT Tested	TLMM_S_350 - SECURITY - SLAVE ACCEPTS A VALID REQUEST BAN/EBAN key VIA PROXIMITY SWITCH REQUEST	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security034\m_security034	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.5.2 SLAVE' Page No: ' 253'						
TRACING	FWVT Tested	TLMM_S_351 - SECURITY - AUTHORIZATION TO GIVE BAN/EBAN KEY SERVICE RESPONSE	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security045\m_security045	
			Status: <b>Up-to-date</b>	Rev: 2.9	Test: .\M_TCP_Security\m_Security002\m_security002	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Security\m_Security039\m_security039	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_Security\m_Security041\m_security041	



Tracing	Classification	Requirement Title			
Class	Decomp	Title	Test Case ID	Class	Test Class Name
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.5.2 SLAVE ' Page No: ' 254'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_352 - SECURITY - USAGE OF EPHEMERAL BAN KEY</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Security\m_Security036\m_security036
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.5.2 SLAVE ' Page No: ' 254'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_419 - SECURITY - UPDATE PROXIMITY STATUS</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Security\m_Security037\m_security037
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.7 Security - update proximity status ' Page No: ' 258'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_420 - SECURITY - SERVICE DURATION TIMEOUT</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Security\m_Security040\m_security040
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.7 Security - update proximity status ' Page No: ' 258'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_422 - POWER INHIBIT - CHANNEL RECOVERY THRESHOLD</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_PowerInhibit\m_Power002\m_power002
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.20.2 MASTER ' Page No: ' 263'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_425 - POWER INHIBIT - RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_PowerInhibit\m_Power006\m_power006
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.20.3 SLAVE ' Page No: ' 265'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_353 - SHUTDOWN - SERVICE REQUEST PARAMETERS</b>			
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.22.1 REQUIREMENTS ' Page No: ' 274'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_354 - SHUTDOWN - RESPONSE TO UPPER LAYER</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_General\m_General030\m_general030
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_General\m_General031\m_general031
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_General\m_General032\m_general032
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_General\m_General033\m_general033
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_General\m_General034\m_general034
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.22.1 REQUIREMENTS ' Page No: ' 274'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_413 - SHUTDOWN INDICATION - DISABLE TIMER EXPIRES</b>	Status: <b>Up-to-date</b>	Rev: 2.7	Test: .\M_TCP_General\m_General027\m_general027
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.6.2 SHUTDOWN INDICATION ' Page No: ' 120'			





Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Class	Test Class	Name
TRACING	FWVT Tested	TLMM_M_300 - DATA - FIRST INDICATION	Status: Up-to-date	Rev: 2.2	Test: .\M_TCP_Data\m_Data015\m_data015	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.11.4 MASTER DATA ' Page No: ' 172'				
TRACING	FWVT Tested	TLMM_S_326 -NETWORK DATA- ENABLE SECURITY BLOCK				
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.3 SLAVE ' Page No: ' 234'				
TRACING	FWVT Tested	TLMC_S_106 - ARQ - STOP AND WAIT MASTER PACKETS	Status: Up-to-date	Rev: 2.3	Test: .\M_TCP_Data\m_ARQ012\m_arq012	
		Status: Up-to-date	Rev: 2.2	Test: .\M_TCP_Data\m_ARQ017\m_arq017		
		Status: Up-to-date	Rev: 2.3	Test: .\M_TCP_Data\m_ARQ019\m_arq019		
		Status: Up-to-date	Rev: 2.2	Test: .\M_TCP_Data\m_ARQ020\m_arq020		
		Status: Up-to-date	Rev: 2.2	Test: .\M_TCP_Data\m_ARQ021\m_arq021		
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.1.3 Slave ' Page No: ' 285'				
TRACING	FWVT Tested	TLMC_S_107 - ARQ - RECEIPT OF AN ARQ PACKET	Status: Up-to-date	Rev: 2.3	Test: .\M_TCP_Data\m_ARQ024\m_arq024	
		Status: Up-to-date	Rev: 2.3	Test: .\M_TCP_Data\m_ARQ022\m_arq022		
		Status: Up-to-date	Rev: 2.1	Test: .\M_TCP_Data\m_ARQ023\m_arq023		
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.1.3 Slave ' Page No: ' 285'				
TRACING	FWVT Tested	TLMC_S_108 - ARQ - MASTER ARQ PACKET NOT RECEIVED	Status: Up-to-date	Rev: 2.2	Test: .\M_TCP_Data\m_ARQ017\m_arq017	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.1.3 Slave ' Page No: ' 285'				
TRACING	FWVT Tested	TLMC_S_109 - ARQ - IMPLICIT ACK OF VALID SLAVE MEMORY DATA	Status: Up-to-date	Rev: 2.1	Test: .\M_TCP_Data\m_ARQ026\m_arq026	
		Status: Up-to-date	Rev: 2.1	Test: .\M_TCP_Data\m_ARQ023\m_arq023		
		Status: Up-to-date	Rev: 2.1	Test: .\M_TCP_Data\m_ARQ025\m_arq025		
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.1.3 Slave ' Page No: ' 285'				
TRACING	FWVT Tested	TLMC_S_110 - ARQ - MEMORY DATA ACKNOWLEDGEMENT NOT RECEIVED	Status: Up-to-date	Rev: 2.6	Test: .\M_TCP_Data\m_ARQ018\m_arq018	
		Status: Up-to-date	Rev: 2.1	Test: .\M_TCP_Data\m_ARQ027\m_arq027		
		Status: Up-to-date	Rev: 2.3	Test: .\M_TCP_Data\m_ARQ031\m_arq031		
		Status: Up-to-date	Rev: 2.3	Test: .\M_TCP_Data\m_ARQ013\m_arq013		
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.1.3 Slave ' Page No: ' 285'				



Tracing	Classification	Requirement Title				
	Class	Decomp Title		Test Case ID	Test Class	Test Class Name
TRACING	FWVT Tested	TLMM_S_356 - ARQ - RETRANSMIT WAVEFORM PACKET	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_EEPROM\m_Eeprom006\m_eeprom006	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Data\m_ARQ030\m_arq030	
' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.1.3 Slave' Page No: ' 286'						



Tracing	Classification	Requirement Title		Test Case ID	Test Class	Test Class Name
TRACING	FWVT Tested	TLMC_MS_001 - PACKET CONTROL BYTES	Status:	<b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryRead001\m_memoryread001
			Status:	<b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Data\m_MemoryRead006\m_memoryread006
			Status:	<b>Up-to-date</b>	Rev: 2.8	Test: .\M_TCP_Data\m_TransferMode001\m_transfermode001
			Status:	<b>Up-to-date</b>	Rev: 2.11	Test: .\M_TCP_Open\m_Open001\m_open001
			Status:	<b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_Close\m_Close001\m_close001
			Status:	<b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryRead014\m_memoryread014
			Status:	<b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryWrite005\m_memorywrite005
			Status:	<b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_TransferMode002\m_transfermode002
			Status:	<b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_Discover\m_DiscoverFull002\m_discoverfull002
			Status:	<b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Emergency\m_Emergency002\m_emergency002
			Status:	<b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_General\m_General015\m_general015
			Status:	<b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Security\m_Security015\m_security015
			Status:	<b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Security\m_Security020\m_security020
			Status:	<b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_ARQ006\m_arq006
			Status:	<b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_MemoryRead031\m_memoryread031
			Status:	<b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_MemoryRead033\m_memoryread033
			Status:	<b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Data\m_TransferMode003\m_transfermode003
			Status:	<b>Up-to-date</b>	Rev: 2.7	Test: .\M_TCP_Discover\m_DiscoverFull001\m_discoverfull001
			Status:	<b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Discover\m_DiscoverFull032\m_discoverfull032
			Status:	<b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_PowerInhibit\m_Power006\m_power006
			Status:	<b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_MemoryRead012\m_memoryread012
			Status:	<b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Diagnostic\m_Diagnostics001\m_diagnostics001
			Status:	<b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Emergency\m_Emergency038\m_emergency038
			Status:	<b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Open\m_Open005\m_open005
			Status:	<b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Close\m_Close002\m_close002
			Status:	<b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Data\m_MemoryWrite046\m_memorywrite046
			Status:	<b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Diagnostic\m_Diagnostics032\m_diagnostics032



Tracing	Classification	Requirement Title
Class	Decomp Title	Test Case ID Class Test Class Name
		Status: <b>Up-to-date</b> Rev: 2.2 Test: .\M_TCP_General\m_General003\m_general003
		Status: <b>Up-to-date</b> Rev: 2.5 Test: .\M_TCP_Network\m_Network001\m_network001
		Status: <b>Up-to-date</b> Rev: 2.1 Test: .\M_TCP_Data\m_MemoryWrite010\m_memorywrite010
		Status: <b>Up-to-date</b> Rev: 2.4 Test: .\M_TCP_MedicalEvent\m_MedicalEvent001\m_medicalevent001
		Status: <b>Up-to-date</b> Rev: 2.4 Test: .\M_TCP_Security\m_Security021\m_security021
		Status: <b>Up-to-date</b> Rev: 2.4 Test: .\M_TCP_Data\m_MemoryRead003\m_memoryread003
		Status: <b>Up-to-date</b> Rev: 2.3 Test: .\M_TCP_Data\m_MemoryWrite006\m_memorywrite006
		Status: <b>Up-to-date</b> Rev: 2.1 Test: .\M_TCP_Data\m_MemoryWrite011\m_memorywrite011
		Status: <b>Up-to-date</b> Rev: 2.2 Test: .\M_TCP_Data\m_MemoryWrite047\m_memorywrite047
		Status: <b>Up-to-date</b> Rev: 2.3 Test: .\M_TCP_Emergency\m_Emergency001\m_emergency001
		Status: <b>Up-to-date</b> Rev: 2.4 Test: .\M_TCP_General\m_General005\m_general005
		Status: <b>Up-to-date</b> Rev: 2.4 Test: .\M_TCP_Security\m_Security011\m_security011
		Status: <b>Up-to-date</b> Rev: 2.2 Test: .\M_TCP_Data\m_ARQ017\m_arq017
		Status: <b>Up-to-date</b> Rev: 2.1 Test: .\M_TCP_Data\m_MemoryRead034\m_memoryread034
		Status: <b>Up-to-date</b> Rev: 2.2 Test: .\M_TCP_Discover\m_DiscoverFull034\m_discoverfull034
		Status: <b>Up-to-date</b> Rev: 2.4 Test: .\M_TCP_General\m_General016\m_general016
		Status: <b>Up-to-date</b> Rev: 2.4 Test: .\M_TCP_Security\m_Security004\m_security004
		Status: <b>Up-to-date</b> Rev: 2.12 Test: .\M_TCP_Security\m_Security023\m_security023
		' FILE_NAME: 'datalink.fm' FILE_REV: '1.34' SECTION: '5.1.1 Packet Control Bytes' Page No: ' 95'
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_408 - EEPROM - WAKEUP DURING EEPROM READ</b> Status: <b>Up-to-date</b> Rev: 2.3 Test: .\M_TCP_EEPROM\m_Eeprom001\m_eeprom001
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.2.4 READY INDICATION' Page No: ' 104'
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_426 - DEFAULT NATIVE MODE RATE</b>
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.6 General Requirements' Page No: ' 110'
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_428 - INITIALIZE - UPPER LAYER TO DATA LINK LAYER PARAMETERS</b>
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.7 Initialize' Page No: ' 121'



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_432 - POLLING - HOST REQUIRES SECURE BUT LOCAL WAKEUP PACKET DOES NOT INCLUDE SECURITY</b>	Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_Polling\m_Polling091\m_polling091	
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.8.1 REQUIREMENTS' Page No: ' 129'						
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_240 - POLLING INITIATION</b>	Status: <b>Up-to-date</b>	Rev: 2.6	Test: \M_TCP_Polling\m_Polling046\m_polling046	
Status: <b>Up-to-date</b> Rev: 2.1 Test: \M_TCP_Polling\m_Polling047\m_polling047						
Status: <b>Up-to-date</b> Rev: 2.5 Test: \M_TCP_Polling\m_Polling050\m_polling050						
Status: <b>Up-to-date</b> Rev: 2.1 Test: \M_TCP_Polling\m_Polling025\m_polling025						
Status: <b>Up-to-date</b> Rev: 2.1 Test: \M_TCP_Polling\m_Polling040\m_polling040						
Status: <b>Up-to-date</b> Rev: 2.1 Test: \M_TCP_Polling\m_Polling017\m_polling017						
Status: <b>Up-to-date</b> Rev: 2.4 Test: \M_TCP_Polling\m_Polling049\m_polling049						
Status: <b>Up-to-date</b> Rev: 2.0 Test: \M_TCP_Polling\m_Polling016\m_polling016						
Status: <b>Up-to-date</b> Rev: 2.2 Test: \M_TCP_Polling\m_Polling026\m_polling026						
Status: <b>Up-to-date</b> Rev: 2.1 Test: \M_TCP_Polling\m_Polling045\m_polling045						
Status: <b>Up-to-date</b> Rev: 2.3 Test: \M_TCP_Polling\m_Polling048\m_polling048						
Status: <b>Up-to-date</b> Rev: 2.5 Test: \M_TCP_Polling\m_Polling024\m_polling024						
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.8.1 REQUIREMENTS' Page No: ' 130'						
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_252 - POLLING - RESTART NATIVE MODE TIMER OR CHANNEL LISTEN TIMER</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: \M_TCP_Polling\m_Polling080\m_polling080	
Status: <b>Up-to-date</b> Rev: 2.1 Test: \M_TCP_Polling\m_Polling092\m_polling092						
Status: <b>Up-to-date</b> Rev: 2.1 Test: \M_TCP_Polling\m_Polling076\m_polling076						
Status: <b>Up-to-date</b> Rev: 2.3 Test: \M_TCP_Polling\m_Polling081\m_polling081						
Status: <b>Up-to-date</b> Rev: 2.1 Test: \M_TCP_Polling\m_Polling085\m_polling085						
Status: <b>Up-to-date</b> Rev: 2.1 Test: \M_TCP_Polling\m_Polling077\m_polling077						
Status: <b>Up-to-date</b> Rev: 2.2 Test: \M_TCP_Polling\m_Polling082\m_polling082						
Status: <b>Up-to-date</b> Rev: 2.3 Test: \M_TCP_Polling\m_Polling083\m_polling083						
' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.8.1 REQUIREMENTS' Page No: ' 130'						



Tracing	Classification	Requirement Title				
	Decomp			Test Case	Test	
Class	Title		ID	Class	Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_037 - POLLING - NATIVE MODE TIMEOUT/ CHANNEL LISTEN TIMEOUT</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Polling\m_Polling018\m_polling018	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: \\M_TCP_Polling\m_Polling016\m_polling016	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.8.1 REQUIREMENTS' Page No: ' 131'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_271 - DISCOVER FULL - CANCEL COLLISION AVOIDANCE TIMER</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_Discover\m_DiscoverFull038\m_discoverfull038	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.9.2 DISCOVER FULL' Page No: ' 142'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_084 - RAW MODE - MASTER PACKET ATTACHED RESPONSE</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_RawMode\m_RawMode003\m_rawmode003	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: \\M_TCP_RawMode\m_RawMode008\m_rawmode008	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_RawMode\m_RawMode002\m_rawmode002	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: \\M_TCP_RawMode\m_RawMode004\m_rawmode004	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_RawMode\m_RawMode006\m_rawmode006	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_RawMode\m_RawMode011\m_rawmode011	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_RawMode\m_RawMode012\m_rawmode012	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_RawMode\m_RawMode009\m_rawmode009	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: \\M_TCP_RawMode\m_RawMode010\m_rawmode010	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_RawMode\m_RawMode007\m_rawmode007	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_RawMode\m_RawMode005\m_rawmode005	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.14.2 RAW MODE (MASTER PACKET ATTACHED)' Page No: ' 195'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_440 - MEDICAL EVENT - POLL UPON TELM REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_MedicalEvent\m_MedicalEvent020\m_medicalevent020	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.16.1 REQUIREMENTS' Page No: ' 203'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_431 - NETWORK DATA - TRANSMIT SECURED NETWORK DATA PACKET</b>				
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.2 MASTER' Page No: ' 231'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_434 - NETWORK DATA - PROCESSING POLLING REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: \\M_TCP_Network\m_Network018\m_network018	



**Tracing Classification Requirement Title**

Class	Decomp Title	Test Case ID	Test Class	Test Class Name
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.3 SLAVE ' Page No: ' 232'		

<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_335 - SECURITY - ASSERT BAN KEY/EPHEMERAL BAN KEY LOCAL</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Security\m_Security005\m_security005
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Security\m_Security003\m_security003
			Status: <b>Up-to-date</b>	Rev: 2.9	Test: .\M_TCP_Security\m_Security012\m_security012
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security026\m_security026
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Security\m_Security006\m_security006
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Security\m_Security013\m_security013
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security009\m_security009
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security045\m_security045
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_Security\m_Security007\m_security007
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security008\m_security008
Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security010\m_security010			
Status: <b>Up-to-date</b>	Rev: 2.9	Test: .\M_TCP_Security\m_Security038\m_security038			

' FILE\_NAME: 'external.fm' FILE\_REV: '1.267' SECTION: '5.2.19.3 aSSert ban key/ephemeral ban key Local ' Page No: ' 242'

<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_336 - SECURITY - REQUEST BAN KEY OR EPHEMERAL BAN KEY LOCAL</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Security\m_Security005\m_security005
			Status: <b>Up-to-date</b>	Rev: 2.9	Test: .\M_TCP_Security\m_Security002\m_security002
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_Security\m_Security007\m_security007
			Status: <b>Up-to-date</b>	Rev: 2.9	Test: .\M_TCP_Security\m_Security012\m_security012
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Security\m_Security006\m_security006
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security045\m_security045
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security008\m_security008
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security010\m_security010
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Security\m_Security003\m_security003
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security009\m_security009
Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Security\m_Security026\m_security026			
Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Security\m_Security013\m_security013			

' FILE\_NAME: 'external.fm' FILE\_REV: '1.267' SECTION: '5.2.19.4 REQUEST BAN KEY/EPHEMERAL BAN KEY LOCAL ' Page No: ' 243'



Tracing	Classification	Requirement Title	Test Case ID	Test Class	Test Class Name
	Decomp Class	Title			
TRACING	FWVT Tested	<b>TLMM_S_264 - POWER INHIBIT - UPPER LAYER TO DATA LINK LAYER PARAMETERS</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.20.3 SLAVE ' Page No: ' 264'			
TRACING	FWVT Tested	<b>TLMM_S_421 - POWER INHIBIT - TRANSMIT PACKET</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.20.3 SLAVE ' Page No: ' 264'	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_PowerInhibit\m_Power002\m_power002
TRACING	FWVT Tested	<b>TLMM_S_427 - POWER INHIBIT SERVICE RESPONSE TO UPPER LAYER</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.20.3 SLAVE ' Page No: ' 264'	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_PowerInhibit\m_Power004\m_power004
TRACING	FWVT Tested	<b>TLMM_S_423 - POWER INHIBIT IDLE IMMEDIATE - ASSERTED</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.20.3 SLAVE ' Page No: ' 265'	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_PowerInhibit\m_Power003\m_power003
TRACING	FWVT Tested	<b>TLMM_S_424 - POWER INHIBIT IDLE IMMEDIATE - DEASSERTED</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.20.3 SLAVE ' Page No: ' 265'	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_PowerInhibit\m_Power003\m_power003
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_PowerInhibit\m_Power008\m_power008
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_PowerInhibit\m_Power007\m_power007
TRACING	FWVT Tested	<b>TLMM_M_355 - ARQ - UPDATING THE EXPECTED WAVEFORM SEQUENCE NUMBER 1</b> ' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.1.2 MASTER ' Page No: ' 283'	Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Data\m_ARQ028\m_arq028
TRACING	FWVT Tested	<b>TLMM_M_429 - ARQ - UPDATING THE EXPECTED WAVEFORM SEQUENCE NUMBER 2</b> ' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.1.2 MASTER ' Page No: ' 284'	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Data\m_ARQ029\m_arq029
TRACING	FWVT Tested	<b>TLMM_M_441 - WIRELESS WAKEUP - CCA AFTER WAKEUP</b> ' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.6 Requirements ' Page No: ' 325'			
TRACING	FWVT Tested	<b>TLMM_S_412 - RAMWARE RESTRICTIONS</b> Status: <b>Up-to-date</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_EEPROM\m_Eeprom006\m_eeprom006
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_EEPROM\m_Eeprom007\m_eeprom007





Tracing	Classification	Requirement Title			
Class	Decomp	Title	Test Case ID	Class	Test Class Name
		' FILE_NAME: 'appendix.fm' FILE_REV: '1.111' SECTION: '7.6	Ramware	' Page No: ' 364'	
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_388 - MOZART MODULE MEMORY READ</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_Data017\m_data017
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_Data016\m_data016
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_Data018\m_data018
		' FILE_NAME: 'appendix.fm' FILE_REV: '1.111' SECTION: '7.6.3.1 Mozart module Memory Read ' Page No: ' 367'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_389 - MOZART MODULE MEMORY WRITE</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_Data018\m_data018
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_Data016\m_data016
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_Data\m_Data017\m_data017
		' FILE_NAME: 'appendix.fm' FILE_REV: '1.111' SECTION: '7.6.3.2 Mozart module Memory Write ' Page No: ' 368'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_436 - MOZART MODULE WRITE TO EEPROM</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_EEPROM\m_Eeprom002\m_eeprom002
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_EEPROM\m_Eeprom003\m_eeprom003
		' FILE_NAME: 'appendix.fm' FILE_REV: '1.111' SECTION: '7.6.3.3 Special function commands ' Page No: ' 369'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_437 - MOZART MODULE WRITE TO EEPROM AFTER CLOSE WITHOUT POLLING INDICATION</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_EEPROM\m_Eeprom005\m_eeprom005
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: \\M_TCP_EEPROM\m_Eeprom004\m_eeprom004
		' FILE_NAME: 'appendix.fm' FILE_REV: '1.111' SECTION: '7.6.3.3 Special function commands ' Page No: ' 369'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_438 - MOZART MODULE ENABLE RAMWARE</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_EEPROM\m_Eeprom002\m_eeprom002
		' FILE_NAME: 'appendix.fm' FILE_REV: '1.111' SECTION: '7.6.3.3 Special function commands ' Page No: ' 370'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_MS_439 - MOZART MODULE CLEAR RAMWARE</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: \\M_TCP_EEPROM\m_Eeprom002\m_eeprom002
		' FILE_NAME: 'appendix.fm' FILE_REV: '1.111' SECTION: '7.6.3.3 Special function commands ' Page No: ' 370'			



Tracing	Classification	Requirement Title				
Class	Decomp Title		Test Case ID	Test Case Class	Test Class Name	
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_286 - OPEN - RESPONSE TO A VALID OPEN REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Open\m_Open006\m_open006	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Open\m_Open013\m_open013	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_Open\m_Open014\m_open014	
			Status: <b>Up-to-date</b>	Rev: 2.0	Test: .\M_TCP_Open\m_Open015\m_open015	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_Open\m_Open009\m_open009	
			Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Open\m_Open012\m_open012	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_Open\m_Open010\m_open010	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Polling\m_Polling024\m_polling024	
			Status: <b>Up-to-date</b>	Rev: 2.11	Test: .\M_TCP_Open\m_Open001\m_open001	
			Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_Open\m_Open002\m_open002	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Open\m_Open004\m_open004	
			Status: <b>Up-to-date</b>	Rev: 2.7	Test: .\M_TCP_Open\m_Open007\m_open007	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.10.1 OPEN - GENERAL REQUIREMENTS' Page No: ' 154'			
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_293 - OPEN - UNSUCCESSFUL - MISSING KEY</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Open\m_Open030\m_open030	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.10.1 OPEN - GENERAL REQUIREMENTS' Page No: ' 156'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_304 - EMERGENCY DURING CLOSE</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Close\m_Close016\m_close016	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.13.2 MASTER' Page No: ' 192'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_M_305 - EMERGENCY - SECOND EMERGENCY REQUEST WHILE PROCESSING FIRST</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Emergency\m_Emergency043\m_emergency043	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.13.2 MASTER' Page No: ' 192'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_307 - MEDICAL EVENT - CHANNEL TRANSMIT TIMEOUT</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_MedicalEvent\m_MedicalEvent015\m_medicalevent015	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_MedicalEvent\m_MedicalEvent018\m_medicalevent018	
			Status: <b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_MedicalEvent\m_MedicalEvent017\m_medicalevent017	
			' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.16.1 REQUIREMENTS' Page No: ' 202'			
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_416 - MEDICAL EVENT - INVALID OPEN REQUEST</b>	Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_MedicalEvent\m_MedicalEvent019\m_medicalevent019	
			Status: <b>Up-to-date</b>	Rev: 2.9	Test: .\M_TCP_MedicalEvent\m_MedicalEvent016\m_medicalevent016	




Tracing	Classification	Requirement Title				
Class	Decomp	Title	Test Case ID	Class	Test Class	Name
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.16.1 REQUIREMENTS ' Page No: ' 203'				
<b>TRACING</b>	FWVT Tested	<b>TLMC_S_417 - MEDICAL EVENT - SERVICE DURATION</b>	Status: <b>Up-to-date</b>	Rev: 2.6	Test: .\M_TCP_MedicalEvent\m_MedicalEvent017\m_medicalevent017	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_MedicalEvent\m_MedicalEvent018\m_medicalevent018	
			Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_MedicalEvent\m_MedicalEvent015\m_medicalevent015	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.16.1 REQUIREMENTS ' Page No: ' 203'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_430 - MOZART DATA REQUEST INDICATION</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_Data018\m_data018	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Data\m_Data017\m_data017	
		' FILE_NAME: 'appendix.fm' FILE_REV: '1.111' SECTION: '7.6 Ramware ' Page No: ' 364'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_M_372 - WIRELESS WAKEUP- SECURE WAKEUP USER DATA INSTIGATOR</b>				
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.4 Requirements ' Page No: ' 323'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_378 - WIRELESS WAKEUP - SNIFF INTERVAL</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_WirelessWakeup\m_Wakeup001\m_wakeup001	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.8 Requirements ' Page No: ' 326'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_402 - WIRELESS WAKEUP - DISABLE WAKEUP</b>	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_WirelessWakeup\m_Wakeup013\m_wakeup013	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.8 Requirements ' Page No: ' 326'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_379 - WIRELESS WAKEUP- SECURE WAKEUP USER DATA RECEPTOR</b>				
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.6.8 Requirements ' Page No: ' 327'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_442 - POWER INHIBIT - WAKEUP COMPLETE INDICATION DURING SYNC SNIFF</b>	Status: <b>Up-to-date</b>	Rev: 2.3	Test: .\M_TCP_PowerInhibit\m_Power009\m_power009	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.20.3 SLAVE ' Page No: ' 266'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_447 - POWER INHIBIT - WAKEUP COMPLETE INDICATION DURING ASYNC SNIFF</b>	Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_PowerInhibit\m_Power010\m_power010	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.20.3 SLAVE ' Page No: ' 266'				



Tracing	Classification	Requirement Title	Test Case ID	Test Case Class	Test Class Name
	Decomp Class	Title			
TRACING	FWVT Tested	<b>TLMM_S_448 - POWER INHIBIT - CHANNEL LISTEN TIMER FOR SCAN DURING POLLING</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.20.3 SLAVE ' Page No: ' 266'			
TRACING	FWVT Tested	<b>TLMM_S_449 - POWER INHIBIT - MEDICAL EVENT TRANSMIT TIME</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.20.3 SLAVE ' Page No: ' 266'			
TRACING	FWVT Tested	<b>TLMM_S_399 - PARAMETER CRC CHECK</b> ' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.10.2 Requirements ' Page No: ' 337'	Status: <b>Up-to-date</b>	Rev: 2.7	Test: .\M_TCP_MemoryTest\m_MemoryTest001\m_memorytest001
TRACING	FWVT Tested	<b>TLMM_S_400- PARAMETER CORRUPTION INDICATION</b> ' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.10.2 Requirements ' Page No: ' 337'	Status: <b>Up-to-date</b>	Rev: 2.7	Test: .\M_TCP_MemoryTest\m_MemoryTest001\m_memorytest001
TRACING	FWVT Tested	<b>TLMM_S_451- CHARGE NOISE - USE NEW CHANNEL RECOVERY THRESHOLD</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.21 Charging Noise ' Page No: ' 270'	Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_PowerInhibit\m_Power005\m_power005
TRACING	FWVT Tested	<b>TLMM_S_453- CHARGE NOISE - SAME CHANNEL RECOVERY IMMINENT</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.21 Charging Noise ' Page No: ' 271'	Status: <b>Up-to-date</b> Status: <b>Up-to-date</b>	Rev: 2.5 Rev: 2.1	Test: .\M_TCP_PowerInhibit\m_Power005\m_power005 Test: .\M_TCP_PowerInhibit\m_Power011\m_power011
TRACING	FWVT Tested	<b>TLMM_S_454- CHARGE NOISE - SAME CHANNEL RECOVERY IMMINENT RESUMED</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.21 Charging Noise ' Page No: ' 271'	Status: <b>Up-to-date</b> Status: <b>Up-to-date</b>	Rev: 2.1 Rev: 2.5	Test: .\M_TCP_PowerInhibit\m_Power011\m_power011 Test: .\M_TCP_PowerInhibit\m_Power005\m_power005
TRACING	FWVT Tested	<b>TLMM_MS_410 - POWER INHIBIT DURING EEPROM OPERATION</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.2.6 EEPROM and power inhibit ' Page No: ' 106'	Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_PowerInhibit\m_Power001\m_power001
TRACING	FWVT Tested	<b>TLMM_S_331 - NETWORK DATA - SERVICE SUCCESSFUL AT SLAVE</b> ' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.3 SLAVE ' Page No: ' 235'	Status: <b>Up-to-date</b>	Rev: 2.5	Test: .\M_TCP_Network\m_Network018\m_network018



Tracing	Classification	Requirement Title				
	Decomp		Test Case	Test		
Class	Title		ID	Class	Class	Name
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_332 - NETWORK DATA - SERVICE UNSUCCESSFUL AT SLAVE</b>	Status: <b>Up-to-date</b>	Rev: 2.4	Test: .\M_TCP_Network\m_Network017\m_network017	
			Status: <b>Up-to-date</b>	Rev: 2.1	Test: .\M_TCP_Network\m_Network028\m_network028	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.18.4.3 SLAVE ' Page No: ' 235'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_405 - SECURITY - ASSERT EBAN KEY DURATION</b>	Status: <b>Up-to-date</b>	Rev: 2.9	Test: .\M_TCP_Security\m_Security038\m_security038	
			Status: <b>Up-to-date</b>	Rev: 2.2	Test: .\M_TCP_Security\m_Security046\m_security046	
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.19.6 SECURITY - Assert eban key duration ' Page No: ' 255'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_450 - POWER INHIBIT - OPEN RESPONSE PACKETS</b>				
		' FILE_NAME: 'external.fm' FILE_REV: '1.267' SECTION: '5.2.20.3 SLAVE ' Page No: ' 267'				
<b>TRACING</b>	FWVT Tested	<b>TLMM_S_398 - PARAMETER CRC UPDATE</b>	Status: <b>Up-to-date</b>	Rev: 2.7	Test: .\M_TCP_MemoryTest\m_MemoryTest001\m_memorytest001	
		' FILE_NAME: 'internal.fm' FILE_REV: '1.131' SECTION: '5.3.10.2 Requirements ' Page No: ' 336'				

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	TITLE <b>TELEMETRY M COMMUNICATION PROTOCOL SPECIFICATION</b>				
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<b>REVISIONS</b>					
<b>REV</b>	<b>DESCRIPTION</b>				<b>ECO NO.</b>
<b>A</b>	Initial Release into eMatrix. This version reflects firmware Baseline 11.1.				10-00156
<b>B</b>	This release includes updates since Rev. A. The updates are documented under SCRs 186183, 186189, 186623, 186931, 187162, 187540, 187611, 187968, 188074, 188115, 188184, 188393, 188870, 189448, 189885, 190273, 190369, 190661, 190923, 191014, 191062., 192070, 192228, 192305, 192393, 193057 and 193715. It reflects Mozart Firmware Baseline 17.1.				10-01936
<b>C</b>	This release includes updates since Rev. B. The updates are documented 195259. It reflects Mozart Firmware Baseline 17.1.				10-02089

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## 1.0 INTRODUCTION

### 1.1 PURPOSE

The System M — Telemetry Communication Protocol defines the protocol for all data communication between a system M slave and master. In this document, the terms instrument and programmer are used interchangeably.

The purpose of this document is to ensure that all Medtronic devices making use of telemetry system M are designed to conform to a single specification to guarantee that a common headless telemetry system can be used regardless of the application.

The use of the common protocol is also beneficial in that it creates the possibility that different organizations within Medtronic can leverage a common telemetry system and shorten time-to-market while being guaranteed that a quality telemetry system is being delivered.

### 1.2 SCOPE

This specification defines the communication protocol for Telemetry M. All Medtronic products using Telemetry M shall conform to this specification.

This specification defines only the communication protocol for the data exchange between an slave device and the master. Each device product specification or system interface specification specifies aspects of communication which are unique to a particular application.

### 1.3 APPLICABLE DOCUMENTS

DOC. NO.	DOCUMENT TITLE
A40675	Telemetry M RF Module System Interface Specification
A17245	Telemetry M RF Module Requirements Specification
A34639	Telemetry M Design Input Source Document
123970	Mozart Programmer's Manual
A44088	Telemetry M RF Module EEPROM Specification
217420	System B Telemetry Communication Protocol Specification

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## 1.4 DEFINITIONS AND ACRONYMS

ITEM	DEFINITION
ACK	Acknowledgment.
ad hoc network	A network comprised solely of stations within mutual communication range of each other via wireless medium. An ad hoc network is typically created in a spontaneous manner. The principal characteristic of an ad hoc network is limited extent in time and space. These limitations allow creation and dissolving of ad hoc networks to be sufficiently straightforward and convenient so as to be achievable by non-technical users of the network facilities.
AES	The “advanced encryption standard”; a block cipher (used by the security feature) which is the de facto industrial/governmental standard. AES is defined in 128, 192 and 256 bit versions. A 128 bit AES block cipher is used by telemetry M.
ARQ	Automatic Request Repeat. A method of error control involving the retransmission of packets.
BAN	Body area network (for the security feature).
baseband	the band of frequencies occupied by the signal before it modulates the carrier (or subcarrier) frequency to form the transmitted line or radio signal
block cipher	A deterministic function which takes as input a data block and key (each of the same length) and outputs a data block (again of the same length). A block cipher also has the property that given the input data block and the output data block, it is exceedingly difficult to determine the key. The block cipher is used by the security feature.
bps	bits per second
broadband	refers to multiple channels
broadband interference	a disturbance that has a spectral energy distribution sufficiently broad so that the response of the measuring receiver in use does not vary significantly when tuned over a specified number of receiver bandwidths
byte	a group of eight bits
CCA	Clear channel assessment. Used interchangeably with channel mapping.
channel	a band of frequencies of a sufficient width to permit its use for radio communications
channel mapping	The process of selecting a clear communication channel. Used interchangeably with mapping.
channel recovery	The process of recovering communication between a master and slave.
Comm	one of the Data Link states; for the enumeration of all Data Link states, see <b>5.2.3 (States and Transitions)</b> .
Command code	A byte which identifies a slave message Contains a type (receive ready, reject, etc.) and a tag. The slave repeats this byte on every slave transaction (indication). The master will remove the redundant command codes (which occur on the 2nd, 3rd,..., nth indication).
communication hardware	a conglomeration of RF and baseband hardware; the term is used by Telemetry M when no distinction is necessary.
CRC	Cyclic Redundancy Check
CRDM	Cardiac Rhythm Disease Management. A business unit of Medtronic.

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ITEM	DEFINITION
Data	the name of one of the External Services; see <b>5.2 (External Services)</b> for an enumeration of all the services
Data indication	A message from the master's Data Link Layer to the Upper Layer. This message contains up to 240 bytes of Memory Data (one to 8 fragments (packets)). Used interchangeably with data transaction.
Data Link Layer	The layer responsible for establishing and maintaining communication. This layer resides between the upper layer and the physical layer.
Data link task	The task responsible for establishing and maintaining communication. This task resides between the upper layer task and the telemetry digital hardware.
data transaction	see <b>TLMC_M_120 - CH RECOVERY - TRIGGER CHANNEL RECOVERY</b> in section <b>5.3.3.2 (MASTER)</b> .
Destination station	The destination station for a packet. For master packets the slave is the destination station. For slave packets the master is the destination station. Also see source station.
device	Implantable Pulse Generator (IPG) or Implantable Cardioverter Defibrillator (ICD). See also 'implant'.
Device name	see station name
Discover Full	a type of Discover service; see <b>5.2.9 (Discover)</b> .
Emergency indication	A message from the master's Data Link Layer to the Upper Layer. This message contains the application receive ready or reject response (~4 bytes). Used interchangeably with Emergency transaction.
Event indication	A message from the a station's Data Link Layer to the Upper Layer. Examples include: channel recovery initiated, channel recovery successful, first request packet sent, and system error.
External Services	refer to <b>5.2 (External Services)</b>
External service duration timeout	A service duration timeout occurs when the data link task is not able to complete an external service in time. The time duration is a parameter of the external service request. The data link task notifies the upper layer that a timeout occurred. Used interchangeably with service duration timeout.
External service request	A message from a station's Upper Layer to its Data Link Layer. Used to identify stations, establish communications, terminate communication, exchange data between stations, and reset communication parameters.
External service response	A message from a station's Data Link Layer to its Upper Layer. Contains the status of the external service request.
fade	the variation of radio field strength caused by changes in the transmission path with time
FDMA	Frequency Division Multiple Access - a frequency based access technique which divides the RF spectrum into individual channels with separate users on each channel
FEC	Forward Error Correction. A method of error control allowing the receiver to correct errors.
field	a region or space in which a given effect exists
Finite State Machine (FSM)	a computational model consisting of a finite number of states and transitions between these states
FOP	First Outstanding Packet. The leading or oldest outstanding packet expected by the destination station.

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ITEM	DEFINITION
frame	A time-based entity encapsulating one or more master packets. A time-based entity encapsulating one or more slave packets.
identifier	unique manufacturer assigned identifier (ID) for each transmitting station: master ID, slave ID
implant	A synonym for the variety of implant devices produced by Medtronic. Examples include IPG, ICD, etc. Occurs in this specification as ' <i>implant device</i> ' or simply ' <i>the implant</i> '. See also 'device'.
Implant ID/ Implant station ID	The implant station ID is a 6 byte identification which uniquely identifies a Telemetry M device. It is a composite, consisting of Model ID, SubModel ID, and Serial #. For details, see <b>5.2.6 (General Requirements)</b> . Used interchangeably with device ID.
Indication	A message from the master's Data Link Layer to the Upper Layer. An indication may be for Memory Data, or unrequested data. Used interchangeably with transaction.
instigator	See wakeup-instigator
instrument	A synonym for the external Telemetry M station. Examples include the programmer, bedside monitor, patient activator, etc.
Internal Services	refer to <b>5.3 (Internal Services)</b>
IOP	Input/Output Processor
Joule	Absolute unit of energy. One Joule equals one Watt Second.
$K_{BAN}$	The body area network key. All telemetry M nodes in a body area network share $K_{BAN}$ . $K_{BAN}$ is used by the security feature.
$K_{Sess}$	The session key. A new session key is calculated at the start of each new secure telemetry session, and is used to secure packets within the telemetry session. $K_{Sess}$ is used by the security feature.
layer	A structuring technique to reduce the complexity of a network architecture. A layer is created where a different level of abstraction is needed. Each layer performs a well defined function. Layer boundaries are chosen to minimize information flow across the interfaces. Layering increases the portability of applications.
LEM	Link Electronic Module
link	The term used to refer to the channel over a short period of time. A link is present when both the master and the slave can communicate with each other in a closed loop.
LSB	Least Significant Bit
$M_{nnn}$	see the entry below for (master) 'requirement'.
MAC	Message authentication code. Replaces the CRC used in telemetry C.
Mapping	The process of selecting a clear communication channel. Used interchangeably with channel mapping.
Master	The station which sends the first (wakeup or protocol) packet. The master sends request packets. The slave sends response packets. For example, a master sends an 8K memory read request (using about 20 bytes). A slave responds with 8K bytes using multiple response packets.
master message	One or more master transactions. The master's application fragments the message into one or more transactions.
master packet	Telemetry communication where the master is transmitting and the slave is receiving. The master is the station which initiated the communication (i.e., open request, etc.).

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ITEM	DEFINITION
Medical Event	A patient event which is communicated to an master. In this scenario the slave is allowed to talk first.
message	Upper layer data unit for transferring user data between two stations. A message is composed of a finite number of one or more Telemetry M packets.
mobile	A communication device that can be moved during operation. See the definition for portable.
ms	millisecond
MSB	Most Significant Bit
network	A collection of up to 8 stations which share a common network ID. A network facilitates efficient communication (i.e., broadcast).
network coordinator	A network node whose ID used as the local network's ID.
network ID	The network coordinator's ID. Shared among the network nodes.
Octet	Synonym for byte
OSI	Open Systems Interconnection
OSI Reference Model	A standard communication model consisting of Application, Presentation, Session, Transport, Network, Data Link and Physical layers.
packet	A group of binary digits including data and control elements which is switched and transmitted as a composite whole. The data and control elements and possibly error control information are arranged in a specified format. Within Telemetry M, the Data Link layer protocol data unit for transferring information between two stations.
Packet Error Rate	a ratio expressing the number of error packets detected over the total number of packets
Polling off	Polling request with a duration of zero
Polling on	Polling request with a non-zero duration
portable	A communication device that can be moved from location to location, but is only used while at a fixed location.
programmer	External Medtronic product capable being a master or slave using Telemetry M. It can communicate with an implanted device, sensor or another instrument.
protocol	A set of rules governing the format and meaning of the frames, packets or messages that are exchanged by the peer entities within a layer. Entities use protocols to implement their service definitions.
Receive ready	The application version of acknowledgment. Used in the slave to notify the master that processing of the message has completed and that another message can be sent.
receptor	See wakeup-receptor
requirement	A singularly stated, traceable condition stated in terms that are unambiguous, measurable and testable. In this document, our convention for requirement tags takes this form: <b>TLMC_M_nnn, TLMC_S_nnn or TLMC_MS_nnn,</b> where <b>M</b> = Master; <b>S</b> = Slave; and <b>MS</b> = pertains to both.
RF	Radio Frequency
RH	Only radiation hardened (RH ) always on (3V) registers are immune to ionizing radiation at the energy levels of concern.
RSSI	Received Signal Strength Indication

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ITEM	DEFINITION
Rx	Receive
S <sub>nnn</sub>	see entry below for (slave) ‘requirement’.
same channel	see <b>5.3.3 (Channel Recovery)</b> .
scan	listen to different channels in succession. This term pertains only to the slave, not the master; for details, see <b>2. (A master provides the Total Polling Duration Time as part of open master packet.)</b> .
SCR	Same Channel Recovery; see <b>5.3.3.1 (Requirements)</b> .
security	The security feature provides for privacy, integrity, freshness, and authenticity.
service	A set of primitives (operations) that Telemetry M provides to the upper layer. The service defines what operations Telemetry M is prepared to perform on behalf of its users, but it says nothing at all on how these operations are implemented.
Service duration timeout	A service duration timeout occurs when the data link task is not able to complete an external service in time. The time duration is a parameter of the external service request. The data link task notifies the upper layer task that a timeout occurred. Used interchangeably with external service duration timeout.
service region	the multi-dimensional space time extent within which Telemetry M stations may communicate
Service request	A service request may be an external service request (discover, open, etc.). The Upper Layer sends external service request messages to the Data Link Layer. A service request may be an internal service request (ARQ, mapping, etc.).
Service response	A service response may be an external service request (discover, open, etc.). The Data Link Layer sends external service response messages to the upper layer. A service response may be an internal service request (mapping, etc.).
session	a state where point to point communication between a specific master and slave has been established and is being maintained by closed loop communication between the two stations
Slave	The station which receives the first (wakeup or protocol) packet. The master sends request packets. The slave receives the request packet and sends response packet(s) in return. For example, a master sends an 8K memory read request (using about 20 bytes). A slave responds with 8K bytes using multiple response packets.
slave packet	Telemetry communication where the slave is transmitting and the master is receiving
slave message	One or more slave data indications. The master’s application assembles the slave data indications into an slave message.
sniff interval	The period that a station sniffs for wakeup transmissions. A trade-off exists: a short sniff interval consumes more current but is very responsive; a long sniff interval consumes less current but is less responsive.
SNR	Signal to Noise Ratio
Source station	The station where a packet originated. For master packets the master is the source station. For slave packets the slave is the source station. Also see destination station.
SR-ARQ	Selective Repeat ARQ algorithm
Standby	A data link state. Also, an application term for waveform disable (see waveform disable).



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ITEM	DEFINITION
station	A generic reference to any Medtronic product that is Telemetry M compliant. When no distinction is necessary, 'station' is used to refer to either the master or the slave. (Accordingly, a 'local station/remote station' pair might refer <i>either</i> to an 'master/slave' configuration <i>or</i> to an 'master/slave' configuration; see the text that accompanies <b>Fig. 20 (Service Request Response Primitives).</b> )
station (FCC definition)	One or more transmitters or receivers or a combination of transmitters and receivers, including the accessory equipment, necessary at one location for carrying on a radio communication service or radio astronomy service.
Station ID	The station ID is a 6 byte identification which uniquely identifies a Telemetry M device.
Station name	The station name consists of the following five fields: 1. Station serial number (null terminated ASCII text) 2. Station name (null terminated ASCII text) 3. Station Medtronic/Vitatron (16 bit) 4. Station status (optional) 5. Application specific information (optional)
station services	the set of services which support Telemetry M communications
Supplemental marker (slave transaction)	Communicates the slave's therapy status on a cycle by cycle basis. Also referred to as unrequested (slave) data.
TDD	<b>TDD</b> - Time Division Duplex - Communication system designation which uses time to separate master and slave communications.
Telemetry System M	formal name for 'Telemetry M' or 'Telemetry M system' or 'System M'
<b>TLMC</b>	A requirement ported from telemetry C. A singularly stated, traceable condition stated in terms that are unambiguous, measurable and testable. In this document, our convention for requirement tags takes this form: <b>TLMC_M_nnn, TLMC_S_nnn or TLMC_MS_nnn,</b> where <b>M</b> = Master; <b>S</b> = Slave; and <b>MS</b> = pertains to both.
<b>TLMM</b>	A requirement for telemetry M. A singularly stated, traceable condition stated in terms that are unambiguous, measurable and testable. In this document, our convention for requirement tags takes this form: <b>TLMM_M_nnn, TLMM_S_nnn or TLMM_MS_nnn,</b> where <b>M</b> = Master; <b>S</b> = Slave; and <b>MS</b> = pertains to both.
transaction	roughly synonymous with 'a Data service request'; for details, see <b>5.2.11.4 (MASTER DATA).</b>
transaction (master)	One to 16 fragments (master packets) comprise a master transaction. The maximum transaction size is 480 bytes (since the master content size is fixed at 30 bytes). Transactions are used for Memory Data (read device memory or write device memory).
transaction (slave)	One to 16 fragments (slave packets) comprise an slave transaction. The maximum transaction size is 480 bytes (since the slave content size is fixed at 30 bytes). Transactions are used for slave (memory) data, slave unrequested data, and slave discover name. Used interchangeably with indication.
Tx	Transmit
UCR	Unspecified Channel Recovery

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ITEM	DEFINITION
ULH byte/ upper layer header byte	A byte added to each transaction (by the source station). A byte checked (and removed) from each transaction (by the destination station). The byte contains the type (Data or Emergency). It also contains the reset bit and final bit (final transaction of a multi-transaction message, or transaction other than the final one). The terms 'ULH byte' and 'Upper layer header byte' are used interchangeably.
Unrequested indication	A message from the Data Link Layer to the Upper Layer. This message contains up to 480 bytes of unrequested data (one to 16 fragments (packets)). Used interchangeably with unrequested transaction.
Unrequested (slave) data	Communicates the slave's therapy status on a cycle by cycle basis. Also referred to as a supplemental marker.
upper layer	generic reference to the protocol stack layer(s) above the Data Link Layer; in this document, the term is used interchangeably with 'application'.
us	microsecond (in this document, we do not use the abbreviation 'µs')
user data	Information generated and used by upper layer or layers outside of the Telemetry M protocol. Telemetry M simply transfers user data between stations without comprehension of user data contents.
wakeup	A method of causing a station to go from a very low current state to a higher current state so native mode telemetry operations can occur.
wakeup-instigator	The station transmitting the wakeup pattern.
wakeup-receptor	The station receiving the wakeup pattern.
waveform data	Real-time data generated on the slave device and transmitted to the master. Real-time data and waveform data are synonymous in this document.
waveform interval	fixed time interval at which slave waveform packets are transmitted
wireless medium	the medium used to convey Telemetry M communications

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## 2.0 GENERAL DESCRIPTION

Telemetry M is a headless RF telemetry system that provides high speed, long range, bidirectional communications between any two nodes (i.e., implanted device and external instrument). Telemetry M differentiates itself from earlier Medtronic telemetry systems with the following features:

1. Wireless wakeup
2. Networking
3. Increased data rate
4. Forward error correction
5. Security

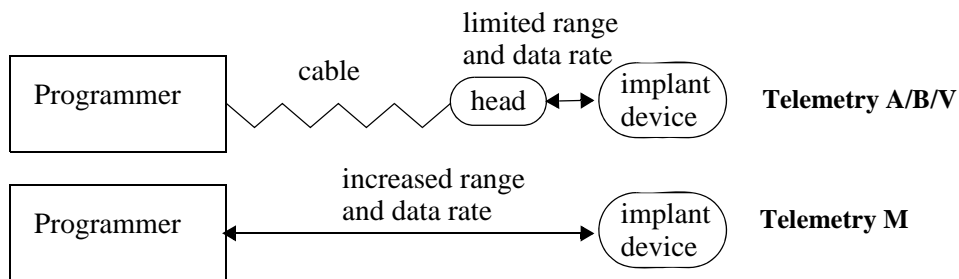
## 2.1 OVERVIEW

There are multiple ways to view Telemetry M. These different views provide understanding and insight into the system and its features.

### 2.1.1 MEDTRONIC VIEW

Telemetry M is designed to operate with Medtronic products: implanted devices, external instruments and sensors. The implant device is designed for implant within a human body and provides medical diagnostic or therapeutic functions. The instrument resides outside the human body. The instrument typically provides a user interface, allowing the user to communicate and interact with an implant device. A sensor may be internal or external. It may provide data to the implanted device for therapy.

Earlier Medtronic telemetry systems such as A/B/V require a programming head connected to an instrument to communicate at low data rates with one implant device. Telemetry M eliminates the programming head, increasing the range and data rate. **Figure 1** illustrates this view.



**Figure 1: Medtronic Telemetry**

An operator using a programming head with a short range telemetry system easily concludes that a specific programming head is communicating with a specific implant device. The programming head provides a tangible mechanism helping the operator control and verify the communication between a specific instrument and a specific implant device. Telemetry M uses other techniques to initiate and maintain communications between a specific instrument and implant device.

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Medtronic has different product combinations and use models requiring telemetry. These use models include:

- External instrument and implanted device
- Implanted device and sensor
- External instrument and sensor
- External instrument and external instrument
- Implanted device and implanted device
- Sensor and sensor

From a user's perspective, each model appears to have more differences than similarities in usage, operation and data exchange. Telemetry M is designed such that the telemetry operations of each model are very similar. Where differences exist, Telemetry M provides additional features to support the requirements of the particular use model.

### 2.1.2 WIRELESS VIEW

A significant industry and body of knowledge exists for wireless RF communication systems. The wireless industry uses its own standard terminology to describe system components, concepts and behaviors. This section uses the terminology of the wireless industry to provide a wireless view of Telemetry M.

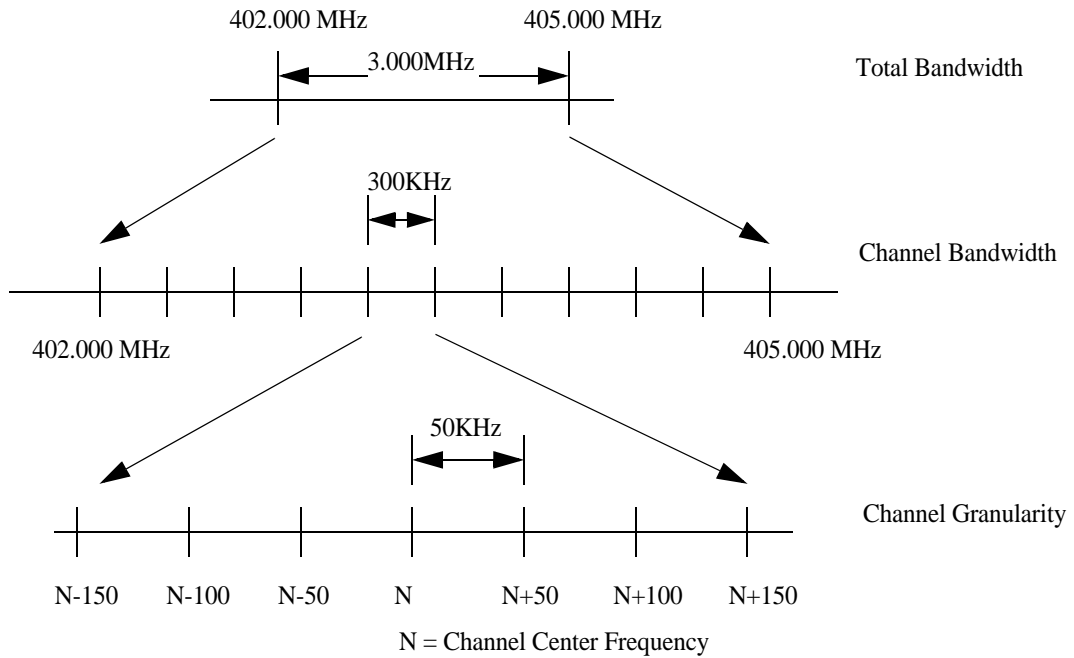
Telemetry M is an ad hoc, FDMA/TDD telemetry system operating as a secondary user in the regulated frequency spectrum between 402 and 405MHz (MICS). Telemetry M also has a MEDS band (401-402 MHz and 405-406 MHz).

Telemetry M communicates in the frequency range of 401.000MHz to 406.000MHz. This range of frequencies is a regulated spectrum which Telemetry M shares with other users of that spectrum. Competent authorities and regulatory agencies have extensively analyzed and reviewed this spectrum, the primary users, and Medtronic's proposals to share this spectrum for medical implant communications. The outcome of this extensive effort is that Telemetry M has received nearly world-wide approval to operate as a secondary user in this spectrum.

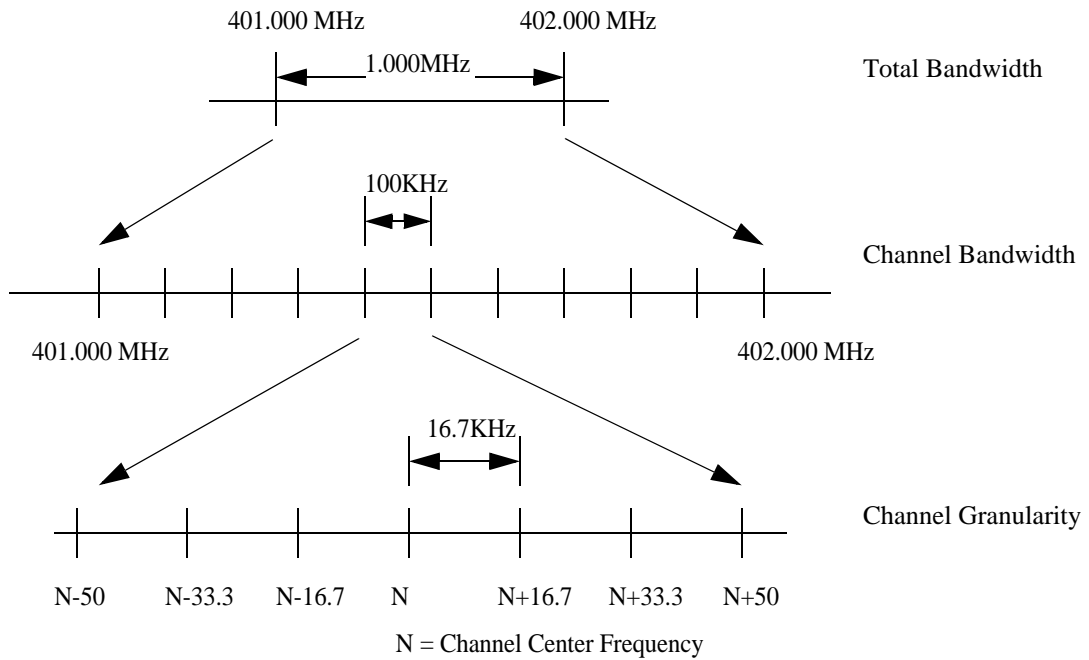
As a secondary user, Telemetry M must not interfere with the primary users of the spectrum. Other regulatory requirements such as transmit power, receiver sensitivity, channel width, Listen Before Talk, etc. impact the design, operation and behavior of Telemetry M. Refer to the specifications listed in **1.3 Applicable Documents**.

**Figure 2** illustrates the relationships of Telemetry M frequency spectrum, channel bandwidth, and channel granularity.

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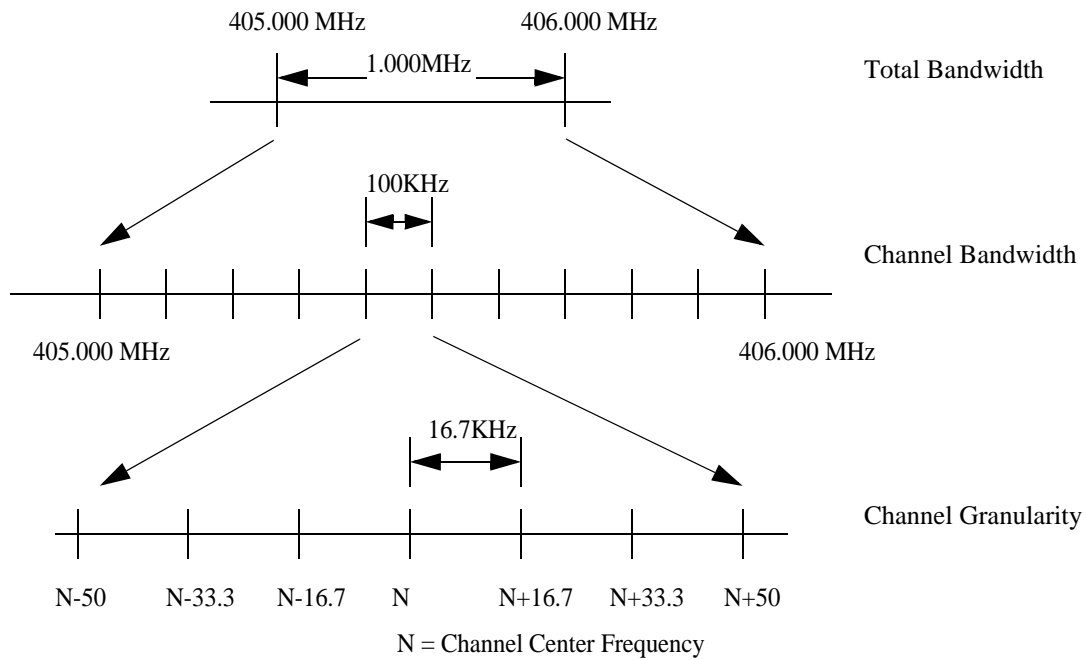


**Figure 2: Telemetry M Frequency Relationships (MICS)**



**Figure 3: Telemetry M Frequency Relationships (MEDS lower)**

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**Figure 4: Telemetry M Frequency Relationships (MEDS upper)**

A Telemetry M channel consists of a predetermined center frequency with a specified bandwidth on either side of the center frequency. Multiple channels coexist within the overall total bandwidth of Telemetry M. There are many factors associated with the determination and specification of Telemetry M channels. This information resides in **Medtronic Document A34639 (Telemetry M Design Input Source Document)** and **Medtronic Document 123970 (Mozart Programmer's Manual)**. From the perspective of the Telemetry M communication protocol, it is sufficient to state that Telemetry M has a finite set of communication channels.

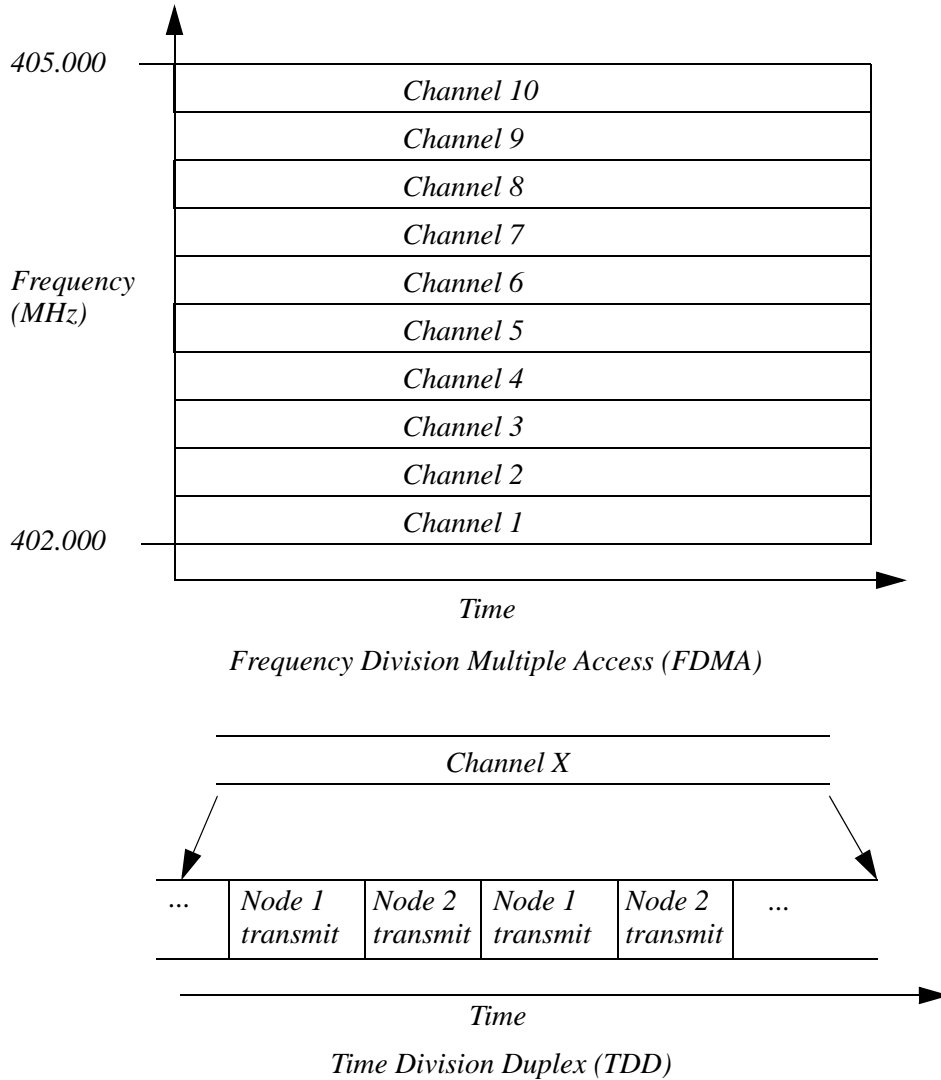
Telemetry M channels have dynamic signal levels. A channel that is available at one location may not be available at another location. In a similar manner, channel availability can change over time. A channel that was available today for a particular location may not be available tomorrow at the same location. Telemetry M provides the algorithms for a node to measure the channel signal levels and determine channel availability.

Frequency Division Multiple Access (FDMA) provides separate RF communication channels. Both instrument and implant device must be on the same channel to communicate with each other. Instrument and implant devices on different channels cannot communicate with each other. Channels are occupied on demand by two nodes. A channel is freed when the two nodes terminate their communications. Time Division Duplexing (TDD) allows bidirectional communication over a single radio channel through time sharing. Time is separately allocated for master communications and slave communications.

Ad hoc networking allows Telemetry M communications to be established in a spontaneous manner that is limited in time and space. A pre-existing or permanent communication infrastructure is not required. By definition, setup, use and termination of an ad hoc network must be sufficiently straightforward and convenient enough to be accomplished by non-technical users.

**Figure 5** illustrates FDMA and TDD. (For a channel scan example, see **Figure 5**.)

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**Figure 5: Depictions of FDMA and TDD in Telemetry M (MICS)**

Telemetry M channels are not preallocated. Wireless systems such as pagers or cellular telephones preallocate one or more channels for specific purposes. These systems have the advantages of established locations and infrastructure which allow resources like channels, antenna towers, electronic equipment, etc. to be preallocated or dedicated. In addition cellular telephone systems are more sophisticated and have higher authorities such as telephone companies which can manage and control channel and equipment usage and coverage. Telemetry M does not have these advantages.

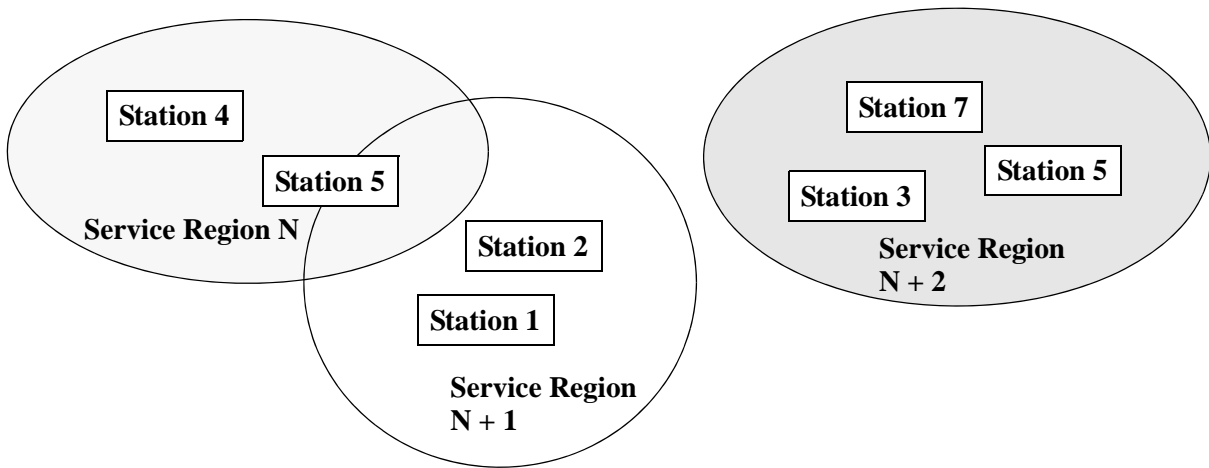
By definition, each instrument, implant device or sensor containing Telemetry M is a 'station'. A Telemetry M station transmits and receives to exchange information with other Telemetry M stations. When no distinction is needed, 'station' refers to either instrument, implant device or sensor.

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Telemetry M stations use a finite set of services to provide Telemetry M communication operations. Services help provide a well-known interface by which Telemetry M users control certain Telemetry M operations. Users invoke Telemetry M services to establish communications, transfer data and terminate communications between Telemetry M stations.

Telemetry M stations communicate over a finite distance, also known as range. Two stations within a common communication range can communicate with each other. If both stations are outside of a common communication range, they cannot communicate with each other. Range is multi-dimensional with three spatial dimensions and one time dimension. Two stations must share a common extent of space and time before communications can be established. This common extent of space and time is called a service region.

Well defined service regions rarely exist for wireless communication systems. Propagation characteristics of RF signals are dynamic and difficult to predict. Small changes in position or direction may result in significant changes in signal strength. Similar effects occur whether a station is mobile or stationary. Moving objects near a station can impact RF signal propagation characteristics. **Figure 6** illustrates a simple two dimensional view of service regions. Though the illustration has sharp boundaries for service regions, this is an artifact of the pictorial representation, not a physical reality.



**Figure 6: Telemetry M Service Region Example**

In this illustration, several stations and their associated service regions are depicted. Service regions can overlap or be disjoint. Service region overlap can occur such that a station may reside in two or more service regions. This overlap can lead to a hidden station problem. For example, assume Station 5 is communicating with Station 4. Stations 1 and 2 may be able to detect Station 5 communications; however, they may not be able to detect Station 4 communications.

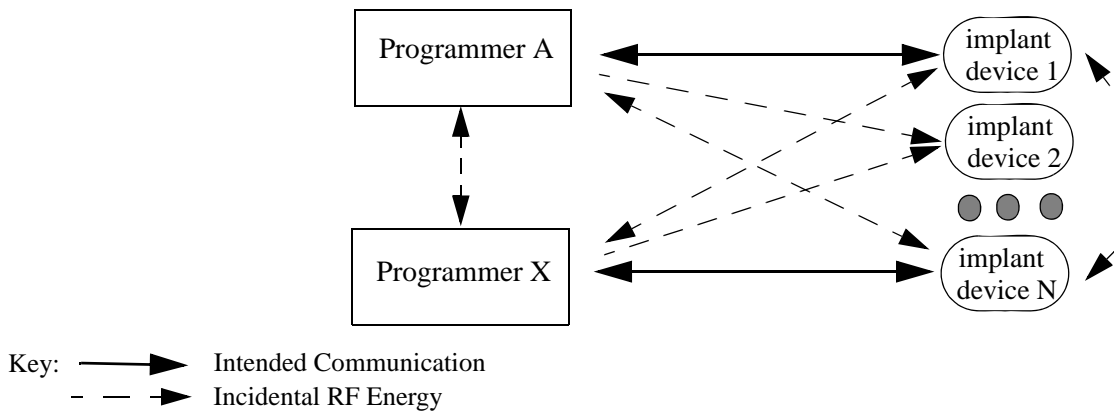
Interference sources are another important challenge in wireless RF communication systems. These are electromagnetic signal sources which can interfere with wireless communications. Examples include: other communication systems, electric or electronic equipment, light switches, natural phenomenon, etc. In the time domain, interference sources can be of short duration or long duration affecting single bits or spanning multiple packets. In the frequency domain, interference sources can affect one channel, i.e. narrow band or all channels, i.e. broadband. Interference sources are not



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readily apparent to the casual observer. Special equipment and techniques are required to detect interference sources. Interference sources are not always present, nor may they always interfere with wireless communications. However, when they do exist, interference sources can impact wireless communications.

**Figure 7** illustrates how established Telemetry M communication links may radiate RF energy towards other Telemetry M programmers and implants. In this example, Programmer A communicates with implant device 1 and Programmer X communicates with implant device N. Implant device 1 may receive incidental RF energy from Programmer X or implant device N, depending on the range, channel selection, signal levels, timing, etc. Other stations may receive similar examples of incidental RF energy. Telemetry M uses a number of known and proprietary wireless communication design techniques in the Physical and Data Link layers to reduce the effects of interference and incidental radiation techniques. Channelization, station identification, packet retransmission, etc. are some of the techniques used by the Data Link layer of the communication protocol and discussed later in this document. Reference the corresponding Telemetry M documentation (in 1.3) to learn the design details of the physical layer components of the antenna, RF hardware and baseband hardware.



**Figure 7: Incidental RF Energy Example**

Fades are an important challenge for Telemetry M. By definition, a fade is the variation of radio field strength caused by changes in the transmission path. The effect of a fade is the loss of communication signals and data. Fades can impact both hardware and software operations. Fades have a number of important dynamic characteristics such as strength, duration, rate, etc. Telemetry M uses several proprietary techniques to reduce the effect of fades.

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### 3.0 TELEMETRY SYSTEM M OVERVIEW

#### 3.1 TELEMETRY SYSTEM M GOALS

There are number of performance goals for the Telemetry M system. In general the goals are:

- Provide a standard communication module for all Medtronic products,
- Increased communication range,
- Ease-of-use,
- Higher data rate with respect to Telemetry A, B, and C
- Develop a modular system which will minimize changes for the Application layer.

The following rules are used to achieve the goals stated above:

A standard telemetry module is produced. This has the analog, digital and firmware on one chip. The module may be instantiated as an implanted device, external instrument, or sensor.

#### 3.2 LAYERED MODEL

To simplify definition and implementation, Telemetry System M has been broken down into layers which are modeled on the international Open System Interconnect (OSI) reference model.

The partitioning has been done to follow as closely as possible the OSI definitions for the lowest layers of the standard model. However, the model has been adapted to our specific data needs.

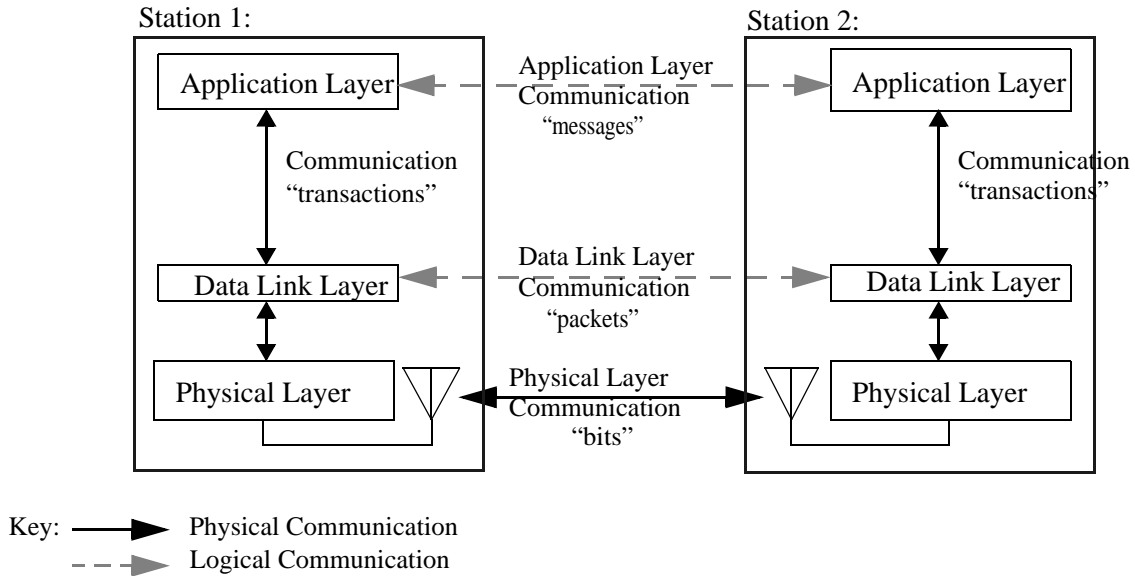
- Each layer performs a well-defined function.
- The layer boundaries are chosen to minimize information flow across the interfaces.

The System M telemetry communication protocol is divided into four distinct communication layers:

- **The Physical Layer:** specifies the characteristics of the physical link. This includes: *physical signal transmission and reception, wakeup, antenna selection and control, communication channel selection and control, and communication timing.*
- **The Data Link Layer:** deals primarily with data encoding and decoding. This includes: *transmission between packets and messages, bit-level encoding, channel management and security, error detection and correction, and reliable data transmission/retransmission.*
- **The Application Layer:** defines the content of the transmitted message. This includes: *communication of application messages (request and response), Memory read processing, Memory write processing, and Application specific special commands processing.*

#### 3.3 DATA FLOW BETWEEN LAYERS

Information flow between layers is an important concept to understand. Simply stated, information physically flows between adjacent vertical layers and logically flows between horizontal peer layers. Taking a closer look, data bridges the physical layer in a U-shape (dark arrows in **Figure 8**), and information is mirrored accordingly, in the three upper layers (pale dashed arrows in **Figure 8**). The vertical flow of information between layers represents services between adjacent layers of the protocol stack. The horizontal layers represent a notional flow of information between peer layers on separate products. Only the peer physical layers directly communicate with each other via RF communication signals. All other peer to peer communications represents a logical flow of information.

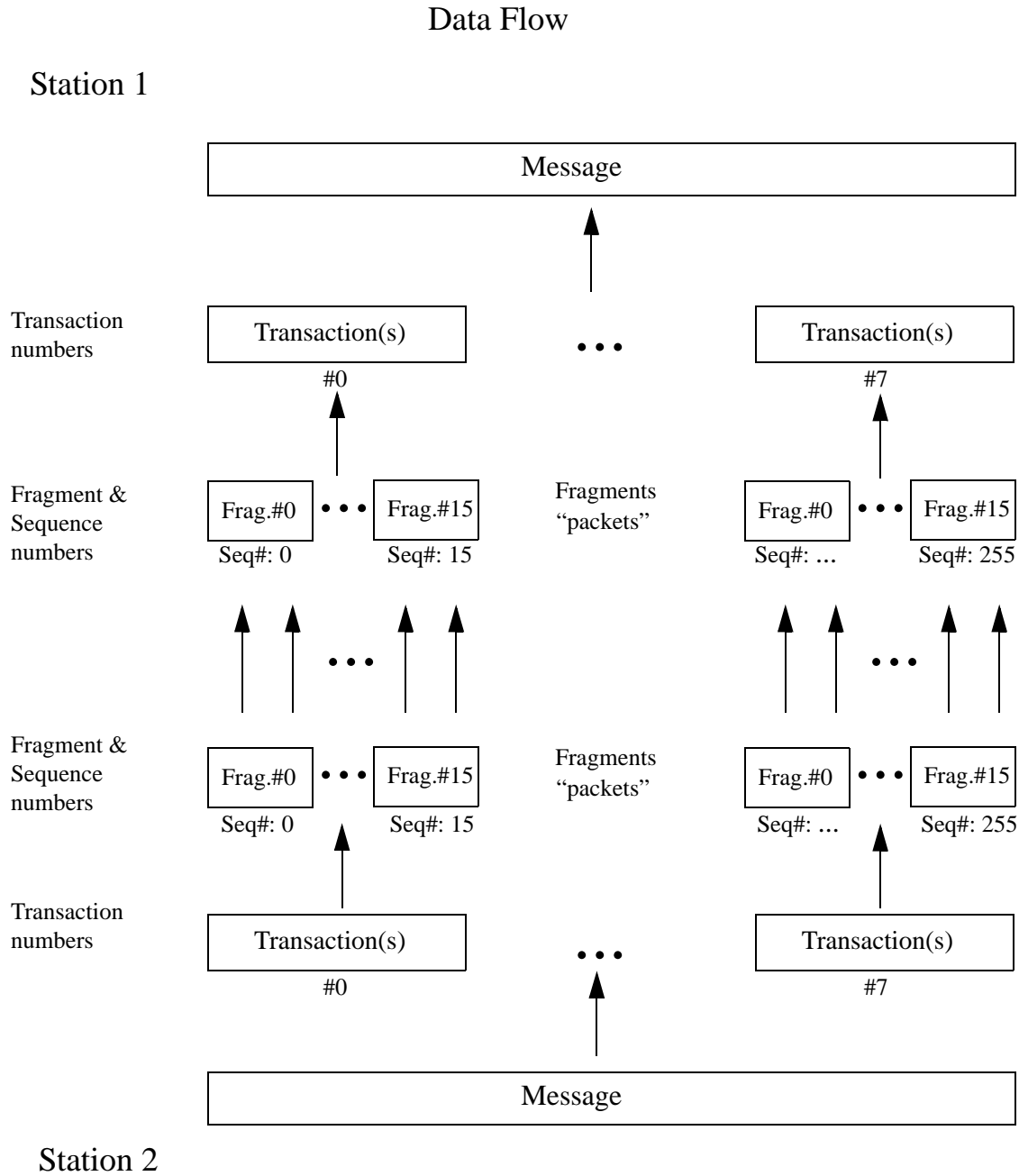


**Figure 8: Layer Communications**

Information originates in a particular layer or arrives from a higher layer. As information flows through lower layers of the system it is encapsulated as required by each lower layer to ensure proper recovery at the destination peer layer. Data originating in a particular layer normally transfers to the peer layer at the destination.

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Figure 9 shows the data flow between two stations.

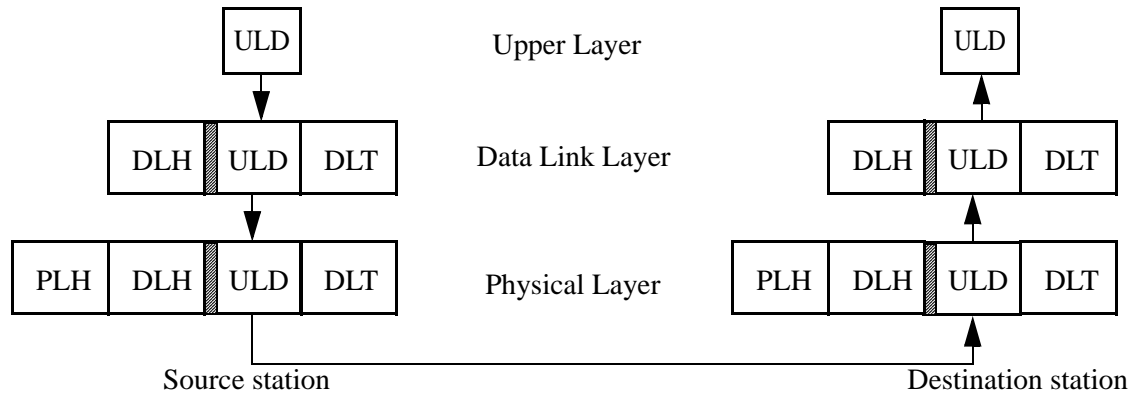


\* Sequence numbers are used for the memory data ARQ algorithm.

Figure 9: Data Flow Between Two Stations

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**Figure 10** illustrates application layer data encapsulation as it flows through the data link and physical layers of the source station. On the source station each layer adds their respective header and trailer information. At the destination station, the peer layers remove their respective headers and trailers as the information flows to the application layer. (See also **Figure 20**.)



Key:

- ULD Upper Layer Data
- DLH Data Link Layer Header
- PLH Physical Layer Header
- DLT Data Link Layer Trailer
- Upper Layer Header (ULH) byte

**Figure 10: Upper Layer Data Encapsulation**

### 3.4 TELEMETRY M OVERVIEW

Telemetry M provides a finite set of services which define specific operations related to Telemetry M communications. These services are partitioned into external and internal services. External services are invoked by the application layer, causing Telemetry M to perform specific operations on behalf of the application layer. Internal services are invoked within Telemetry M to support Telemetry M operations.

**External services:** allow the application layer to perform the following operations:

- Enable and disable Telemetry M using the **Initialize** and **Shutdown** services.
- Establish and terminate communications using the **Discover**, **Polling**, **Open** and **Close** services.
- Transfer user memory data using the **Data** or **Emergency** service. Real-time data transfer is setup via the **Open** service or the **Medical Event** service.
- Transfer a small amount of data using the **Network** service. This service does not require a two way session (open packet exchange).
- Link information using the **Diagnostic** service.
- Provide for privacy, integrity, freshness and authenticity using the **Security** service.
- Manage peak current constraints (or charging interference) using the **Power Inhibit** service.

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**Internal services:** allow Telemetry M to perform the following operations:

- ARQ Algorithms
- Channel Mapping
- Channel Recovery
- Data Transfer Modes
- Memory Test
- Reset
- Tune and Trim
- Wakeup

These external and internal services work together to:

- support request and response communication between two stations (nodes)
- provide high level control of Telemetry M communication operations
- simplify user data transfer operations
- provide transparent communication maintenance and error handling operations

3.4.1 OPERATIONAL EXAMPLE

The following example provides a high level description of Telemetry M operation using an instrument and implant device.

On the instrument, Telemetry M is activated via the application layer. The associated event may originate from various user interface sources. For example, when the instrument is powered up or via a specific user interface action by an operator. Eventually, Telemetry M is commanded to begin communications. Telemetry M selects the best available channel and transmits wakeup packets followed by discover transmissions to determine what implants are available for communications.

On the implant device, Telemetry M is activated via a wakeup transmission from the instrument. After initialization, Telemetry M listens on the channel specified in the wakeup packet. If Telemetry M detects the correct request, it responds with its station identification information.

On the instrument, Telemetry M collects information from the responding implant device(s) and presents this information to the application layer. The M interface layer passes this information up the protocol stack to the appropriate user interface for display to the operator. The operator selects the desired implant device and passes this information back to the application layer which commands Telemetry M to establish communications with the specific implant device. Telemetry M then transmits specific requests containing both the instrument station ID and the implant device station ID to establish communications with the specific implant device.

On the implant device, Telemetry M continues scanning its channels listening for instrument requests. When the implant device receives the specific request containing its station ID, the implant verifies the contents and responds to the specific instrument with both station ID's. The use of station ID's allows other programmers or implants detecting these communications to reject them as errors. The correct instrument verifies the implant device response and establishes communications with the specific implant device. At this point, one-to-one communications are established between the specific instrument and the specific implant device.

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After communications are established between the instrument and implant device, user data can be transferred between the two stations. Link management, error handling, and channel management are automatically provided by Telemetry M without intervention from the application layer. When no significant data transfer is needed, Telemetry M optimizes the communications to save implant device energy. As needed, the instrument and implant change channels to avoid interference sources and maintain communications.

When communication between instrument and implant device is no longer desired, the instrument operator closes the communications. This command is propagated down to the implant's application layer which commands Telemetry M to close communications. The instrument transmits this command to the implant device. Both Telemetry M stations close their communications and terminate their respective telemetry operations. On the implant device, the application layer may power down Telemetry M to save energy. On the instrument, Telemetry M enters a standby state from which the application layer can command Telemetry M to start another communications or shutdown.

In this example, simple operations allow the application layers of the instrument and implant to use Telemetry M to establish communications, transfer data and terminate communications. Telemetry M handles all the communication specific details between two Telemetry M stations. Telemetry M frees the application layer from the burden of communication specific details.

**3.4.2 OPERATIONAL EXAMPLE (MEDICAL EVENT - HOME MONITOR)**

The following example provides a high level description of Telemetry M operation using a home monitor and implant device. A home monitor which supports Telemetry M may receive data from the implant via a Medical Event transmission.

When a medical event condition is detected by the implant (e.g., lead impedance out of range, therapies exhausted, etc.) then the implant initiates a session by transmitting its ID. In this model the home monitor continuously listens for an implant. When the home monitor hears from a desired implant a communication session is opened, once home monitor receives the appropriate data then session is closed.

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## 4.0 PHYSICAL LAYER

### 4.1 INITIALIZATION

The physical layer requires initialization when it is powered up or enabled. This initialization consists of writing parameters to various control registers. After initialization is complete, the physical layer is available for communication operations via the Data Link Layer.

### 4.2 CHANNEL FREQUENCIES

A finite number of communication channels are provided by the physical layer. These channels are spaced 300KHz apart, each around a center frequency. **Table 1** summarizes the different communication frequencies provided by the physical layer. The Data Link Layer associates a channel number which each frequency.

**TABLE 1: MICS COMMUNICATION CHANNEL FREQUENCIES**

CHANNEL NUMBER	CENTER FREQUENCY (MHZ)	CHANNEL NUMBER	CENTER FREQUENCY (MHZ)
1	402.15	11	402.300
2	402.45	12	402.600
3	402.75	13	402.900
4	403.05	14	403.200
5	403.35	15	403.500
6	403.65	16	403.800
7	403.95	17	404.100
8	404.25	18	404.400
9	404.55	19	404.700
10	404.85		

**TABLE 2: LOWER MEDS COMMUNICATION CHANNEL FREQUENCIES**

CHANNEL NUMBER	CENTER FREQUENCY (MHZ)
1	401.05
2	401.15
3	401.25
4	401.35
5	401.45
6	401.55
7	401.65



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**TABLE 2: LOWER MEDS COMMUNICATION CHANNEL FREQUENCIES**

CHANNEL NUMBER	CENTER FREQUENCY (MHZ)
8	401.75
9	401.85
10	401.95

**TABLE 3: UPPER MEDS COMMUNICATION CHANNEL FREQUENCIES**

CHANNEL NUMBER	CENTER FREQUENCY (MHZ)
1	405.05
2	405.15
3	405.25
4	405.35
5	405.45
6	405.55
7	405.65
8	405.75
9	405.85
10	405.95

### 4.3 CHANNEL SELECTION

Channels provided by the physical layer are selected by the Data Link Layer. The Data Link Layer determines the desired channel and writes the corresponding physical layer parameters to the appropriate physical layer control registers.

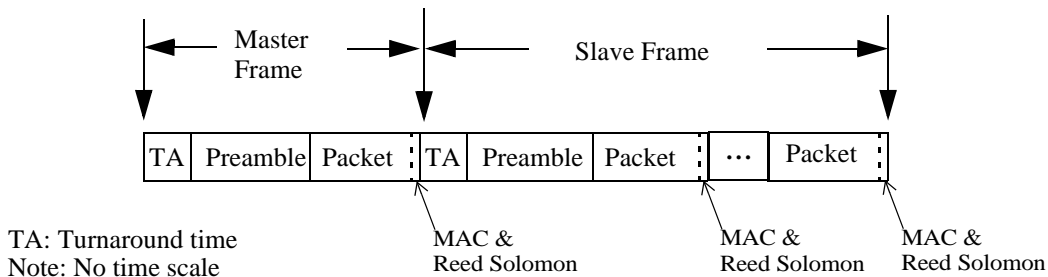
After the Data Link Layer has written the channel selection, a finite amount of time is needed for the physical layer to change to the desired frequency before communication can begin on the selected frequency.

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## 4.4 COMMUNICATION

### 4.4.1 FRAME

Time division duplexing is used to alternate between station 1 (master) and station 2 (slave) transmission. Each transmission contains information and timing entities that are encapsulated by a larger entity called a frame. **Figure 11** illustrates the major components of a frame.



**Figure 11: Telemetry M Frame**

All frames include the following components:

- **Turnaround Time:** A physical layer time for separating station 1 and station 2 transmissions. The Data Link Layer uses this time for communication operations setup, and for transitions between transmit and receive.
- **Preamble:** A physical layer sequence of bits providing bit and frame synchronization information. The physical layer uses the preamble for master and slave synchronization.
- **Packet, MAC and Reed Solomon:** A fixed size protocol data unit containing control, data and error protection information. One or more packet may be transmitted for either master or slave communications. A fixed number of bytes representing packet error detection information. The physical layer calculates and appends the MAC to each transmitted packet. On the receiving station, the physical layer calculates the MAC of the incoming packet, compares the calculated MAC with the received MAC value, removes the received MAC value while storing the packet in a receive buffer and provides a MAC good/bad indication to the Data Link Layer. The physical layer (at the transmitting station) performs Reed Solomon encoding on a packet before it is transmitted. Errors may occur during transmission (noise, interference, etc.). The Reed Solomon decoder (at the receiving station) processes the packet and attempts to recover the original data. If security is enabled, the data content of the packet will be encrypted or decrypted by the transmitter or receiver.

Master and slave frame sizes are determined by several factors including baud rate, turnaround time, preamble size, packet count, packet size, etc. The baud rate, turnaround time and preamble size are determined by the physical layer. The packet count and packet size are determined by the Data Link Layer. Together, these factors combine to determine the overall size of a master frame or slave frame. For examples, see **Figure 12**, **Figure 13**.

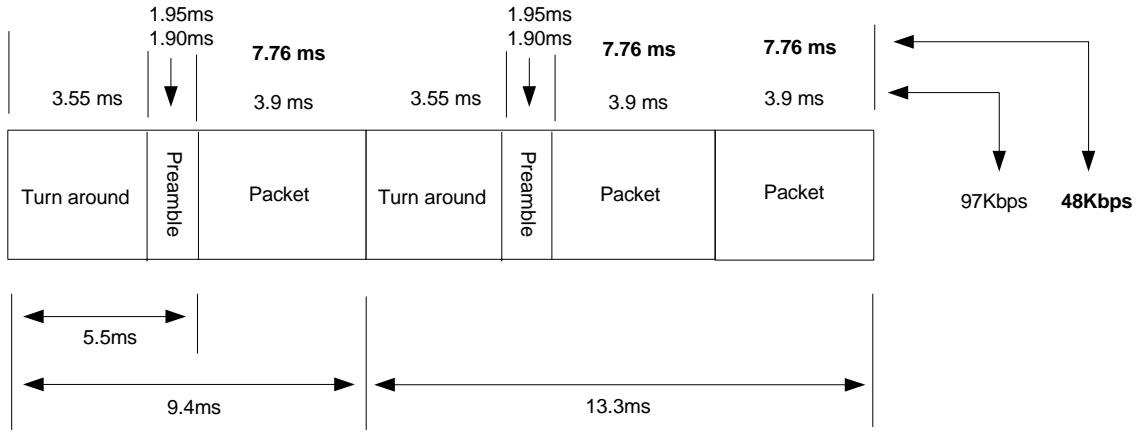


Figure 12: **Frame Timing (#Master Packet, #Slave Packets) = (1,2) Data Rate = 48Kbits/s OR 97Kbits/s**

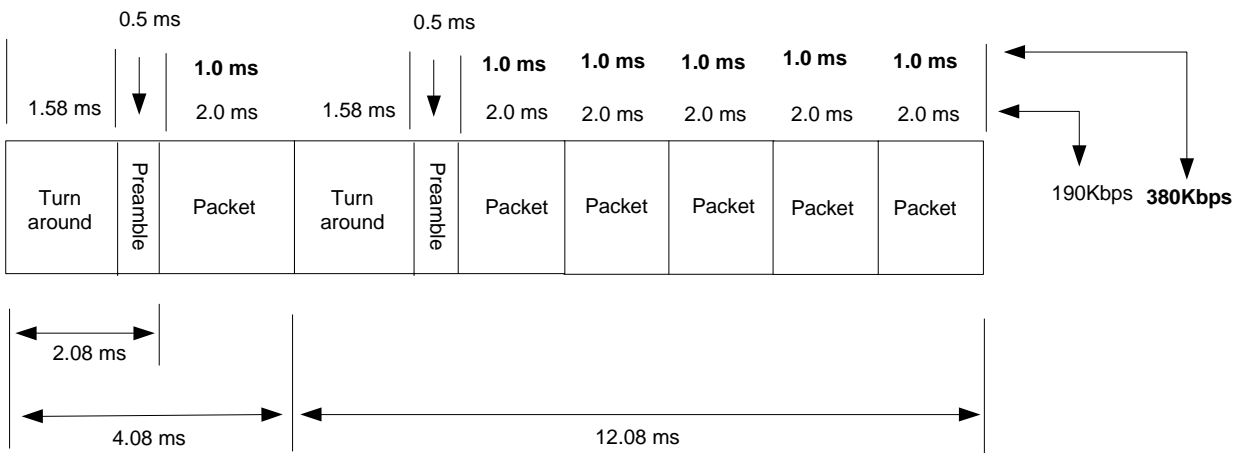


Figure 13: **Frame Timing (#Master Packet, #Slave Packets) = (1, 5) Data Rate = 190Kbits/s OR 380Kbps**

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To properly achieve data transfer between local and remote stations, the hardware from both stations needs to be synchronized for transmission and reception. The receiving station has to be listening for the transmitting station to have successful transmission. The Telemetry M hardware has different modes of operations to facilitate this synchronization necessary for successful data transmission and reception.

Three communication modes are provided by the system.

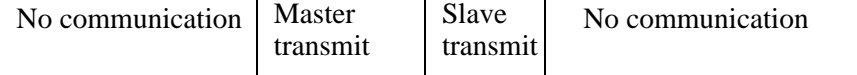
**Asynchronous Communication:** Managed by the Data Link Layer. This mode provides one master frame and one slave frame. The mode terminates after completion of the slave frame. The time for the master frame and slave frame transmission is fixed.

**One-to-one Synchronous Communication:** Managed by the Data Link Layer. This mode provides multiple pairs of master and slave frames. The first cycle of the one-to-one synchronous mode provides the capability to synchronize the master and slave so that their frame cycles are aligned.

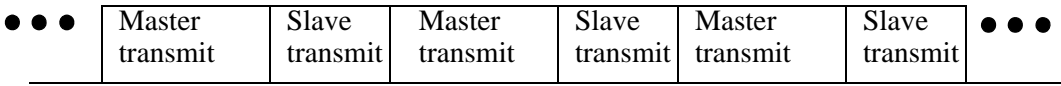
**One-to-N Synchronous Communication:** Managed by the Data Link Layer. This mode provides repeated cycles of one master frame and “N” slave frames. The first (transmit) cycle of the one-to-N synchronous mode provides the capability to synchronize the master and slaves so that their frame cycles are aligned.

**Figure 14** illustrates the asynchronous and synchronous communication modes.

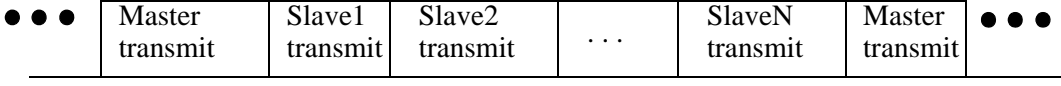
**Asynchronous Communication**



**One-to-one synchronous communication**



**One-to-N synchronous communication**



**Figure 14: Async and Sync Example**

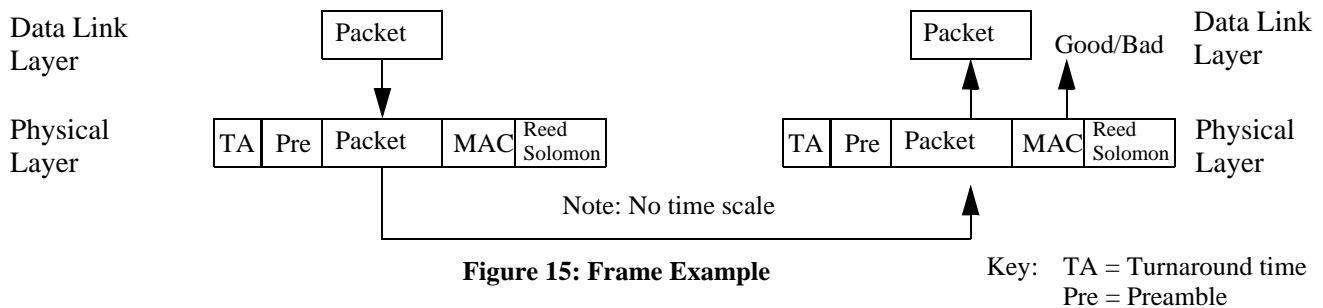
These modes are designed for different profiles of data transfer. The Asynchronous Mode or first cycle sync is used when establishing and reestablishing communications. Second cycle and beyond is used once the communication is established.

The external services create different profiles of data transfer. They need to use these hardware states correctly in order to successfully transfer data. The external services must be invoked by the upper layer in a correct progression in order to properly use these hardware states. The Data Link Layer provides this progression of the various states.

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**Figure 15** shows the major components of a frame. In this example:

1. A packet is generated by the Data Link Layer and passed to the Physical Layer.
2. The transmit frame begins with the turnaround time and preamble.
3. As the packet is transmitted, the MAC is calculated and the Reed Solomon code is attached and appended to the packet. If security is enabled, the data content of the packet will be encrypted by the transmitter.
4. The frame components are received by the Physical Layer of the destination station.
5. The preamble is removed, the packet received, Reed Solomon error detection/ correction is performed and the MAC result calculated by the Physical Layer. If security is enabled, the data content of the packet will be decrypted by the receiver.
6. The Physical Layer notifies the Data Link Layer for each received packet along with the MAC results.



If multiple packets are transmitted in a frame, the Data Link Layer builds each packet, and the physical layer calculates, transmits and receives MAC information for each packet. The physical layer notifies the Data Link Layer when each packet is received along with the MAC results of that packet.

#### 4.5 REED SOLOMON ERROR DETECTION AND CORRECTION

The physical layer (at the transmitting station) performs Reed Solomon encoding on a packet before it is transmitted. Errors may occur during transmission (noise, interference, etc.). The Reed Solomon decoder (at the receiving station) processes the packet and attempts to recover the original data. The physical layer notifies the Data Link Layer when each packet is received along with the Reed Solomon result (Good or Bad) of that packet. If the error is corrected or there is no error, it means “Good”, otherwise it is “Bad”.

A Reed-Solomon codes RS(63,51) has been implemented in Telemetry M.

#### 4.6 MAC GENERATION AND DETECTION

The physical layer provides packet MAC (message authentication code) generation and detection. The Data Link Layer receives a good/bad MAC indication from the physical layer for each packet that is received.

#### 4.7 RSSI (RECEIVED SIGNAL STRENGTH INDICATION)

The physical layer on an instrument provides the capability to measure the received signal strength on a channel. The Data Link Layer uses this capability during channel mapping operations to determine channel availability.

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## 5.0 DATA LINK LAYER

The Data Link Layer section is divided into three sub-sections:

- Packet Formats (Master and Slave) [5.1]
- External Services [5.2]
- Internal Services [5.3].

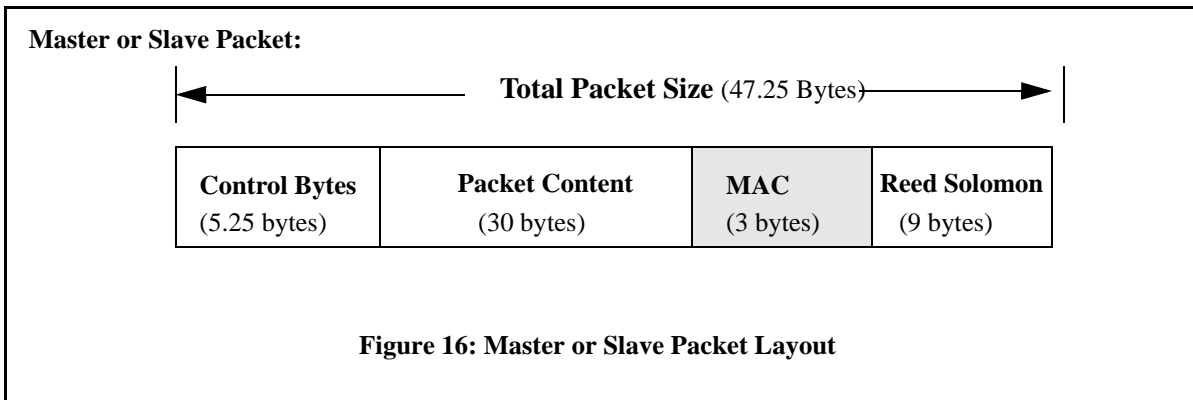
### 5.1 PACKET FORMATS

All the master and slave packets contain the following fields:

- **Control Bytes field:** Control information for all packets. This field is generated and processed by the Data Link Layer.
- **Packet Content field:** This contains either the User Data or the Telemetry M specific data. The User data is generated by application layer and transferred to the appropriate layer for processing. The Telemetry M specific data is generated and processed by the Data Link Layer.
- **MAC (message authentication code) field:** Error detection information. This field is generated and detected by the physical layer.
- **Reed Solomon field:** This contains information to detect/ correct errors.

The packet size is the number of bytes from the start of the control bytes field to the end of the Reed Solomon field.

A graphical representation of master and slave packet format is given in **Fig. 16 (Master or Slave Packet Layout)**.



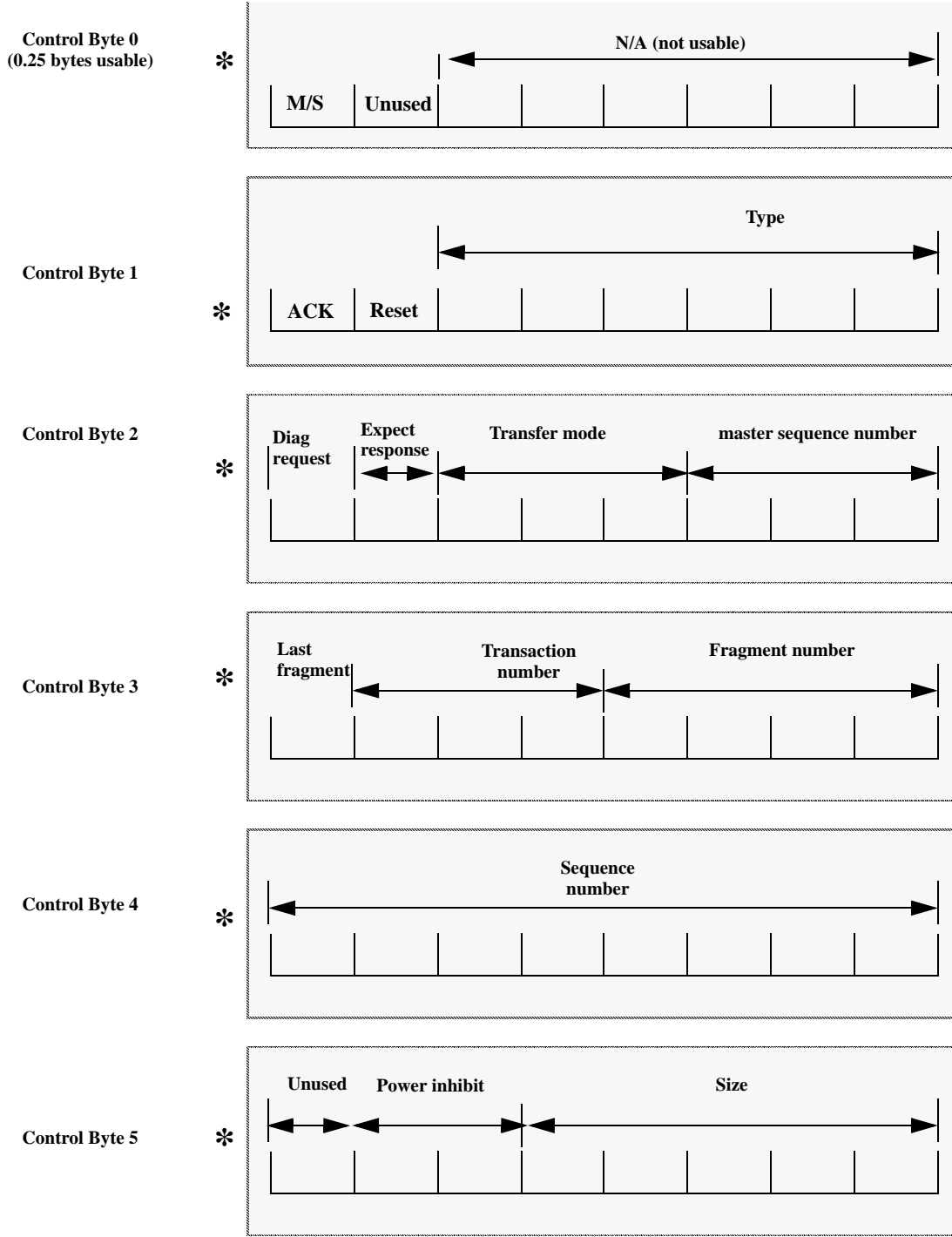
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### 5.1.1.1 PACKET CONTROL BYTES

There are five control bytes (and two bits) allocated for packets.

#### TLMC\_MS\_001 - PACKET CONTROL BYTES

Fig. 17 (Packet Control Bytes) defines the fields within the control bytes of a master packet.



\* The terms ACK, Reset, M/S (master/slave), etc. are defined in [5.1.2 Content Of Control Bytes](#).

Figure 17: Packet Control Bytes

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Service	PKT Type	M/S	Ack	Reset	PKT Type	Diag Req	Exp resp.	Xfer Mode	Mstr Seq #	LF	Trans #	Frag #	Seq Num	Power in h	Size
Discover Full	Discover ID	Y	Y	N	Y	N	N	N	N	N	N	N	N	Y	N
Discover Full	Discover Name	Y	Y	N	Y	N	N	N	N	N	Y	Y	N	Y	Y
Open	Open	Y	Y	N	Y	N	N	N	N	N	N	N	N	Y	N
Close	Close	Y	Y	N	Y	N	N	N	N	N	N	N	N	Y	N
ARQ	ARQ	Y	Y	N	Y	N	Y	N	N	N	N	N	N	Y	N
Diag	Diagnostic	Y	Y	N	Y	Y	N	Y	N	N	Y	Y	N	Y	N
Data	Data	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y
Data	Unrequested	Y	Y	Y	Y	N	N	Y	N	Y	Y	Y	Y	Y	Y
Data	Waveform	Y	Y	Y	Y	N	N	Y	N	Y	Y	Y	Y	Y	Y
Network	Network filler	Y	N	N	Y	N	Y	N	N	N	N	N	Y	Y	N
Network	Network data	Y	N	N	Y	N	Y	N	N	N	N	N	Y	Y	Y
Security	Security	Y	Y	N	Y	N	N	N	N	Y	Y	N	N	Y	N
Medical Evt	Medical Evt	Y	N	N	Y	N	N	N	N	N	N	N	N	Y	N

Key  
 Y - Entity used  
 N - Entity *not* used - a don't care

**Figure 18: Summary of Control Bytes**



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5.1.2 CONTENT OF CONTROL BYTES

5.1.2.1 ACKNOWLEDGE (ACK)

The ACK field provides acknowledgment information for the packet(s) of the previous frame. An ACK field with a value of 1 indicates that all the packets received from the previous frame have good MAC check. The value of 0 indicates at least one packet was received with bad MAC.

5.1.2.2 RESET/ RESET ACK

The RESET field is used by the master to instruct the slave to reset its communication parameters. A RESET field with a value of 1 in the master requests the slave to reset its communication parameters. A value of 0 indicates that this command is not active. The RESET ACK is used by the slave to acknowledge the master's reset request.

5.1.2.3 TRANSFER MODE (DATA XFER MODE)

The Transfer Mode field identifies the current transfer mode between communicating stations. This field is also used when a station initiates a change in transfer mode. Refer to Internal Services section for additional details on transfer mode.

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#### 5.1.2.4 PACKET TYPE

The Type field identifies the type of Telemetry M packet.

#### TLMC\_MS\_003 - PACKET TYPES

**Table 4 (PACKET TYPES)** defines the permissible types of Telemetry M packet.

**TABLE 4: PACKET TYPES**

PACKET TYPE	DIRECTION <sup>(1)</sup>	DESCRIPTION	VALUE <sup>(2)</sup>
Discover ID	M/S	Discover service	0x00
Discover name	M/S	Discover service	0x01
Open	M/S	Open service	0x02
Close	M/S	Close service	0x03
Diagnostic	M/S	Diagnostic operations	0x05
ARQ	M	ARQ operations	0x06
Medical event	S	Medical event service	0x07
Memory data	M/S	Data service	0x0A
Unrequested data	S	Data service	0x0C
Waveform data	S	Data service	0x0E
Spare	M/S	Unused (Reserved for Tel M)	0x10
Network data	M/S	Network service	0x11
Network filler	S	Network service	0x12
Security - proximity security	M/S	Security service	0x13
Security - request key	M/S	Security service	0x14

1. M = Master, and S = Slave. Also see the control field "source of packet is master/slave".
2. Most of the "unused" values are used by telemetry C. For example, a value of 0x0B is a "memory data with size" packet for telemetry C.

#### 5.1.2.5 LAST FRAGMENT (LF)

Zero (0) indicates there are more packets for this transaction. One (1) indicates this packet is the last packet of this transaction.

#### 5.1.2.6 SIZE (COMMON)

The Size field is used to indicate the number of bytes of user data in the packet content field. It is present for the packet types memory data, unrequested data, waveform data, discover name, and network data. The size ranges from one (1) byte up to the (maximum Packet Content size bytes). Specifically, the size of a packet ranges from 1 to 30 bytes.

#### 5.1.2.7 TRANSACTION NUMBER

The Transaction field identifies the transaction number of an (fragment) packet. All the (fragment) packets resulting from one external service request are of the same transaction and have the same transaction number.

#### 5.1.2.8 FRAGMENT NUMBER

The Fragment field identifies the fragment number of a particular packet within an transaction. The fragment number is used to assemble the packets back into one transaction.

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### 5.1.2.9 SEQUENCE NUMBER

The Sequence Number field contains the sequence number for the packet. The eight (8) bit sequence number has a range between zero to 255.

For slave transmitted packet, there are 3 sets of sequence numbers. They are used by the following packet types during communication session:

- Memory Data
- Unrequested Data
- Waveform Data

Each packet is uniquely identified by the sequence number within its packet type.

For master transmitted packet, it is used to indicate the expected waveform sequence number during communication session.

For network data request packet, sequence number is "0" all the time. The slave will ignore network data request packets with any other sequence number.

For network data and network filler response packet, sequence number is "0" all the time.

### 5.1.2.10 MASTER/SLAVE (M/S) - SOURCE OF PACKET

The source field is set to one if the master is the sender (source) of the packet. This type of packet is also known as a request packet.

The source field is set to zero if the slave is the sender (source) of the packet. This type of packet is also known as a response packet.

### 5.1.2.11 DIAGNOSTIC REQUEST (MASTER ONLY)

This field is used to distinguish between diagnostic request packets and diagnostic filler packets.

### 5.1.2.12 EXPECT RESPONSE (MASTER ONLY)

The expect response field is set to true if the request packet desires a data link acknowledgement. In general this is always true, except for a network data request that desires no data link acknowledgement.

[A transmit only node may use this feature.]

### 5.1.2.13 MASTER SEQUENCE NUMBER

The master uses this master sequence number for Data packet transmission.

### 5.1.2.14 POWER INHIBIT

The slave controls the power inhibit mode which indirectly controls the channel recovery threshold. The control bits mirror the power inhibit modes (see **Table 71 (POWER INHIBIT MODES)**).

### 5.1.3 CONTENTS OF PACKET(S)

The packet contents for various packet types are defined in **5.2 External Services** and **5.3 Internal Services**.

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## 5.2 EXTERNAL SERVICES

The Data Link provides user services to identify stations, establish and terminate a communication path between master and slave, exchange application data between stations, reset communication parameters and obtain communication statistics.

The External Services available to the Data Link Users are:

- Initialize - initializes Data Link operation [5.2.7]
- Discover - obtain station IDs and Name from scanning slaves [5.2.9]
- Polling - provide station ID and Name to masters using Discover [5.2.8]
- Open - establish communication between master and slave [5.2.10]
- Data - application data exchange between two stations [5.2.11]
- Diagnostic - communication diagnostic information [5.2.12]
- Emergency - Application data between two stations (this service can interrupt the service in progress) [5.2.13] (Master)
- Raw Mode - transmit the user specified packet [5.2.14]
- Close - terminate communication between master and slave [5.2.15]
- Medical event - establish communication between master and slave [5.2.16]
- Network - small application data exchange between two or more stations (without open packet exchange). Also facilitates network configuration [5.2.18]
- Security - provides for privacy, integrity, freshness and authenticity [5.2.19]
- Power inhibit - provides ability to pause telemetry to reduce the peak current demands [5.2.20]
- Charging Noise - provides ability to manage charging interference [5.2.21]
- Shutdown - disable Data Link operations

**Initialize** service allows the Upper Layer to enable or disable Telemetry M Data Link operations on the local station.

**Discover** and **Polling** services provide automatic communication identification between master and slave device.

**Open** and **Close** services allow the Upper Layer to establish and terminate Telemetry M communications between a specific master and a specific slave device.

**Data** service provides user the data transfer capability between two communicating stations.

**Diagnostic** service can provide diagnostic information on both the local and the remote stations. (Development use ONLY — for debugging purposes.)

**Emergency** service provides user the data transfer capability between two communicating stations. Note: This is the only service which can interrupt a service in progress.

**Raw Mode** service provides a mechanism for sending and receiving data directly, without mediation by the lower layers. (Development use ONLY — for debugging purposes.)

**Medical Event** service allows the Upper Layer to establish communications between a specific master and a specific slave. This differs from the Open service in that the slave talks first. In the Open service, the slave listens first.

**Network** service provides the capability to transfer a small amount of user data (no open packet exchange needed). Also facilitates network configuration.

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**Security** service provides the provides a mechanism to exchange secret keys. Once the keys have been exchanged the service provides a means of communicating with privacy, integrity, freshness and authenticity.

**Power inhibit** service provide a mechanism to the host to control the transceiver. When Power Inhibit is asserted the Tel M transceiver is turned off and when power inhibit is deasserted the transceiver is turned ON.

**Charging Noise** provides a mechanism to slave host to control charging interference on downlinks (not on uplinks). Charging noise feature is implemented by using the power inhibit service request.

**Shutdown** service provides a graceful mechanism to cease the data link layer operations prior to turning off the 2V supply.

### 5.2.1 POWER UP SEQUENCE

The power up sequence for this module consists of three states:

**Disable (CPU OFF)** — This is a power-off state. Transition is made out of this state to read EEPROM on the following:

**Reg\_bp\_boot\_stat:**

- bp\_cold\_nreset\_boot - a cold reset from NRESET
- bp\_warm\_nreset\_boot - a warm reset from NRESET
- bp\_irqc\_rst\_boot - a warm reset from interrupt controller block (i.e. fault reset)
- bp\_hst\_rst\_boot - a warm reset from host interface.
- bp\_hdw\_boot - a host dummy write.

**Reg\_wu\_irq0:**

- syn\_pll\_lock\_err - Synthesizer PLL lock error interrupt/status
- wu\_it\_wrap\_up - wakeup interval timer wrap-up threshold
- valid wakeup (wu\_snf\_first\_pkt, wu\_snf\_last\_pkt)
- wu\_snf\_mics\_high current
- wu\_snf\_meds\_high\_current

For further detail see programmer's manual: 123970

**Read EEPROM** — In this state the CPU is enabled and reads the pertinent structures from the EEPROM. Transition is made out of this state to disable (CPU ON) state when:

- Read EEPROM is complete (successful, failed), or
- Read EEPROM duration timer expires

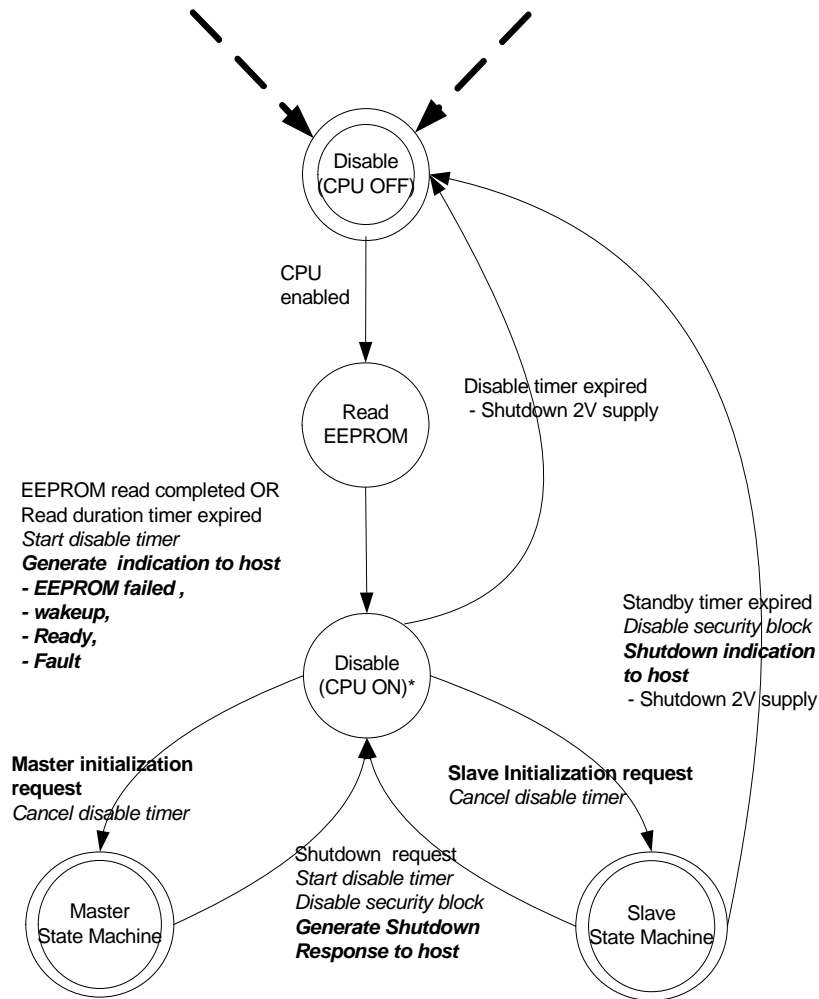
For pertinent structures see section ( **7.8 EEPROM Content**) and for ramware see sections ( **7.6 Ramware**) in the appendix of this document.

**Disable (CPU ON)** — In this state CPU is ready to process the initialization request from the host. When disable timer expires and shutdown indication is generated to the host 2V supply is also turned off. Note: sniffing will function as configured by the host.

**Host dummy write:**  
 (0x69 - powerup, 0x5A - reset, 0xC3 - power down)

**NOTE:** When host generates "reset" or "power down" then wakeup could be left OFF

**Mozart hardware enable: Wakeup**  
 (Wrap-up, High current, First packet non-last block, First packet last block, Last packet last block)



**Note:** Disable timer will need to accommodate wakeup last packet last block

**Figure 19: Powerup Sequence State Machine**

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## 5.2.2 EEPROM

The Telemetry Module shall be capable of reading and writing to EEPROM throughout its the operating life. When telemetry module is powered ON or it is reset there is a group of parameters (See **TABLE 122: STRUCTURES IN EEPROM**) shall be copied from EEPROM to RAM memory.

### 5.2.2.1 EEPROM DATA ARRANGEMENT

The data in the EEPROM is arranged in structures where each structure consists of 128 bytes. Each structure contains various 16 byte blocks. These 16 bytes block contain 14 bytes of data and 2 CRC bytes. During the read function if the 14 bytes data block has no CRC error then the EEPROM read continues with the next block and so on till all data is moved to the RAM. The total number of data content written to the RAM from the EEPROM for each of the data structure is 112 bytes where 110 bytes are the data followed by 2 bytes of total CRC in reverse order for 110 data bytes. The total CRC bytes of each structure will always result in 0x0000.

The capability exist to support up to 43 structures of RAMWARE code patches in the EEPROM, these are indicated by the RAMWARE control parameter. Prior to reading RAMWARE code from the EEPROM the ramware control parameter is read to know how many RAMWARE code patches are present. The total CRC for each RAMWARE patch is also stored in the ramware control parameter. Each time RAMWARE patch is read the total CRC will be checked to insure the ramware validity.

### 5.2.2.2 EEPROM READ AND WRITE

When the Mozart CPU is enabled, the firmware will restart operating in a well defined manner. It will first set all critical RAM locations to a known value. It will then recover operating parameters from the EEPROM. The EEPROM is used to preserve non-volatile always on registers to mitigate alpha particle corruption. If the EEPROM is intact, it will overwrite the non-volatile always on registers which they mirror. The EEPROM is also used to preserve some volatile always on registers, some firmware operating parameters and RAMware (if it exists).

These steps will initialize all RAM to a known value as follows:

1. Clear all RAM

Fixed RAM (0x00 - 0xff), 0x600 - 0x3EFF)

Master RAM: (0x14000 - 0x17FFF)

Slave RAM: (0x24000 - 0x27EFF)

Dual Port: (0x75000 - 0x75FFF)

2. Set all RAM which requires non-zero initial values

3. Update RAM from the EEPROM if it has survived intact:

Mirror of non-volatile always on registers. This is p\_hdw1, p\_hdw2 and part of p\_wakeup.

Mirror of volatile always on registers. This is a portion of p\_wakeup. Note that volatile registers are only overwritten upon a reset.

Firmware operating parameters. This is p\_config and a portion of p\_wakeup

Ramware control and RAMware

The ability to modify the EEPROM of the telemetry module is to be allowed under at least three conditions:

- telemetry module needs to be reconfigured with a different set of hardware parameters
- telemetry module has had a reset, and EEPROM can be restored to manufactured original condition, and Download RAMWARE to be saved in EEPROM. The primary use of the EEPROM is data recovery upon a power up or a reset

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5.2.2.3 REQUIREMENTS

5.2.2.4 READY INDICATION

**TLMM\_MS\_406 - EEPROM - NON-VOLATILE REGISTERS**

When the CPU is enabled and the EEPROM is read successfully, the Mozart module shall update the non-volatile always on registers. Upon a reset, the Mozart module shall update the volatile registers.

[The data read from the EEPROM is copied to a specific location into the RAM **TABLE 122: STRUCTURES IN EEPROM**]

**TLMM\_MS\_407 - EEPROM - LOAD RAMWARE APPLICATION**

The Mozart module will load the RAMWARE application (if one exists) into RAM if there are no unrecoverable error reading the RAMWARE section of the EEPROM. Additionally it will begin executing the RAMWARE application.

**TLMM\_S\_408 - EEPROM - WAKEUP DURING EEPROM READ**

When CPU is enabled via wakeup then wakeup indication will be generated to the host upon the successful read of the EEPROM. For wakeup indication see **TABLE 93: WAKEUP INDICATION (SLAVE)**

**TLMM\_MS\_262- READY INDICATION - INDICATION TO UPPER LAYER**

The Ready indication will be generated to the Upper Layer when Data link layer is enabled by Host, or via Reset and the EEPROM has been successfully read. See **Table 5 (READY INDICATION (MASTER OR SLAVE))**

**TABLE 5: READY INDICATION (MASTER OR SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0x20 - Ready indication
Sub-type	N/A	1	The indication sub-type	0x01 - Host dummy write <sup>(1)</sup> 0x02 - Host reset <sup>(2)</sup> 0x03 - Host dummy write followed by Host reset 0x08 - Warm Nreset <sup>(3)</sup> 0x10 - Cold NReset <sup>(4)</sup>
Size	N/A	2	The size of the info field	1
Info	Ready indication status	1	Status of the indication	0x01 - Successful 0x0A - Already ready
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

1. This value occurs when 0x69 is written to the host enable reset register while the RFM is not powered up. Note, if the RFM is not powered up, any write to the RFM will also cause this indication sub-type.
2. This value occurs when 0x5A is written to the host enable reset register and the CPU is on.



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3. This value occurs when the Nreset line is toggled when the CPU and the TAP controller are both on.
4. This value occurs when 0x69 is written to the host enable reset register while the RFM is powered up.

### 5.2.2.5 EEPROM FAILED INDICATIONS

During the read operation of the EEPROM if a CRC error is encountered data link layer will make three attempts to read the EEPROM before generating a failure indication to the host. Upon a successful read of the EEPROM a ready indication will be generated to the host.

The Data Link Layer will read the EEPROM each time it is enabled (by the wakeup feature or by the host). If the EEPROM read fails after three attempts an indication will be sent to the host see **Table 6 (EEPROM READ FAILED INDICATION (MASTER OR SLAVE))**

#### TLMM\_MS\_409 - EEPROM - FAILURE INDICATION

When the CPU is enabled (host dummy write or wakeup) data will be read from the EEPROM. The Mozart module will send an EEPROM read failure indication to the host if there are unrecoverable errors encountered while reading any of the following:

- a. p\_hdw1 & p\_hdw2 - mirror of non-volatile always on registers
- b. p\_wakeup - mirror of non-volatile always on registers, and mirror of volatile always on registers, and firmware operating parameters
- c. p\_config - firmware operating parameters
- d. p\_ramware\_control and RAMWARE code

See **Table 6 (EEPROM READ FAILED INDICATION (MASTER OR SLAVE))**.

[ROM defaults will be used if (a) - (c) do not survive intact.

The content read from the EEPROM is listed in appendix section 7.7]

**TABLE 6: EEPROM READ FAILED INDICATION (MASTER OR SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0x30 - EEPROM read failed indication
Sub-type	N/A	1	The indication sub-type	0x01 - EEPROM Parameter read failed 0x02 - EEPROM RAMware read failed
Size	N/A	1	The size of the info field	1
Info	EEPROM Read failed indication status	1	Status of the indication	0x0B - block level CRC failed during EEPROM read 0x0C - Max EEPROM read duration expired 0x11 - Max EEPROM read duration expired because Power Inhibit takes too long(slave only)
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

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5.2.2.6 EEPROM AND POWER INHIBIT

**TLMM\_MS\_410 - POWER INHIBIT DURING EEPROM OPERATION**

During the EEPROM operation if power inhibit is invoked then EEPROM operation will be suspended.

[During an EEPROM operation if power inhibit is invoked by the host data link layer will complete the on going EEPROM structure operation. The operation on the remaining structure will resume upon the termination of power inhibit.

A timeout indication will be generated to the Upper Layer if the total duration of the EEPROM read operation lasts longer than 10 seconds. Upon a successful read of the EEPROM transition will be made to DISABLE CPU ON state where disable ON timer will be started, power inhibit interrupts will be unmasked. Wakeup indication “Wakeup Complete”, containing the wakeup packet contents, shall be sent to the upper layer. (see **Table 93 (WAKEUP INDICATION (SLAVE))**) if slave is waiting for the “last packet last block” wakeup packet (after the “first packet last block” wakeup packet has enabled the CPU).

EEPROM write operation will occur in Standby state. For detail about the EEPROM write operation, see **7.6.2 Mozart module Memory Read and Write**. A timeout indication (if EEPROM write command from Master) or response (if EEPROM write command from slave host) will be generated to the Upper Layer if the total duration of the EEPROM write operation lasts longer than Standby Timer because Power Inhibit takes too long ( For “standby timer” see **Table 129 (PARAMETERS FROM EEPROM)**).

Power monitor bit shall only be set during EEPROM operation.]

Slave host can use the Power monitor bit to know whether Slave Mozart is in the middle of EEPROM operation. Slave host should take the power inhibit timing into consideration while picking the standby timer duration if EEPROM write is expected to occur.

Also on the other hand, care should be given in extending the standby timeout since the slave does not sniff nor listen in native mode during standby. The worst case write of a 4K byte RAMware should take about 400msec in the lack of power inhibit.

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### 5.2.3 STATES AND TRANSITIONS

The Data Link States are:

- Disable — This is a power-up state. If initialization is successful, then transition is made to Standby state; otherwise, no transition is made to any other state.
- Standby — In this state, telemetry is enabled, waiting for external request.
- Acquire — The system is transmitting or receiving for identification and for establishing communications.
- Comm — Telemetry communication is established between two stations.
- Channel Recovery — This is a Data Link Layer internal state, and is used to recover the communication between the slave and the master.
- Inactive — This state applies to master only. In this state the telemetry is temporarily inactive because Channel Recovery has failed. While in this state if a data request, emergency request, open request, or remote diagnostic request is received then telemetry is activated by triggering Channel Recovery.

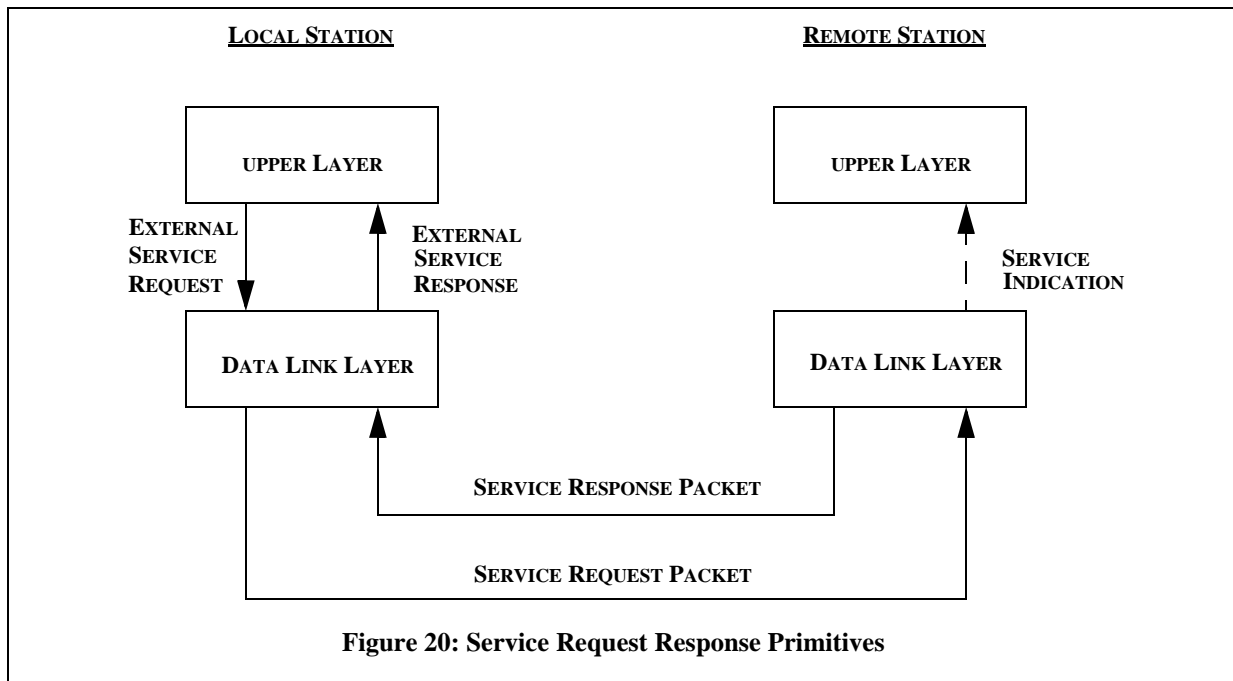
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## 5.2.4 REQUESTS AND SERVICES

The various External Services have the same general behavior which can be summarized as follows:

- The Upper Layer requests a particular External Service.
- Data Link Layer performs the specific actions for the particular service.
- Data Link Layer returns status information and/or responses associated with the service.

Most of the External Service requests issued by the Upper Layer communicate to the remote station, and involve operations from the remote station. This is achieved by sending telemetry request packets to the remote station. Completion of these External Service requests may involve response packets from the remote station. **Fig. 20 (Service Request Response Primitives)** shows the terminology used to describe the External Service request operations. In this figure, the local station could be the instrument, implant, or sensor.



**Figure 20: Service Request Response Primitives**

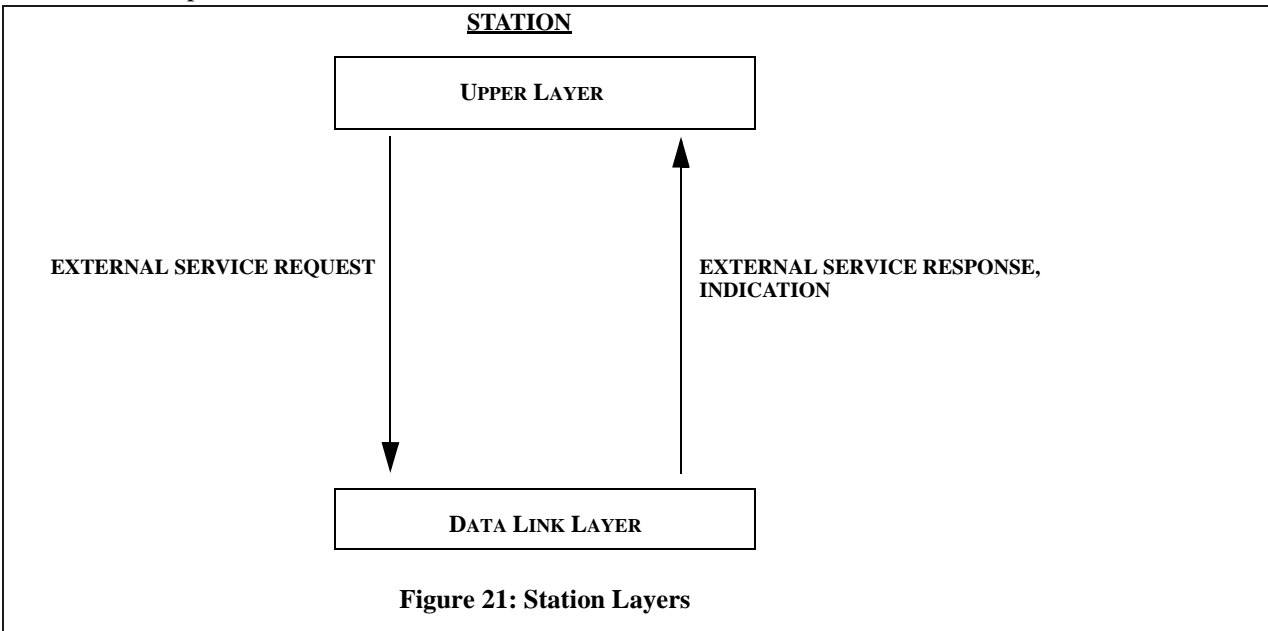
The local station is the source station of the External Service. External services such as Initialize operate only on the local station. The other External Service requests require the generation and transmission of a service request packet to the remote station. The remote station is the destination station that receives and responds to the service request packet. The response for the External Services generally does not involve the Upper Layer of the remote station.

The Service Duration Time is the time duration for the Data Link Layer to perform the service as requested by the External Service request. The Data Link Layer returns an External Service response to the Upper Layer upon completion of the service. The completion of the service is when a response packet is successfully received from the remote station, or upon expiration of the Service Duration Time.

Multi-byte parameters contained in a service request should use “big-endian” convention. Additionally, multi-byte counters (in the diagnostic service response) will use the “big-endian” convention.

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**Fig. 21 (Station Layers)** describes the boundary of the Upper Layer and the Data Link Layer in the implementation of the station (master or slave).



**Figure 21: Station Layers**

**5.2.5 CHANNEL MAPPING TESTING**

The channel mapping algorithm is implemented in the hardware, and the testing of the algorithm is done as part of the hardware verification. This document refers to the channel mapping algorithm in certain requirements for context or implementation continuity.

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## 5.2.6 GENERAL REQUIREMENTS

The Station ID is the manufacturer-assigned station ID to uniquely identify each station. A zero valued ID is not valid.

### TLMC\_MS\_004 - STATION ID

The ID is a 6-byte identifier which uniquely identifies each station. A valid ID shall have non-zero value.

### TLMM\_MS\_426 - DEFAULT NATIVE MODE RATE

The master and slave shall transmit and receive native mode packets using a default rate before two way communication is established.

[See “default downlink native mode rate” and “default uplink native mode rate” in the p\_config block of the EEPROM. Note that the open downlink packet will communicate the downlink and uplink rate for two way communication

Note that the slave’s default data rates come from EEPROM until a wakeup packet is received.]

Each external service request will be verified per **Table 7 (EXTERNAL SERVICES REQUEST VERIFICATION)**. If the external service request is N/A, it will not be processed, otherwise service will be processed. In either case, a service response with status will be returned to the Upper Layer except a (waveform) data service request. That is, slave will process the waveform data request in all the slave states but will not send any waveform data service response (successful or not successful ) to the upper layer.(Note the waveform service response interrupt is generated, but the response buffer is not filled in.).

**TABLE 7: EXTERNAL SERVICES REQUEST VERIFICATION**

EXTERNAL SERVICE	STATE					
	DISABLE	STANDBY	ACQUIRE	COMM	CHANNEL RECOVERY	INACTIVE <sup>(1)</sup> (MASTER ONLY)
Initialize	<b>Valid</b> <sup>(2)</sup>	N/A - Slave <sup>(3)</sup> <b>Valid</b> - master	N/A	N/A	N/A	N/A
Discover (Master only)	N/A	<b>Valid</b>	N/A	N/A	N/A	N/A
Polling (Slave only)	N/A	<b>Valid</b>	<b>Valid</b> <sup>(4)</sup>	N/A	N/A	N/A
Open (Master only)	N/A	<b>Valid</b>	N/A	N/A	N/A	N/A
Data	N/A	N/A	N/A	<b>Valid</b>	N/A - master <b>Valid</b> -slave <sup>(5)</sup>	N/A
Emergency (Master only)	N/A	N/A	N/A	<b>Valid</b>	N/A	N/A
Diagnostic (Local) (Master only)	N/A	<b>Valid</b>	N/A	<b>Valid</b>	<b>Valid</b>	<b>Valid</b>
Diagnostic (Remote) (Master only)	N/A	N/A	N/A	<b>Valid</b>	N/A	N/A
Diagnostic (Mapping) (Master only)	N/A	<b>Valid</b>	N/A	N/A	N/A	N/A
Medical Event	N/A	<b>Valid</b> - Master N/A - Slave <sup>(6)</sup>	N/A	N/A	N/A	N/A
Raw Mode (master packet attached) (Master only)	N/A	N/A	N/A	<b>Valid</b>	N/A	N/A
Network (Sub-type - Configure)	<b>Valid</b> <sup>(7)</sup>	<b>Valid</b>	<b>Valid</b>	<b>Valid</b>	<b>Valid</b>	<b>Valid</b> - Master N/A - Slave

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**TABLE 7: EXTERNAL SERVICES REQUEST VERIFICATION**

Network (Sub-type - Data)	N/A	Valid - Master N/A - slave	N/A - Master Valid - Slave	N/A	N/A	N/A
Security - assert EBAN key duration (Slave only)	Valid	Valid	Valid	Valid	Valid	N/
Security - Authorize Key Delivery and Update Proximity Status (Slave only)	N/A	Valid	Valid <sup>(8)</sup>	N/A	N/A	N/A
Security - Request Key via Proximity Switch (Master only)	N/A	Valid	N/A	N/A	N/A	N/A
Security - Create Key	N/A	Valid	N/A	N/A	N/A	N/A
Security - Assert Key Local and Request Key Local	N/A	Valid	N/A - Master Valid - Slave <sup>(9)</sup>	N/A	N/A	N/A
Power inhibit (Slave only)	Valid	Valid	Valid	Valid	Valid	N/A
Close (Master only)	N/A	Valid	N/A	Valid	Valid	Valid
Shutdown	Valid	Valid	Valid	Valid	Valid	Valid

1. Applies to master ONLY - unspecified Channel Recovery is triggered when data, emergency, open, or remote diagnostic master requests are received.
2. **Valid** means that the external service request will be processed at this state.
3. N/A - means that the external service request is not allowed at this state. (Both ‘Valid’ and ‘N/A’ may occur in a single cell, meaning the logic is conditional, dependant on whether the External Service request is coming from an slave or from a master station.)
4. Polling request (sub-type - 0x06 - Poll upon Tel M) will be valid only if slave is uplinking medical event during acquire state. For details, see **TLMM\_S\_440 - MEDICAL EVENT - POLL UPON TELM REQUEST**. Polling requests (sub-type -0x01 - Poll upon POR, 0x04 - Poll upon Medical event, 0x05 - poll upon patient name and 0x06 - Poll upon Tel M) are invalid if slave is already polling during acquire state.
5. Where in recovery state, if bit “Enable WF in recovery” is set to “1” (via the initialization request), the data request (the sub-type = 0x02 - waveform data) is valid. Slave will save the last two waveform requests (one from service request3 and one from service request4) received during Recovery state and uplink the waveform when the session is recovered. For details, see **TLMM\_S\_356 - ARQ - RETRANSMIT WAVEFORM PACKET**. Where in Recovery state, if bit “Enable WF in recovery” is cleared (via the initialization request), the data request (the sub-type = 0x02 - waveform data) is invalid. Other data requests (sub-type-0x00 - Memory data, 0x01-unrequested data) are invalid during recovery state.
6. Slave transmits medical event by using the service called Poll upon medical event service.
7. It’s valid only after initialization request has been processed once after Mozart FW is enabled.For example, after standby timer times out, FW goes to Disable state.
8. Valid on Slave in the acquire state when slave is polling. Invalid during Medical event and Network services.
9. Valid on Slave in the acquire state when slave is polling. Invalid during Medical event and Network services.

External service requests will be processed in a serialized manner. Once an External Service is issued to the Data Link Layer its processing will be completed by the Data Link Layer. (Exception: see **5.2.13 Emergency**.)

### **TLMC\_MS\_006 - EXTERNAL SERVICE REQUEST PROCESSING**

External service requests will be accepted in a serialized manner, with one exception: Emergency can interrupt any service in progress.

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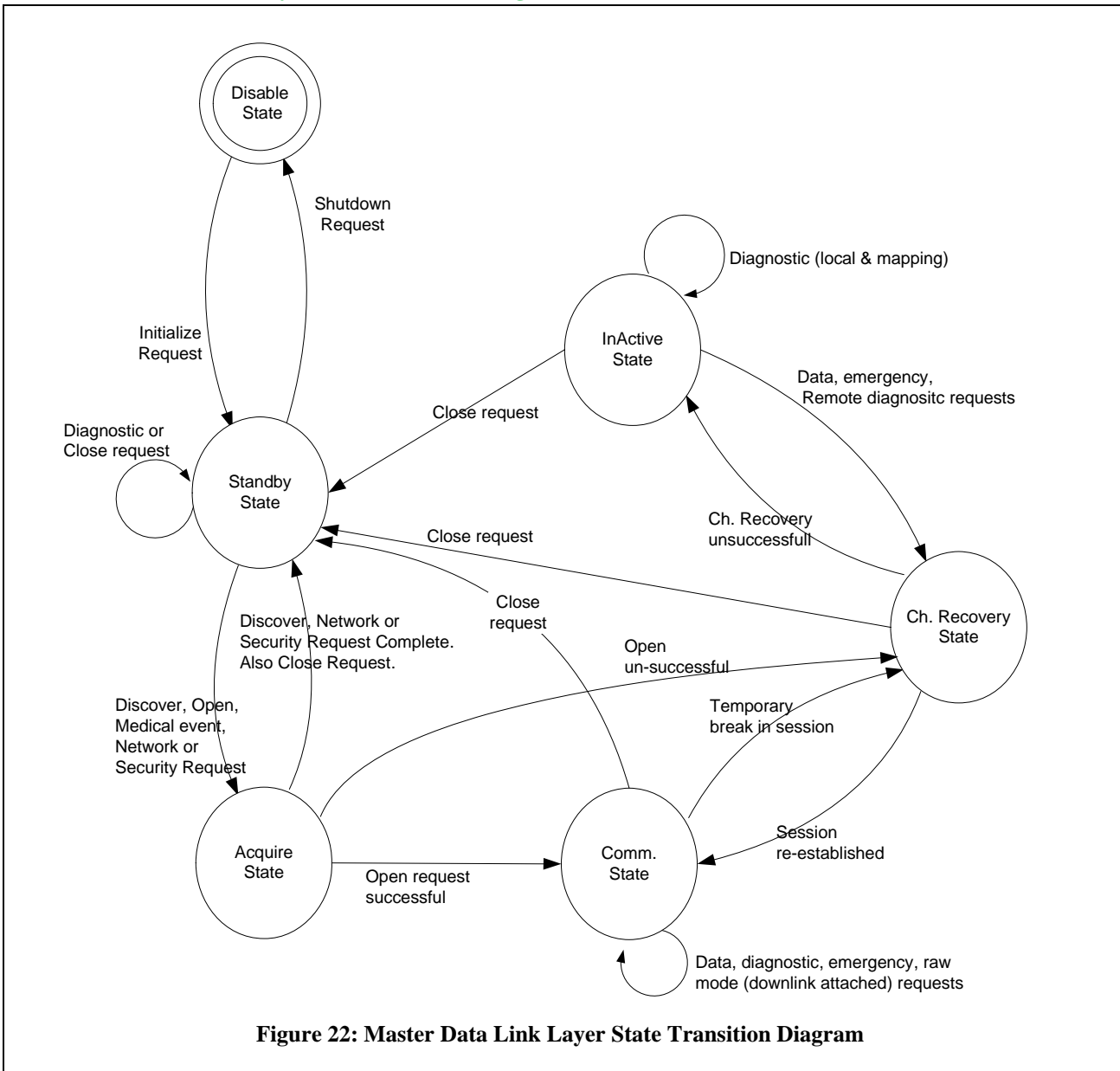
**TLMC\_M\_237 - SERVICE DURATION TOLERANCE**

All service requests are issued with a service duration. The tolerance for all service durations (measured at the application) is [-1 second, +1 second].



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The state machine for External Service requests and timeout events is shown in **Fig. 22 (Master Data Link Layer State Transition Diagram)**.



The Data Link Layer is in the Acquire State to perform the Discover or the Open services. For the most part, the Upper Layer has to wait for the completion of these services, and the Data Link Layer transition back to the Standby State before requesting another service, with the exception of the Diagnostic service request.

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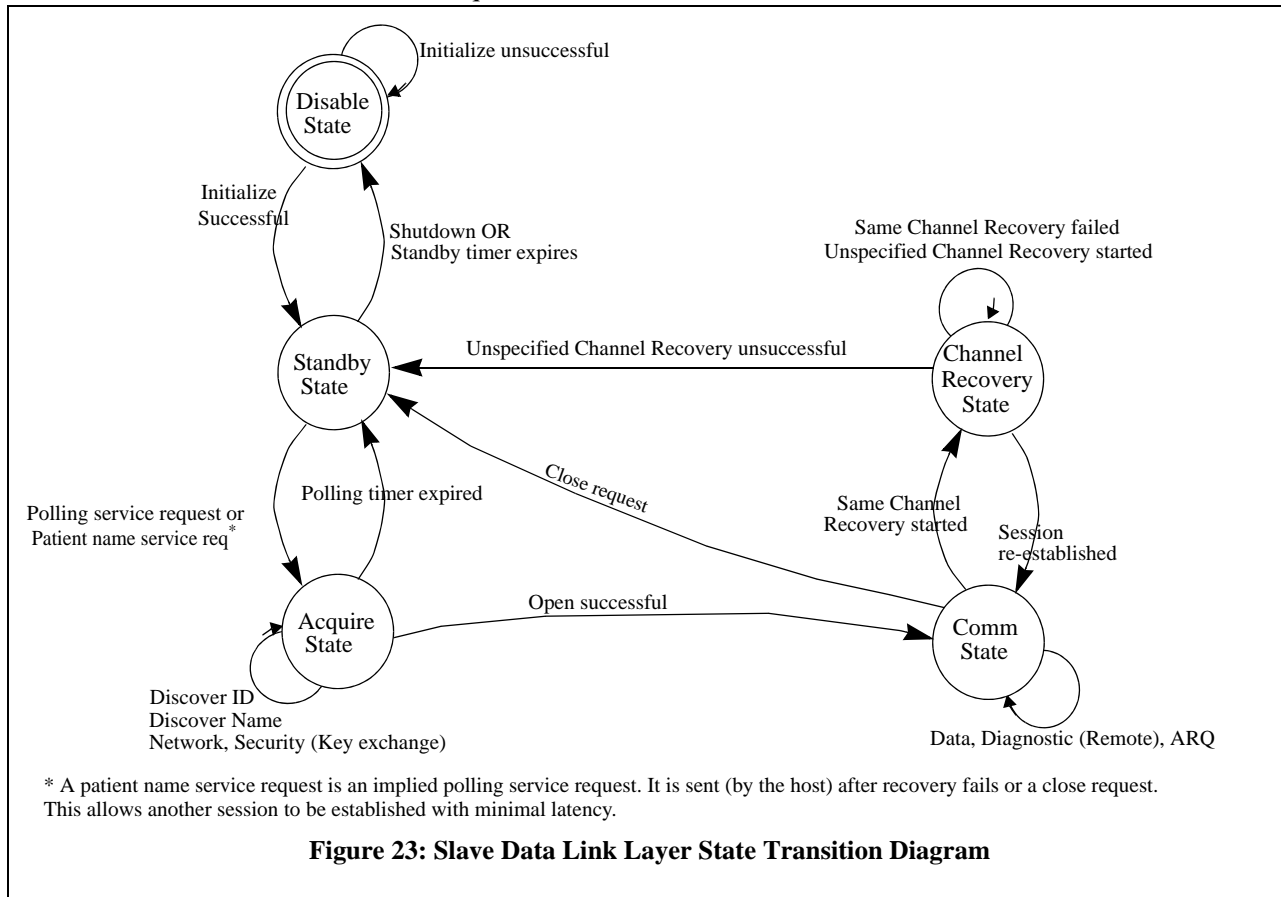
**Table 8** defines the external service requests and the events which cause the state transition of the master.

**TABLE 8: MASTER STATE TRANSITION TABLE**

EXTERNAL SERVICE REQUEST <sup>(1)</sup> OR EVENT <sup>(2)</sup>	STATE					
	DISABLE	STANDBY	ACQUIRE	COMM	CHANNEL RECOVERY	INACTIVE
Initialize <i>Successful</i>	<b>STANDBY</b>	N/C	N/A	N/A	N/A	N/A
Discover Request	N/A	<b>ACQUIRE</b>	N/A	N/A	N/A	N/A
Discover - Complete	N/A	N/A	<b>STANDBY</b>	N/A	N/A	N/A
Open Request <sup>(3)</sup>	N/A	<b>ACQUIRE</b>	N/A	N/A	N/A	N/A
Open Request <sup>(3)</sup> - <i>Successful</i>	N/A	N/A	<b>COMM</b>	N/A	N/A	N/A
Open Request <sup>(3)</sup> - <i>Unsuccessful</i>	N/A	N/A	<b>RECOVERY<sup>(4)</sup> OR STANDBY</b>	N/A	N/A	N/A
Close Request - <i>Successful</i>	N/A	N/C <sup>(5)</sup>	<b>STANDBY</b>	<b>STANDBY</b>	<b>STANDBY</b>	<b>STANDBY</b>
Channel Recovery - <i>Successful</i>	N/A	N/A	N/A	N/A	<b>COMM</b>	N/A
Channel Recovery - <i>Unsuccessful</i>	N/A	N/A	N/A	N/A	<b>INACTIVE</b>	N/A
Communication failure	N/A	N/A	N/A	<b>RECOVERY</b>	N/A	N/A
Data Request	N/A	N/A	N/A	N/C	N/A	<b>RECOVERY</b>
Emergency Request	N/A	N/A	N/A	N/C	N/A	<b>RECOVERY</b>
Remote Diagnostic Request	N/A	N/A	N/A	N/C	N/A	<b>RECOVERY</b>
Medical Event Request	N/A	<b>ACQUIRE</b>	N/A	N/A	N/A	N/A
Network request	N/A	<b>ACQUIRE</b>	N/A	N/A	N/A	N/A
Network service complete	N/A	N/A	<b>STANDBY</b>	N/A	N/A	N/A
Security request (Remote request key)	N/A	<b>ACQUIRE</b>	N/A	N/A	N/A	N/A
Security - complete (remote key request)	N/A	N/A	<b>STANDBY</b>	N/A	N/A	N/A
Shutdown request	<b>DISABLE</b>	<b>DISABLE</b>	<b>DISABLE</b>	<b>DISABLE</b>	<b>DISABLE</b>	<b>DISABLE</b>

1. The external service requests are in **Bold** face. The external service requests are from the Upper Layer of the local station.
2. The events are not in bold face. These events may have resulted from processing of packets received from remote station or from internal Data Link events.
3. Open request includes the open (unsecure) and open (secure). Open (secure) is described in the security section of this document.
4. The master will go to standby if master lacks the appropriate key, or if the open response packet indicates the slave does not have the appropriate key, otherwise master will go to recovery. In the first case user needs to exchange the appropriate key before open can be successful.
5. N/C - no change.

**Fig. 23 (Slave Data Link Layer State Transition Diagram)** illustrates the state transitions as the result of the External Service requests and timeout events..



The slave does not sniff nor listen in native mode during standby state.

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**Table 9** defines the external service requests and the events which cause the state transition of the slave.

**TABLE 9: SLAVE STATE TRANSITION TABLE**

EXTERNAL SERVICE REQUEST <sup>(1)</sup> OR EVENT	STATE				
	DISABLE	STANDBY	ACQUIRE	COMM	CHANNEL RECOVERY
Initialize Request Successful	=> <b>STANDBY</b>	N/A	N/A	N/A	N/A
Polling Request <sup>(2)</sup>	N/A	=> <b>ACQUIRE</b>	=> <b>ACQUIRE</b> <sup>(3)</sup>	N/A	N/A
Patient Name Request <sup>(4)</sup>	N/A	=> <b>ACQUIRE</b>	N/A	N/A	N/A
Polling timer expired	N/A	N/A	=> <b>STANDBY</b>	N/A	N/A
Medical Service Duration timer expired	N/A	N/A	=> <b>STANDBY</b>	N/A	N/A
Open packet <sup>(5)</sup> - successful	N/A	N/A	=> <b>COMM</b>	N/A	N/A
Channel Recovery - successful	N/A	N/A	N/A	N/A	=> <b>COMM</b>
Channel Recovery - unsuccessful	N/A	N/A	N/A	N/A	=> <b>STANDBY</b>
Close packet	N/A	N/A	N/A	=> <b>STANDBY</b>	N/A
Standby timer expired	N/A	=> <b>DISABLE</b>	N/A	N/A	N/A
Same Channel Recovery started	N/A	N/A	N/A	=> <b>CHANNEL RECOVERY</b>	N/A
Shutdown request	<b>DISABLE</b>	<b>DISABLE</b>	<b>DISABLE</b>	<b>DISABLE</b>	<b>DISABLE</b>

1. The external service requests are in **Bold** face. The external service requests are from the Upper Layer of the local station.
2. This includes the poll upon medical event, poll upon Tel M and Poll upon POR subtypes.
3. See footnote <sup>(4)</sup> in **Table 7 (EXTERNAL SERVICES REQUEST VERIFICATION)**
4. It's a subtype of polling request.
5. Open request includes open (unsecure) and open (secure).

Note the network request, security request and data request will not cause the slave to change state.

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Most of the Telemetry M packets contain an master ID and/or slave ID. A Telemetry M packet received by the master is valid if the packet has a correct message authentication code (MAC) and is targeted to this station. A Telemetry M packet received by the slave is valid if the packet has a correct MAC and is targeted to this station.

The slave shall accept the master packets as defined by **Table 10** to be the valid master packets.

**TABLE 10: MASTER PACKET VALIDATION**

STATE	CONTROL BYTE FIELDS							PACKET (CONTENT) SPECIFIC VALIDATIONS
	PKT TYPE	Xfer MODE	SEQ# <sup>(1)</sup>	FRAGMENT NUMBER	LAST FRAGMENT	M/S bit	SIZE	
Acquire	Discover ID	NA	NA	NA	NA	m	NA	Master ID <sup>(2)</sup>
Acquire	Discover Name	NA	NA	NA	NA	m	NA	Master ID <sup>(2)</sup> , Slave ID <sup>(3)</sup> , Discover ID collision avoidance duration
Acquire/ Channel Recovery <sup>(4)</sup>	Open <sup>(5)</sup>	NA	NA	NA	NA	m	NA	Master ID <sup>(2)</sup> , Slave ID <sup>(3)</sup>
Acquire	Network	NA	0	NA	NA	m	1-21	Network ID
Acquire	Security	NA	NA	NA	NA	m	NA	Master ID <sup>(2)</sup> , Slave ID <sup>(3)</sup>
Comm	Close	NA	NA	NA	NA	m	NA	Master ID <sup>(6)</sup> , Slave ID <sup>(3)</sup>
Comm	Diagnostic	0-2	NA	NA	NA	m	NA	Master ID <sup>(7)</sup>
Comm	ARQ	0-2	NA	NA	NA	m	NA	Master ID <sup>(7)</sup>
Comm	Mem Data <sup>(8)</sup>	0-2	0 - 255	0	True if last, False otherwise	m	1-24	Master ID <sup>(7)</sup>
		0-2		1-15		m	1-30	None

1. Sequence Number: This field only applies to the Memory Data packets.
2. The master ID must be a valid ID.
3. The slave ID has to match the ID of this (slave) station.
4. Open packets may occur in Comm State during Channel Recovery.
5. Open packet includes open (unsecure) and open (secure).
6. The master ID has to match that of the master with which the slave station has a session open.
7. The master ID has to match that of the master with which the slave station has a session open. If not, Channel Recovery is initiated.
8. The sequence number has to fall within the window allowed by ARQ. (For details, see **5.3.1 Packet Retransmission (ARQ)**.)

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The master shall accept slave packets as defined by **Table 11** to be the valid slave packets.

**TABLE 11: SLAVE PACKET VALIDATION**

STATE	CONTROL BYTE FIELDS <sup>(1)</sup>					Content
	Pkt Type	Fragment #	Seq <sup>(2)</sup>	M/S bit	Size	Packet (Content) Specific Validations
Acquire	Discover ID	NA	NA	s	NA	Master ID <sup>(3)</sup> , Master ID <sup>(4)</sup>
Acquire	Discover Name	0	NA	s	1-18 <sup>(5)</sup>	Master ID, Slave ID, Station Name String
		1-4	NA	s	1-30	Station Name String
Acquire/ Channel Recovery <sup>(6)</sup>	Open <sup>(7)</sup>	NA	NA	s	NA	Master ID <sup>(3)</sup> , Slave ID <sup>(8)</sup>
Acquire	Network	NA	0	s	0-21	Network ID
Acquire	Security	N/A	N/A	s	N/A	Master ID <sup>(3)</sup> , Slave ID <sup>(8)</sup>
Acquire	Medical Event	N/A	N/A	s	N/A	Slave ID <sup>(8)</sup>
Comm	Close	NA	NA	s	NA	Master ID <sup>(3)</sup> , Slave ID <sup>(8)</sup>
Comm	Diagnostic	0	0-255 <sup>(9)</sup>	s	NA	Slave ID <sup>(8)</sup>
		1-15		s	NA	None
Comm	Mem Data	0	0-255 <sup>(10)</sup>	s	1-24	Slave ID <sup>(8)</sup>
		1-15		s	1-30	None
Comm	WF Data	0	0-255	s	1-24	Slave ID <sup>(8)</sup>
		1-15		s	1-30	None
Comm	UR <sup>(11)</sup> Data	0	0-255	s	1-24	Slave ID <sup>(8)</sup>
		1-15		s	1-30	None

1. NA means not applicable. A field with NA is not used to decide the validity of the packet.
2. Sequence Number. This field applies only to the various slave Data Packets.
3. The master ID must match the ID of this (master) station.
4. The slave ID must be a valid slave ID; see **TLMC\_M\_011 - VALID SLAVE ID**.
5. The discover name size control byte field should include the proximity status byte. See **Fig. 34 (Discover Name Response Packet)**.
6. Open packets may occur in Comm State during Channel Recovery.
7. Open packet include open (unsecure) and open (secure).
8. The slave ID must be the ID of the (slave) station with whom the master is communicating.
9. The master ignores the diagnostic sequence number.
10. The sequence number has to fall within the window allowed by the ARQ. (For details, see **5.3.1 Packet Retransmission (ARQ)**.)
11. UR = Unrequested.

### 5.2.6.1 FAULT INDICATION

#### **TLMM\_MS\_404 - FAULT INDICATION - INDICATION TO UPPER LAYER**

The Fault indication will be generated to the Upper Layer when a fault reset occurs. See **Table 12 (FAULT INDICATION (MASTER OR SLAVE))**

**TABLE 12: FAULT INDICATION (MASTER OR SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0x33 - Fault indication

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**TABLE 12: FAULT INDICATION (MASTER OR SLAVE)**

Sub-type	N/A	1	The indication sub-type	0xF0 - Fault 0 (HW register) 0xF1 - Fault 1 (HW register) 0xFF - Firmware faults (see firmware error codes). See <b>Table 130 (SUMMARY OF FIRMWARE FAULTS)</b>
Size	N/A	2	The size of the info field	4
Info	Fault Reason	1	Status of the indication	One of the following: <ul style="list-style-type: none"> <li>• The content of IRQC fault0 register at reset (if sub-type is 0xf0), or</li> <li>• The content of IRQC fault1 register at reset (if sub-type is 0xf1), or</li> <li>• The firmware reset code at reset (if sub-type is 0xff)</li> </ul>
	Firmware State	1	State of firmware at time of fault	0x00 - 0xFF
	Firmware Event	1	Event generated at time of fault	0x00 - 0xFF
	IRQC bus master	1	Bus master state at time of fault	0x00 - 0x0F
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

### 5.2.6.2 SHUTDOWN INDICATION

#### **TLMM\_S\_263 - SHUTDOWN INDICATION - INDICATION TO UPPER LAYER**

When the standby timer, ephemeral BAN key timer, and security (key exchange authorization) timer have all expired, a shutdown indication will be generated to the upper layer, a transition will be made to the disable state. See **Table 13 (SHUTDOWN INDICATION (SLAVE, MASTER))**

[Then the slave will return to synchronous receptor wakeup operation. If the wakeup disable bit is set to 1 in the initialization request firmware does not set the wakeup enable bit bp\_wakeup\_en bit in REG\_BP\_WU\_CTRL0 register. See requirement **TLMM\_S\_402 - WIRELESS WAKEUP - DISABLE WAKEUP.**

Finally, the slave will wait for “Timer between Shutdown Indication and Turn off 2V” duration and then turn off the 2 volt supply. See **Table 129 (PARAMETERS FROM EEPROM)** for “Timer between Shutdown Indication and Turn off 2V”.]

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**TLMM\_MS\_413 - SHUTDOWN INDICATION - DISABLE TIMER EXPIRES**

Upon the expiration of the disable ON timer shutdown indication will be generated to the upper layer and 2 volt supply will be turned off.

[A shutdown indication can occur when Mozart is enabled via reset, host dummy write or wakeup and the host does not send a subsequent initialize request.

Note that the 2 volt supply is not turned off until the “Timer between Shutdown Indication and Turn off 2V” (see **Table 129 (PARAMETERS FROM EEPROM)**) expires after the expiration of the disable ON timer. In addition, during the “ Timer between Shutdown Indication and Turn off 2V” that follows the disable ON timer expiration, the mozart will not respond to wakeups.]

**TABLE 13: SHUTDOWN INDICATION (SLAVE, MASTER)**

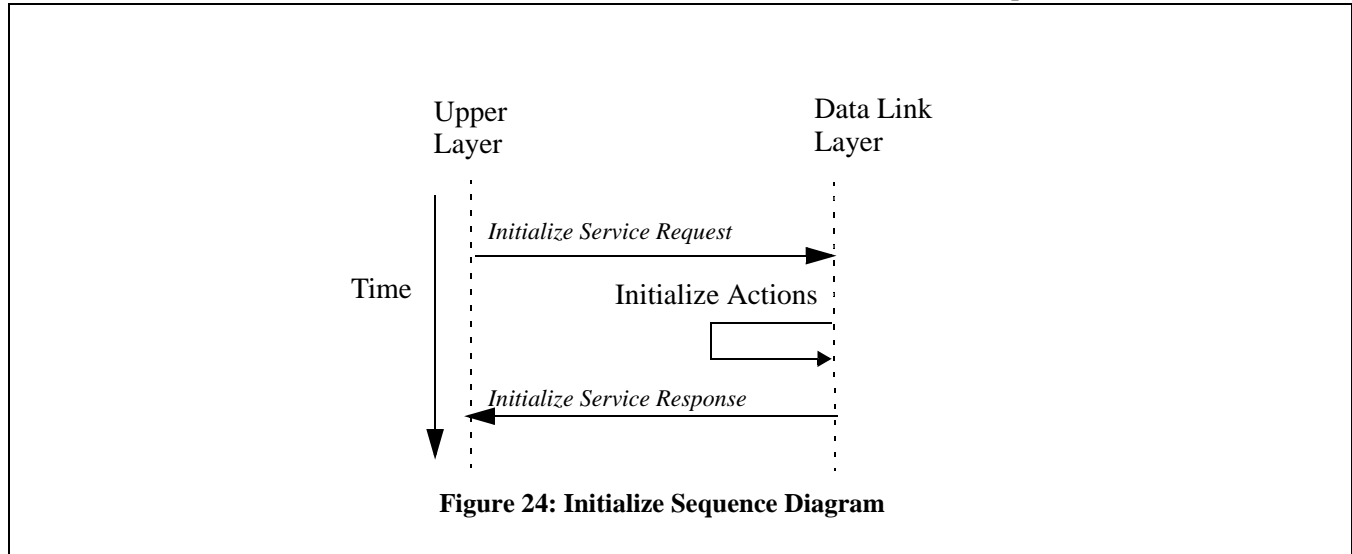
FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0x26 - Shutdown indication
Sub-type	N/A	1	The indication sub-type	N/A
Size	N/A	2	The size of the info field	1
Info	Shutdown indication status	1	Status of the indication	0x01 - successful
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.



### 5.2.7 INITIALIZE

This service is used by the Upper Layer to activate the telemetry system on a local station. Upper layer shall pass configuration data. When this service is invoked various physical and Data Link Layer parameters are initialized to a known state.

**Fig. 24 (Initialize Sequence Diagram)** illustrates the Initialize service operations.



### TLMM\_MS\_428 - INITIALIZE - UPPER LAYER TO DATA LINK LAYER PARAMETERS

When invoking the Initialize service request, the Upper Layer will provide information as specified in **Table 14 (INITIALIZE SERVICE REQUEST (MASTER OR SLAVE))**.

**TABLE 14: INITIALIZE SERVICE REQUEST (MASTER OR SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x81 - Master Initialize service request 0x01 - Slave Initialize service request
Sub-type	N/A	1	The service request sub-type	N/A
Size	N/A	2	The size of the info field	Sizeof(master config file) or sizeof(slave config file)
Info	Configuration file	N	See <b>Table 123 (Master parameters from host)</b> or <b>Table 124 (SLAVE PARAMETERS FROM HOST)</b>	See <b>Table 123 (Master parameters from host)</b> or <b>Table 124 (SLAVE PARAMETERS FROM HOST)</b>
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

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**TLMM\_MS\_265 - INITIALIZE ADDRESS WITH VALUES**

Upon receiving the initialization data, firmware will copy each value to the specified address up to, but not including, an address value of 0. Format for master see **Table 123 (Master parameters from host)** and for slave see **Table 124 (SLAVE PARAMETERS FROM HOST)**.

[Initialization data are address-data pairs contained in the parameters received from the host. This could be used to write any value to the specified address.]

5.2.7.1 MASTER

**TLMM\_M\_266 - MASTER INITIALIZE SERVICE REQUEST FROM UPPER LAYER**

When invoking an Initialize service request, the Upper Layer-in the master will provide information contained in the configuration file (see **Table 123 (Master parameters from host)**).

**TLMM\_M\_267 - MASTER INITIALIZE SERVICE RESPONSE TO UPPER LAYER**

An Initialize service response will be generated to the Upper Layer after the initialize service request is processed.

[The content of the response to the Upper Layer is specified in **Table 15 (INITIALIZE SERVICE RESPONSE (MASTER))**]

**TABLE 15: INITIALIZE SERVICE RESPONSE (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service response	0x81 - Master Initialize service response
Sub-type	N/A	1	The service response sub-type	N/A
Size	N/A	2	The size of the info field	1

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**TABLE 15: INITIALIZE SERVICE RESPONSE (MASTER)**

Info	Initialize service status	1	Status of the service request	0x01 - Request successful 0x02 - Request invalid in current state (state is Comm) 0x03 - Request invalid in current state (state is Recovery; slave scanning) <sup>(1)</sup> 0x04 - Request invalid in current state (state is Recovery; slave not scanning) <sup>(1)</sup> 0x05 - Request invalid in current state (state is Inactive) 0x07 - Request invalid in current state (listening for Medical Event) 0x0A - Parameter out of range <sup>(2)</sup> 0x12 - Invalid size (info size >506) <sup>(2)</sup> 0x0F - Request not serial (another service is in progress) 0x10 - Invalid CRC 0x24 - Request invalid in current state (state is disable, reading EEPROM) 0x25 - Buffer/ service request mismatch <sup>(3)</sup>
CRC	N/A	2	CRC of all above fields.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

1. The slave is considered to be still scanning if (time now - time of last valid slave packet) is less than (slave recovery duration + slave polling duration). Note that a service duration timeout will result in a Data Link response status of 3 or 4 (invalid state, state is Recovery). A Data Link status of 9 (service duration timeout) would not provide any benefit.
2. If the request info size is greater than 506, 0x12 - Invalid size (info size >506) will be used; if the info size or subtype (if applicable) does not match the value in the request table, "Parameter out of range" will be used.
3. This status can occur if the master host attempts to send a initialize service request using service request buffer 1 (instead of buffer 0).

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5.2.7.2 SLAVE

**TLMC\_S\_008 - SLAVE INITIALIZE SERVICE REQUEST FROM UPPER LAYER**

When invoking an initialize service request, the Upper Layer in the slave will provide information as specified in **Table 124 (SLAVE PARAMETERS FROM HOST)**

**TLMC\_S\_009 - INITIALIZE SERVICE RESPONSE TO UPPER LAYER.**

An initialize service response will be generated to the Upper layer after the initialize service request is processed, and a standby timer is started.

[The content of the response to the Upper Layer is specified in **Table 16 (INITIALIZE SERVICE RESPONSE (SLAVE))**.]

**TABLE 16: INITIALIZE SERVICE RESPONSE (SLAVE)**

FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	1	The type of service response	0x01 - Slave Initialize service response
Sub-type	1	The service response sub-type	N/A
Size	2	The size of the info field	1
Info	1	Status of the service request	0x01 - Initialization Successful 0x12 - Invalid size 0x13 - Invalid request type (This code can occur if the service request is sent using an interrupt other than service request0 (there is a buffer/ service request mismatch). 0x15 - Request in invalid state <sup>(1)</sup> 0x24 - Request invalid during EEPROM read 0x10 - Invalid CRC
CRC	2	CRC of all above fields.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

1. See **Table 7 (EXTERNAL SERVICES REQUEST VERIFICATION)** for the invalid states.

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### 5.2.8 POLLING

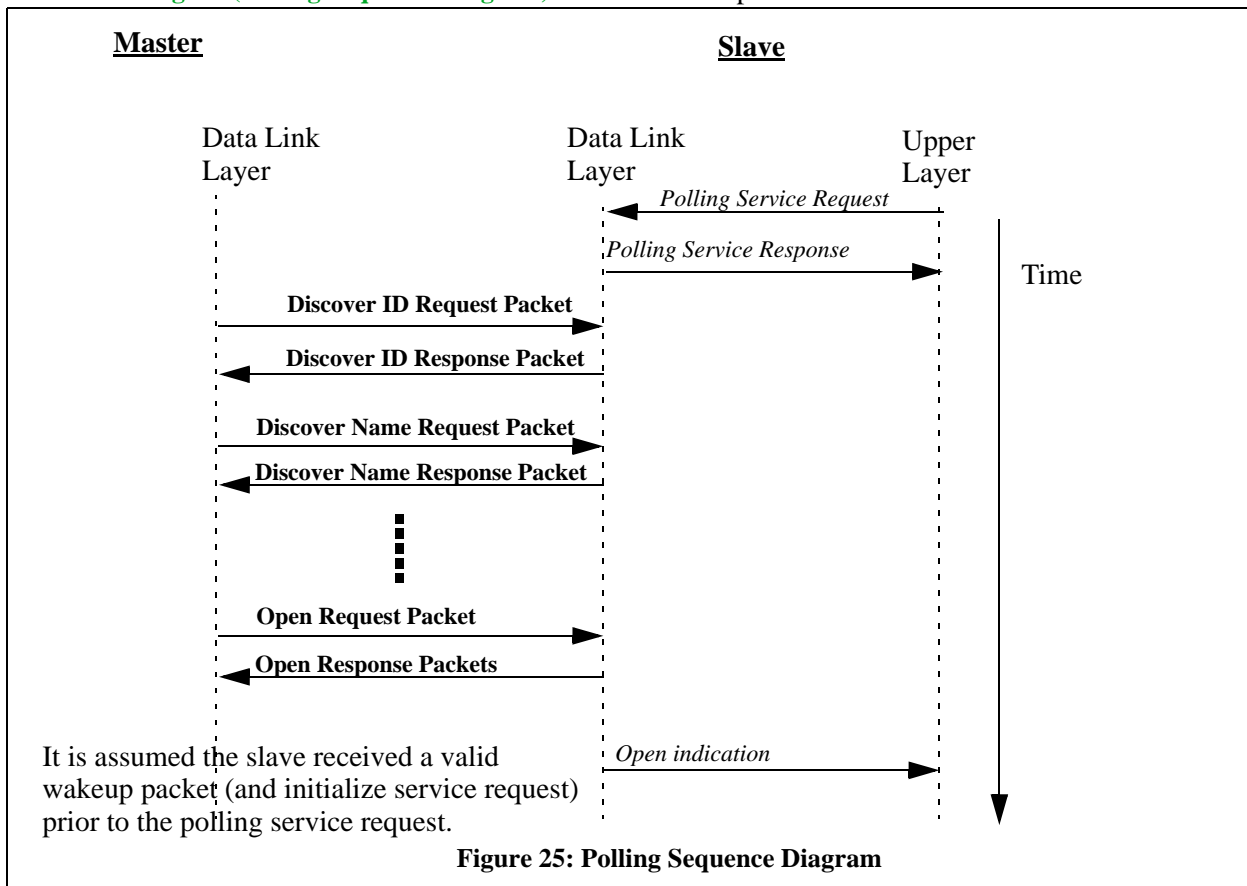
The purpose of the polling service is to allow a slave to “listen/respond” to a master station for a total polling time duration. The Total Polling Duration Time can be specified two ways:

1. When Telemetry M is enabled as part of initialize service Total Polling Duration Time is provided to Telemetry M.
2. A master provides the Total Polling Duration Time as part of open master packet.

A station uses this functionality to listen for other stations using Discover, Open, Network or Security services. The following bullets briefly summarize this functionality:

- The slave receives a valid wakeup packet (during the disable state). It sends a wakeup indication to the upper layer. The upper layer sends an initialize (slave) service request.
- The Upper Layer then sends a Polling request to the Data Link Layer.
- The Data Link Layer listens for Discover, Open, Network or Security packet.
- If a valid Discover ID or a Discover Name request is received, the Data Link Layer records the associated information and transmits the appropriate Discover ID or Discover Name response.
- If a valid Open, Network or Security request is received, the Data Link Layer transmits the appropriate response.

**Fig. 25 (Polling Sequence Diagram)** illustrates the operations.

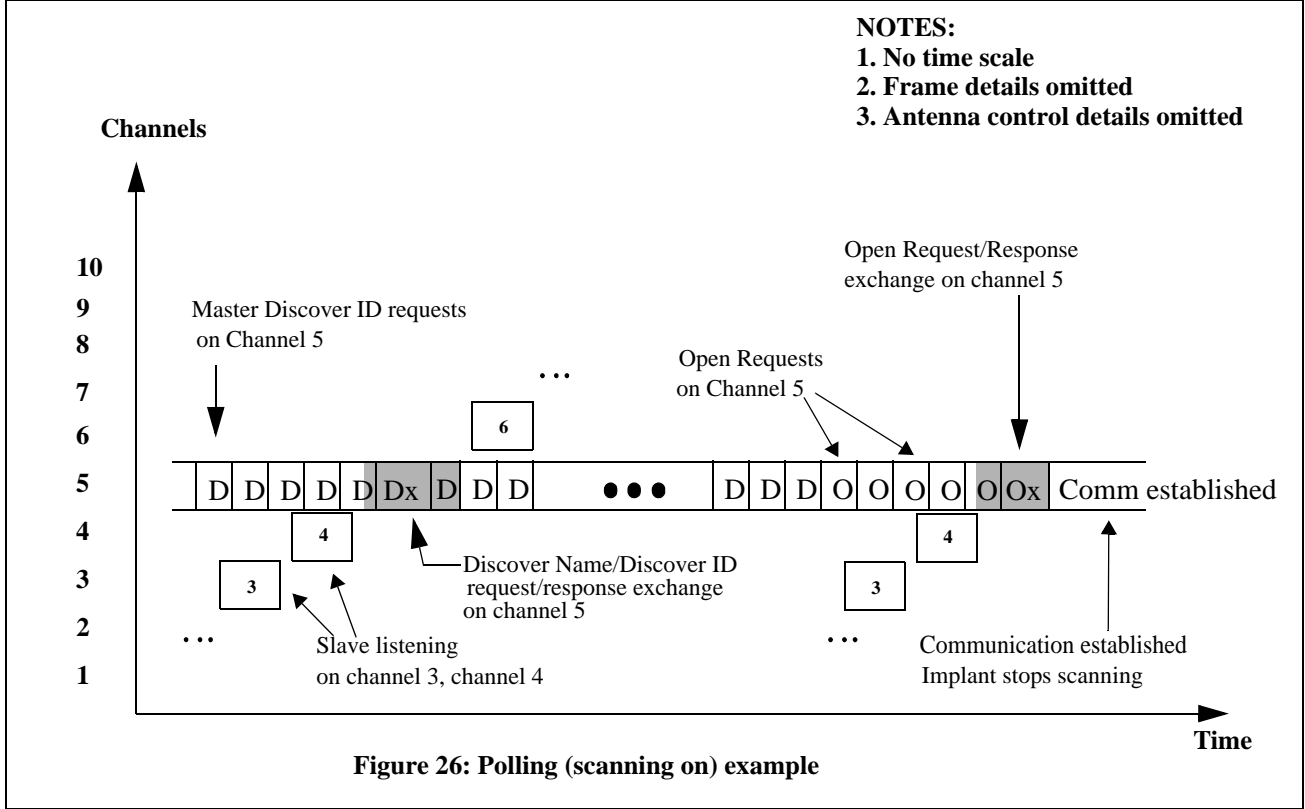


The polling service can be configured in one of two ways:

1. scanning on
2. scanning off (alternating native/ async receptor wakeup)

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In the scanning on case, the data link layer listens for a discover, open, network or security packet. If these valid packets are not received (channel listen timeout), a new channel is selected for (native mode) listening. This process continues until the polling duration timer expires or a valid open packet is received. **Fig. 26 (Polling (scanning on) example)** illustrates the Discover and Open services on a master and polling (scanning on) on a slave. The stations successfully exchange Discover ID/Discover Name request/response packets. At some later time the master switches from Discover requests to Open requests. Eventually, the slave lands on the channel selected by the master. The slave receives an Open request from this master. The slave verifies the Open request, and transmits an Open response to establish communication with the other station.

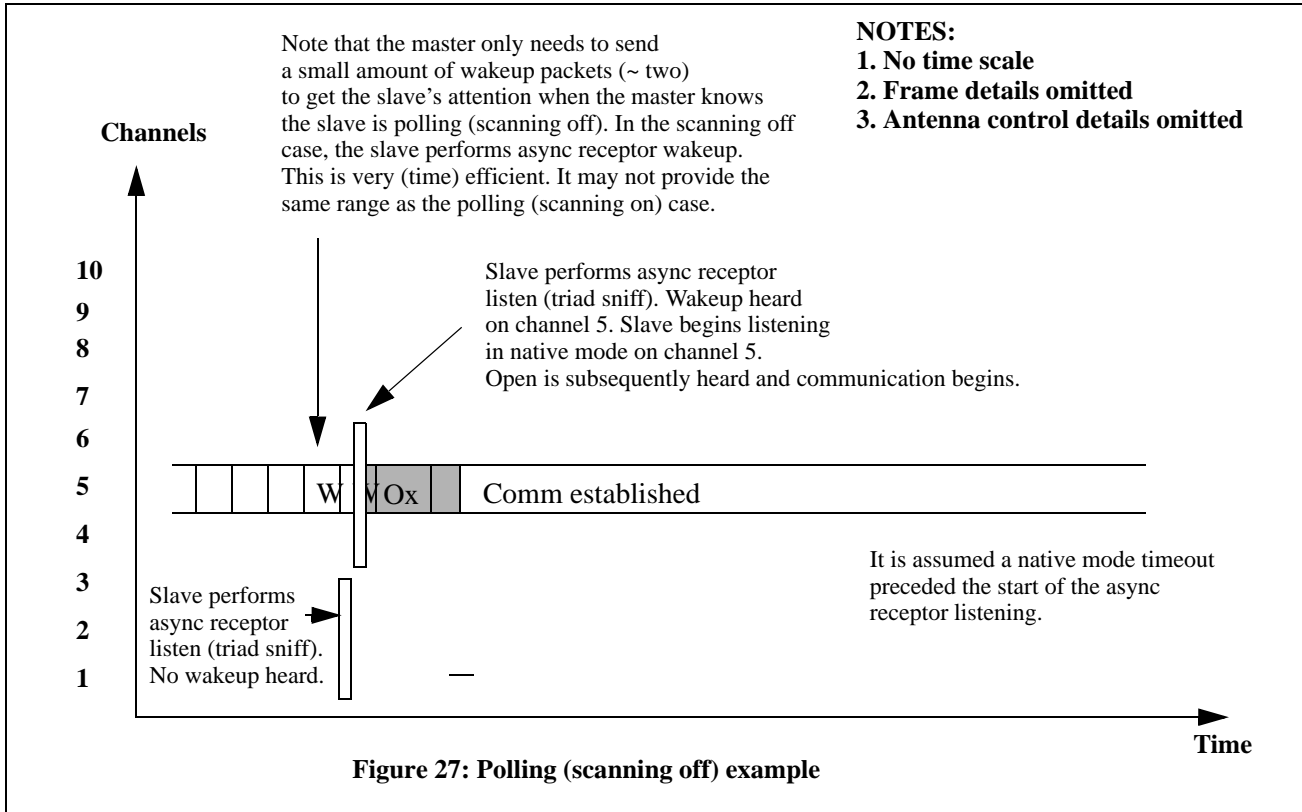


When polling is invoked (scanning off case), the Data Link Layer dwells on the selected channel for a period of time, listening for a Discover, Open, Network or Security packet. If these valid packet types are not received (native mode timeout), the Data Link Layer begins listening for a wakeup packet. If a valid wakeup packet is received, the slave begins listening for a valid native mode packet again. This process continues until the polling duration expires, or a valid open packet is received.

A polling station only responds to Discover, Open, Network or Security packet. All other packet types are ignored during polling. When the polling station detects a valid Open request, it stops polling its channels and remains in native mode while two way communication continues.

Total duration of the polling mode is configurable.

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### 5.2.8.1 REQUIREMENTS

#### TLMM\_S\_241 - POLLING ENABLING CRITERIA

If the polling feature is enabled then it will be activated:

1. Pre-session – when a polling service request is received from the upper layer (i.e., valid wakeup packet received),
2. Post-session – when channel recovery is terminated unsuccessfully and the patient name service request is received from the upper layer.
3. Post-session – when a close request packet is received and the patient name service request is received from the upper layer.

The slave will use the polling duration in the open packet

[If session is not opened then default polling time value from the initialization data provided by the host will be used.]

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### TLMM\_S\_035 - POLLING - SERVICE REQUEST FROM UPPER LAYER

When invoking a Polling service request before a session has been established, use the Total Initial Polling Duration time provided by the host as part of initialization data when initialization service request is invoked.

[The polling timer can also be programmed as via Open master packet (see **5.2.10 OPEN SESSION**), this timer value specifies the duration of the polling period.]

**TABLE 17: POLLING SERVICE REQUEST (SLAVE)**

FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	1	The type of service request	0x0A -Polling service
Sub-type	1	The service request sub-type	0x01 - Poll upon POR 0x02 - Poll upon Tel B ID (C only) 0x03 - Poll upon schedule time (C only) <sup>(1)</sup> 0x06 - Poll upon TelM
Size	2	The size of the info field	Size of <b>Table 126 (SLAVE POLLING REQUEST)</b>
Info	Size of <b>Table 126 (SLAVE POLLING REQUEST)</b>	See <b>Table 126 (SLAVE POLLING REQUEST)</b>	See <b>Table 126 (SLAVE POLLING REQUEST)</b>
CRC	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

### TLMM\_S\_256 - POLLING - SERVICE RESPONSE TO UPPER LAYER

When poll request is received, the Data Link Layer will validate the Poll service request.

[The content of the response to the Upper Layer is specified in **Table 18 (POLLING SERVICE RESPONSE (SLAVE))**]

**TABLE 18: POLLING SERVICE RESPONSE (SLAVE)**

FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	1	The type of service request	0x0A -Polling service



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**TABLE 18: POLLING SERVICE RESPONSE (SLAVE)**

Sub-type	1	The service response sub-type	0x01 - Poll upon POR 0x02 - Poll upon Tel B ID (C only) 0x03 - Poll upon schedule time (C only) 0x06 - Poll upon Tel M
Size	2	The size of the info field	1
Info	1	Status of the service request	0x01 - Successful 0x10 - Invalid CRC 0x12 - Invalid size <sup>(1)</sup> 0x13 - Invalid request type (This code can occur if the service request is sent using an interrupt other than service request0 (there is a buffer/ service request mismatch). 0x14 - Invalid Poll subtype 0x15 - Request in invalid state <sup>(2)</sup> 0x24 - Request invalid during EEPROM read 0x2A - Request invalid during EEPROM write 0x2B - Request invalid as host requires secure but local wake up does not include security
CRC	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

1. It's invalid size if the size is zero or greater than what's indicated in **Table 126 (SLAVE POLLING REQUEST)**.
2. See **Table 7 (EXTERNAL SERVICES REQUEST VERIFICATION)** for the invalid states.

The polling mode (scanning on or off) is selected using the parameter “slave scans during polling” in **TABLE 123: Master parameters from host**. This is communicated to the slave via a wakeup packet.

If slave is authorized to open an “unsecure” by the host, and a valid local wakeup “secure or unsecure user data/network packet” request is received, when polling request (upon Tel M) is received, then slave will listen in native mode for the network data request packet. See **TLMM\_S\_434 - NETWORK DATA - PROCESSING POLLING REQUEST** for details.

**TLMM\_S\_432 - POLLING - HOST REQUIRES SECURE BUT LOCAL WAKEUP PACKET DOES NOT INCLUDE SECURITY**

If slave’s “authorized to talk unsecurely” parameter is false as provided by the host, and a valid local wakeup packet with “security user data/network packet” set false is received, when polling request (upon Tel M) is received, slave will send an invalid polling response to upper layer.

[Host authorizes Tel M to talk secure/unsecure as part of initialization.]

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**TLMM\_S\_240 - POLLING INITIATION**

Once the polling feature (scanning off) is activated Pre-session the slave will start the polling timer, start the native mode timer and start listening for a native mode packet. The native mode listen channel will come from the recently received wakeup packet.

Once the polling feature (scanning off) is activated Post-session the slave will start the polling timer and start listening for wakeup packets.

When the polling feature (scanning on) is activated (pre or post session) the slave will start the polling timer, start the channel listening timer and start listening for a native mode packet on a channel.

[For the polling (scanning off) case, if no wakeup packet has been received (i.e. Poll upon POR), the listen channel will be chosen randomly.

For the polling (scanning on, pre session) case, if Unicast wakeup packet has been received, the first listen channel will be the channel number indicated in the Unicast wakeup packet; if Global wakeup packet has been received, the first listen channel will be a randomly selected channel number.

For the polling (scanning on, post session) case, the first listen channel will be the channel number used in the last session.

Note that the slave's polling mode (scanning on or scanning off) comes from EEPROM until a wakeup packet is received.]

While polling, the slave will process valid Discover ID, Discover Name, Network, Security and Open master (request) packets. Other master packets will be ignored.

**TLMC\_S\_252 - POLLING - RESTART NATIVE MODE TIMER OR CHANNEL LISTEN TIMER**

The slave will do the following upon the receipt of a valid discover ID, or discover name packet:

1. Restart the native mode timer for the polling (scanning off) case. Restart the channel listen timer for the polling (scanning on) case.
2. Restart the polling timer using the "last polling" value for the polling. "Last polling" is the latest polling duration via the initialize service or polling duration via downlink open packet.

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## TLMC\_S\_037 - POLLING - NATIVE MODE TIMEOUT/ CHANNEL LISTEN TIMEOUT

The slave will do the following upon a native mode timeout/ channel listening timeout for the scanning off/ scanning on cases respectively:

1. Begin listening for wakeup for the scanning off case. Utilize continual asynchronous receptor wakeup listens to do this. It will continue to listen for wakeup until a valid wakeup packet is received, or the polling timer expires.
2. Select a new channel for (native mode) listening for the scanning on case. Note that this is done using two phases:
  - a. Phase 1 - random channel listening - the slave will randomly select a channel and will restart the channel listening time and listen for a valid packet from the master. If no valid open packet has been received and the service duration timer is still active, the slave will switch to the phase 2 approach.
  - b. Phase 2 - sequential channel listening - the slave will sequentially select the next channel and will restart the channel listening time and listen for a valid packet from the master. When every channel has been selected once the slave will switch to the Phase 1 approach.

[Note that the slave will scan on the bands specified in **Table 124 (SLAVE PARAMETERS FROM HOST)**. See the parameter called “telemetry scheme and waveform setup”.]

## TLMM\_S\_268 - POLLING - VALID WAKEUP PACKET

The slave will start the native mode timer and begin listening for a valid native mode packet if a valid wakeup packet is received during polling (scanning off).

The Discover ID and Discover Name response is described in the Discover section. The Data Link Layer maintains a list of Station IDs received from Discover Name request packets. It is used to decide the appropriate response of the Discover ID request. This list shall be discarded upon completing the polling duration.

## TLMC\_S\_038 - POLLING - TERMINATION

The polling will terminate when Polling duration timer expires, or when a valid Open request is received. The slave shall discard all the master IDs stored during the polling operation. The slave will maintain the ID of the master with which communication is established.

## TLMC\_S\_039 - POLLING INDICATION TO UPPER LAYER

A polling timeout event indication to the Upper Layer will be generated when the polling timer expires. See **TABLE 19: POLLING INDICATION (SLAVE)**.

**TABLE 19: POLLING INDICATION (SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0x21 - Polling indication
Sub-type	N/A	1	The indication sub-type	N/A
Size	N/A	2	The size of the info field	1
Info	Polling indication status	1	Status of the indication	0x03 - timeout

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**TABLE 19: POLLING INDICATION (SLAVE)**

CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.
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5.2.9

**DISCOVER**

This service is invoked by the Upper Layer in the master to identify multiple slave stations within range. Slave stations identified during the Discover Service Duration Time will be passed on to the Upper Layer.

The Discover service is divided into two types:

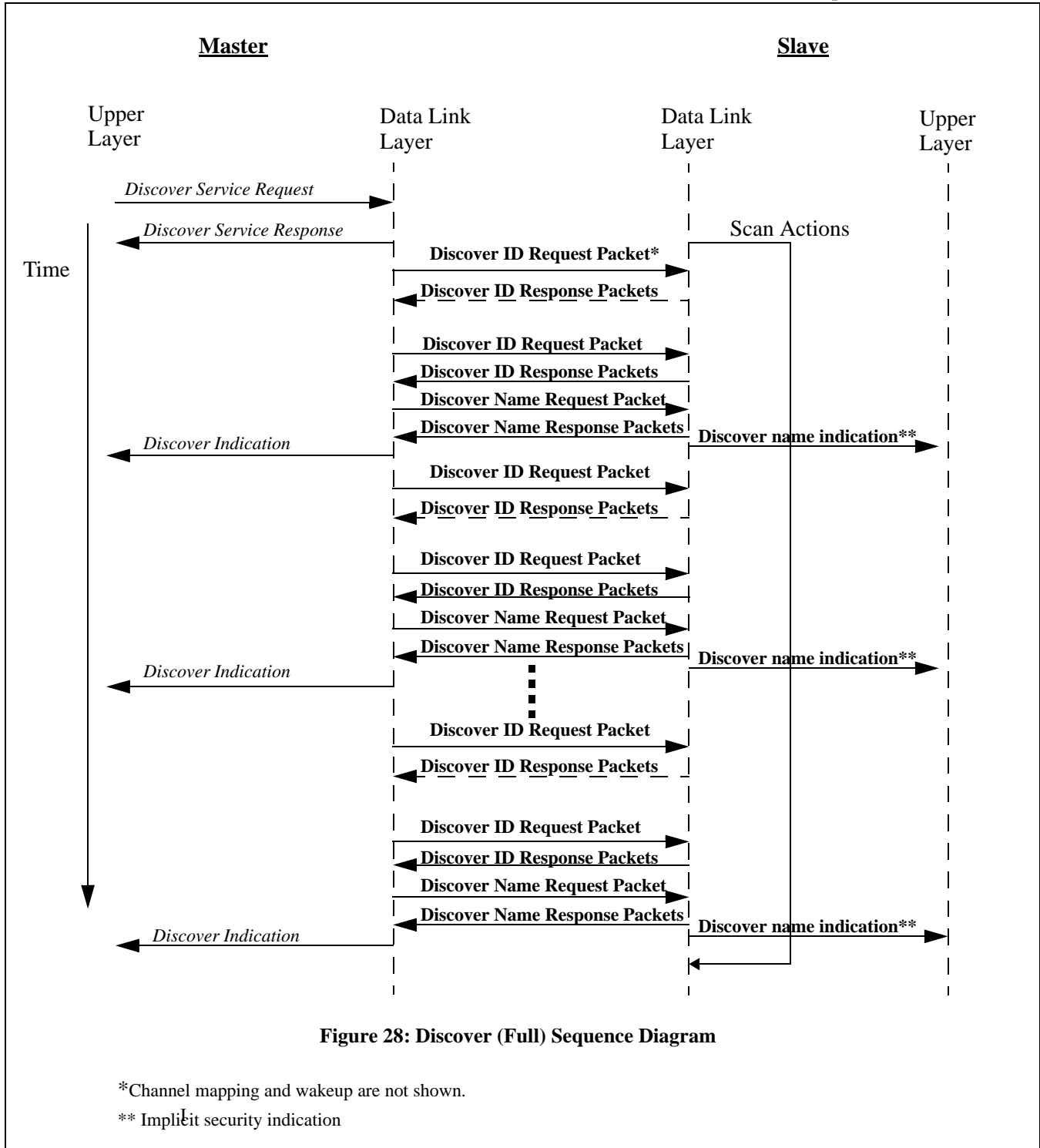
- **Discover Full** - is used to identify ALL the slave stations whose ID matches the slave ID specified in the service request. The Discover Full service obtains the device ID and the name for each device identified. The six bytes of slave ID may contain wildcard.
- **Discover Stop** - is used to stop previously invoked discover service.

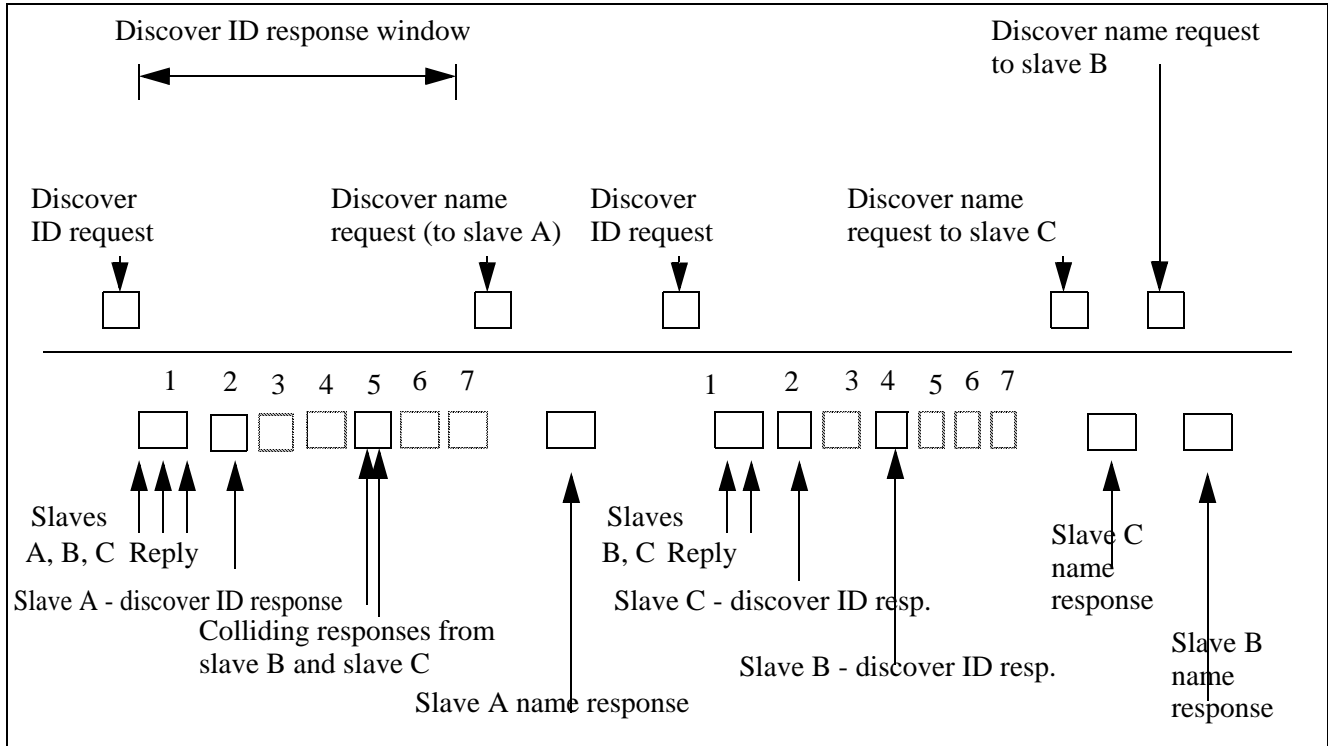
The slave must be listening in order to receive the Discover request packet(s). To facilitate the Open service request, the master may request the slave to extend its scanning duration.

The following bullets summarize the operations of this service.

- Upper Layer generates the Discover request to the Data Link Layer.
- The Data Link Layer uses the best available channel for communication.
- The Data Link Layer transmits wakeup packet(s) to wakeup the slave(s).
- The Data Link Layer periodically transmits Discover ID request packets alternating between the two antennas, and listens for Discover ID responses from one or more slaves.
- The Data Link Layer requests the Station Name String from the slaves responding to the Discover ID request.
- The Data Link Layer records information received from the slave(s) and presents the information to the Upper Layer.

**Fig. 28 (Discover (Full) Sequence Diagram)** illustrates the Discover service operations.





**Figure 29: Discover Full example (slave doesn't scan during polling)**

In telemetry M, the wakeup packet instructs the slave to use a particular channel for native mode when the slave does not scan during polling. If multiple slaves wake up, they may all hear and respond to the first discover ID request. This may cause collisions. In telemetry M, the discover full response can be configured to occur with a random delay (to reduce collisions). The slave responds randomly in “slot” 1, 2, 3, 4, or 5 (see **Fig. 29 (Discover Full example (slave doesn't scan during polling))**). The master listens for the discover ID response window after each discover ID request.

When the slave scans during polling, the discover ID response window is one uplink frame. Note that the slave begins scanning on a random channel. This is the collision avoidance mechanism for that configuration.

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## 5.2.9.1 REQUIREMENTS

### TLMC\_M\_010 - DISCOVER SERVICE REQUEST FROM UPPER LAYER

When invoking a Discover service request, the Upper Layer will provide information as specified in **Table 20 (DISCOVER SERVICE REQUEST (MASTER))**.

**TABLE 20: DISCOVER SERVICE REQUEST (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x82 - Discover service request
Sub-type	N/A	1	The service request sub-type	0 - Discover Full, 1 - Discover Stop
Size	N/A	2	The size of the info field	6
Info <sup>(1)</sup>	Discover Slave ID	6	Slave ID consists of six bytes: Model ID - two bytes, SubModel ID - one byte, Serial # - three bytes.	Six bytes of slave ID: For Discover Full. The Discover slave id may contain wild cards.
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

1. The discover service has two additional parameters which control its behavior: discover service duration and discover ID collision avoidance duration. See **Table 123 (Master parameters from host)**.

The Discover Slave ID may contain a wild card specification in its Model, Sub-Model and/or Serial Number. However, the Slave ID with wild card specification must follow the hierarchy indicated in **Table 21**

### TLMC\_M\_011 - VALID SLAVE ID

The valid slave IDs with wild card specification are defined in **Table 21 (VALID SLAVE ID WITH WILD CARD)**.

**TABLE 21: VALID SLAVE ID WITH WILD CARD**

MODEL NUMBER	SUB-MODEL NUMBER	SERIAL NUMBER
Specified	<b>Wild Card (0x00)</b>	<b>Wild Card (0x00)</b>
Specified	Specified	<b>Wild Card (0x00)</b>
<b>Wild Card (0x00)</b>	<b>Wild Card (0x00)</b>	<b>Wild Card (0x00)</b>

Any Slave ID with wild card specification not in **Table 21** is considered an invalid target slave ID.



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### 5.2.9.2 DISCOVER FULL

This section describes the requirements for the Discover service type Full. The Discover Full service is used to identify all the devices within telemetry range. It will also try to obtain the Device Name for each device identified.

#### TLMC\_M\_024 - DISCOVER FULL - RESPONSE TO UPPER LAYER

A Discover service response to the Upper Layer will be generated when a Discover Full service request is received.

[The content of the response to the Upper Layer is specified in **Table 22 (DISCOVER SERVICE RESPONSE (MASTER))**.]

**TABLE 22: DISCOVER SERVICE RESPONSE (MASTER)**

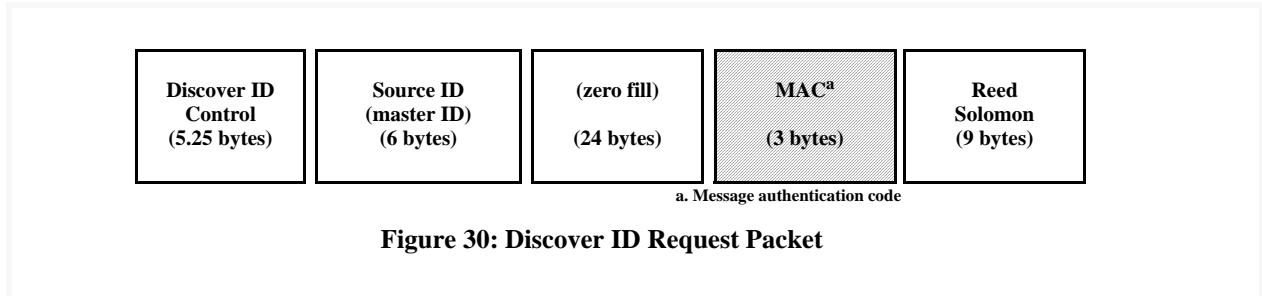
FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x82 - Discover service response
Sub-type	N/A	1	The service response sub-type	0 - Discover Full 1 - Discover Stop
Size	N/A	2	The size of the info field	1 byte
Info	Discover service status	1	Status of the service request	0x01 - Request initiated 0x02 - Request invalid in current state (state is Comm) 0x03 - Request invalid in current state (state is Recovery; slave scanning) <sup>(1)</sup> 0x04 - Request invalid in current state (state is Recovery; slave not scanning) <sup>(1)</sup> 0x05 - Request invalid in current state (state is Inactive) 0x07 - Request invalid in current state (listening for Medical Event) 0x08 - Request invalid in current state (state is disable, not reading EEPROM) 0x0A - Parameter value error <sup>(2)</sup> 0x0F - Request not serial (another service is in progress) 0x10 - Bad CRC on service request 0x12 - Invalid size (info size >506) <sup>(2)</sup> 0x24 - Request invalid in current state (state is disable, reading EEPROM) 0x25 - Buffer/ service request mismatch <sup>(3)</sup>
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

1. The slave is considered to be still scanning if (time now - time of last valid slave packet) is less than (slave recovery duration + slave polling duration).
2. If the request info size is greater than 506, 0x12 - Invalid size (info size >506) will be used; if the info size or subtype (if applicable) does not match the value in the request table, "Parameter out of range" will be used.
3. This status can occur if the master host attempts to send a discover service request using service request buffer 1 (instead of buffer 0).

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## TLMC\_MS\_012 - DISCOVER FULL - DISCOVER ID PACKET FORMAT

The Discover ID request packet has the layout indicated in **Fig. 30 (Discover ID Request Packet)**.



**Figure 30: Discover ID Request Packet**

## TLMC\_M\_013 - DISCOVER FULL - DISCOVER ID REQUEST PACKET

When Discover service request is invoked by the Upper Layer, start a service duration timer and transmit a Discover ID request packet.

[A service duration timer will be started; select the least interfered channel (takes approximately 275 +/- 50 msec<sup>(1)</sup>); start the Listen Before Talk (LBT) timer; perform instigator wireless wakeup, send a “first request packet sent” indication to the Upper Layer (see **Table 23**); start the native mode timer (if the slave does not scan during polling), transmit a discover ID request packet.

Note the 'first request packet sent' indication is configurable. See the parameter called 'transmit notification enabled' in **Table 123 (Master parameters from host)**

Also note that the master will perform clear channel assessment before and after transmitting wakeup (if the slave scans during polling). The master will restart the Listen Before Talk (LBT) timer after the second clear channel assessment. This minimizes the interaction between the time it takes the slave to scan all channels and the time before the master starts transmitting wakeup again.]

**TABLE 23: FIRST REQUEST PACKET SENT INDICATION (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0xAA -First request packet sent
Sub-type	N/A	1	The indication sub-type	N/A
Size	N/A	2	The size of the info field	1
Info	indication status	1	N/A	0x01 - successful
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

1. CCA of the MICS band takes approximately 275 msec. CCA of the MEDS band takes approximately 550 msec. CCA of both bands takes approximately 825 msec. Note that if HDR mode is enabled, assessment of each channel, antenna pair is lengthened by 5 msec (to allow the HDR synthesizer to stabilize). This means the CCA of the MICS band is lengthened from 275 msec to 375 msec.

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### TLMM\_M\_269 - DISCOVER FULL - DISCOVER ID RESPONSE WINDOW

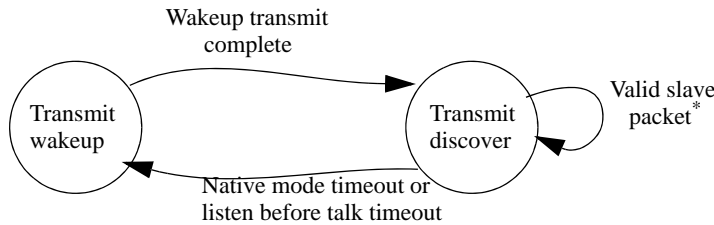
The master shall continue listening for more slave responses upon hearing any response (valid or not) provided the device ID response window is not complete.

### TLMM\_M\_270 - DISCOVER FULL - RESTART NATIVE MODE TIMER

The master will restart the native mode timer whenever it receives a valid discover ID (or discover name) packet from the slave (if the slave does not scan during polling).

[Note that a channel is selected and instigator wakeup is performed when the native mode timer expires. Once instigator wakeup is complete, discover ID is transmitted again. See **Fig. 31 (Simplified master discover full state machine)**

Note that the native mode timer is not used when the slave scans during polling.]



The master transitions between native mode discover and wakeup using the native mode timer if the slave does not scan during polling. The transition is done using the LBT timer otherwise.

Note that discover full will alternate between instigator wakeup and discover transmissions until the service duration timer expires (or stop discover is received).

**Figure 31: Simplified master discover full state machine**

### TLMC\_M\_014 - DISCOVER FULL - RETRY DISCOVER ID REQUEST

If no valid Discover ID slave response packet is received within the discover ID response window, the master shall transmit another Discover ID request packet. The Discover ID retry will continue until:

1. A valid Discover ID response packet is received, or
2. The service duration timer expires, or
3. The native mode timer expires, or
4. The listen before talk timer expires.

[In order to retransmit the Discover ID request due to no slave response from a previous discover ID request data link layer will switch to a different antenna and will retransmit the discover ID request.]

Discover ID slave response packets with mismatched master ID will be ignored.

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## TLMC\_S\_015 - DISCOVER FULL - DISCOVER ID RESPONSE

Upon receiving a valid Discover ID request packet the slave will perform as follows:

1. If the master packet contains an master ID which the slave received previously from a valid Discover Name request packet, then slave response will not be generated.
2. If the master packet contains a master ID which the slave has not received previously from a valid Discover Name request packet, the slave will transmit a Discover ID response packet in the first slave timeslot. It will transmit a second Discover ID response packet in slave timeslot 2, 3, ..., or 7. This timeslot will be randomly chosen (to reduce collisions). Note that the second response is not used if the slave scans during polling.

The slave will restart the native mode timer to allow the receipt of another master packet if the slave does not scan during polling.

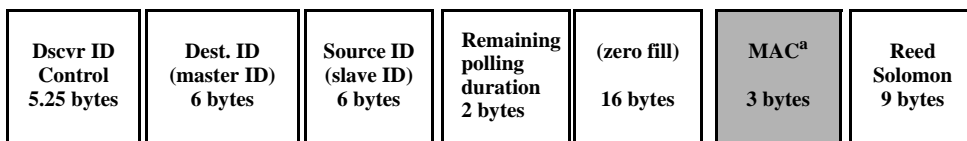
## TLMC\_M\_016 - DISCOVER FULL - LBT OR NATIVE MODE TIMEOUT

While the service duration timer is active and LBT timer expires or the native mode timer expires, the master will reselect the least interfered channel, toggle the antenna, perform instigator wireless wakeup, and transmit a discover ID packet.

[Note that the master will perform clear channel assessment before and after transmitting wakeup (if the slave scans during polling). The master will restart the Listen Before Talk (LBT) timer after the second clear channel assessment. This minimizes the interaction between the time it takes the slave to scan all channels and the time before the master starts transmitting wakeup again.]

## TLMC\_MS\_017 - DISCOVER FULL - DISCOVER ID RESPONSE PACKET FORMAT

The Discover ID response packet has the layout indicated in **Fig. 32 (Discover ID Response Packet)**.



a. Message authentication code

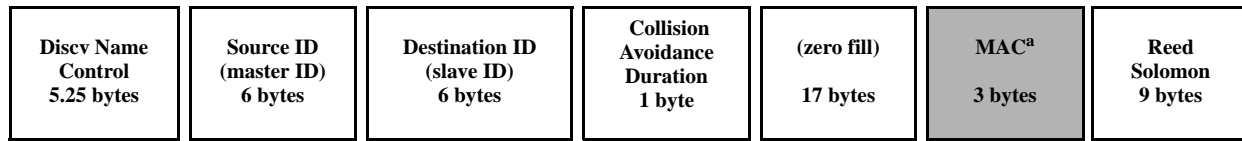
**Figure 32: Discover ID Response Packet**

The Discover Name request is to request the Station Name String from the slave. The Discover Name request is also used to acknowledge the reception of the Discover ID response from the slave.

## TLMC\_MS\_018 - DISCOVER FULL - DISCOVER NAME REQUEST PACKET FORMAT

The Discover Name request packet has the following layout indicated in **Fig. 33 (Discover Name Request Packet)**.

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a. Message authentication code

**Figure 33: Discover Name Request Packet**

### TLMC\_M\_019 - DISCOVER FULL - DISCOVER NAME REQUEST PACKET

After the receipt of a valid Discover ID response, the master will transmit a Discover Name request packet.

[The master will keep track of all the unique slave IDs, the discover name request will be transmitted on the same antenna as was used for Discover ID.

If multiple slave respond during the discover ID response window, the master will sequentially transmit a name request (and wait for a name response) to each slave.]

The Discover Name request is only issued by the master during the Discover service processing. If a valid Discover Name response is not received by the master, the master shall request the Station Name String again by issuing another Discover Name packet.

### TLMC\_M\_020 - DISCOVER FULL - RETRY DISCOVER NAME REQUEST

If no valid slave Discover Name response is received, the master will retry the Discover Name request packet until the discover name retry timer expires. Note that this timer was started when the initial discover name downlink was sent. Once the timer expires, the master will continue the Discover service by transmitting a new Discover ID request packet.

[The retry attempt of the discover name request will use the same antenna as was used for the first discover name request. If no response is received from the retry attempts then discover ID will be transmitted using a different antenna.]

The new Discover ID request packet will be transmitted via the Asynchronous Mode operation, but from a different antenna.

The Discover Name request acknowledges the Discover ID response sent by the slave earlier. The slave shall remember this master such that it will not respond to any subsequent Discover ID request from this master.

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## TLMC\_S\_021 - DISCOVER FULL - DISCOVER NAME RESPONSE

After the receipt of a valid master Discover Name request packet, the slave shall do the following:

1. Transmit the Discover Name response packet(s). see **Table 112 (DISCOVER NAME SLAVE RESPONSE FORMAT)** for details. The proximity status shall be the byte immediately following the slave ID see **Fig. 35 (Proximity status type byte)**.
2. The slave shall store the master station ID from the Discover Name packet for the collision avoidance duration indicated in the Discover Name request packet. The slave shall not transmit any Discover ID response for the subsequent Discover ID request from this master for the duration of the collision avoidance timer.
3. Send a discover name indication (sub-type of 0x01) to the host (see **Table 24 (DISCOVER INDICATION (SLAVE))**). This is an implicit security indication. The indication to the host will not be sent more than once a second.

[The slave shall update its current remaining Scan duration with that from the Discover Name request packet (discover ID collision avoidance duration) if the current remaining Scan duration is shorter. Also extend the listen time by 50ms if the remaining listen time is less than 50ms. The size of the collision avoidance buffer is ten, a circular buffer is used to keep track of number of masters issuing Discover full]

**TABLE 24: DISCOVER INDICATION (SLAVE)<sup>(1)</sup>**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0x22 - Discover indication
Sub-type	N/A	1	The indication sub-type	0x01 = Discover Name received 0x02 = Discover ID received while uplinking medical event
Size	N/A	2	The size of the info field	1
Info	Discover name indication status	2	Status of the indication	1st byte: 0x01 - successful
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

1. The same Discover Indication will not be sent to the host more than once per second. For example, while uplinking medical event, if discover ID is received over and over within 1 second after sending the previous Discover ID received indication, slave shall not send the Discover ID received indication.

## TLMM\_S\_271 - DISCOVER FULL - CANCEL COLLISION AVOIDANCE TIMER

The collision avoidance timer will be canceled upon receiving of an “authorize BAN key exchange service request or update proximity status service request”.

## TLMC\_MS\_022 - DISCOVER FULL - DISCOVER NAME RESPONSE PACKET FORMATS

During the slave response of Discover Name the slave will use one or more of the packet formats as shown in **Fig. 34 (Discover Name Response Packet)**.

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**TLMM\_M\_272 - DISCOVER FULL - SUCCESSFUL NAME**

The master will send a discover indication to the upper layer (with a status of success) if it successfully obtains the slave's name. The format of the indication is shown below:

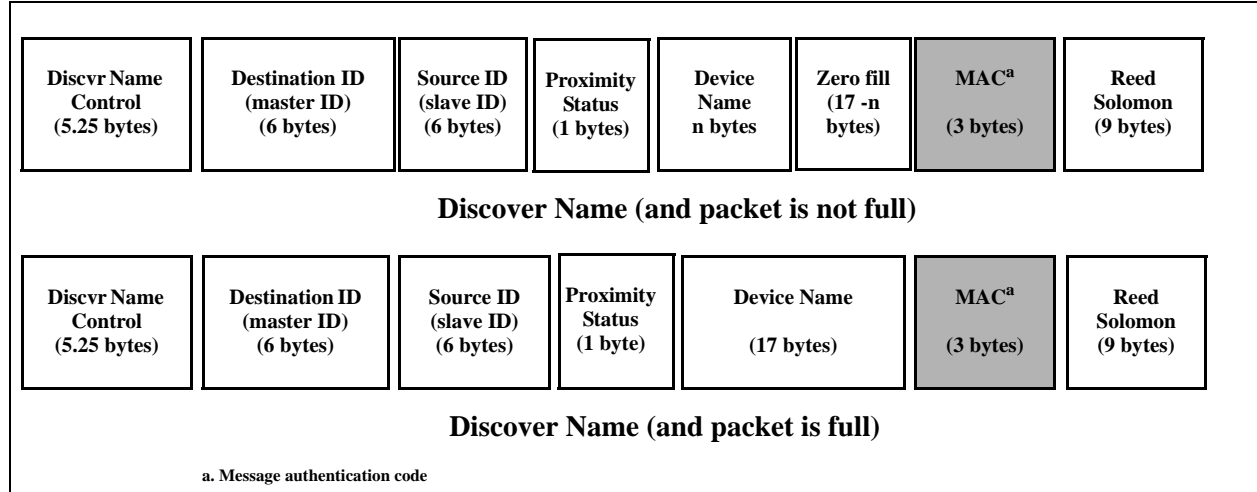
**TABLE 25: DISCOVER INDICATION (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0xA2 - Discover indication
Sub-type	N/A	1	The indication sub-type	N/A
Size	N/A	2	Number of data bytes	1 or N+8 <sup>(1)</sup>
Info	Status	1	The indication status	0x01 - success 0x02 - cancelled <sup>(2)</sup> 0x03 - timeout
	Slave ID	6	The slave ID (6 bytes)	The ID of the slave
	Proximity status	1	The security proximity status	<b>Fig. 35 (Proximity status type byte)</b>
	Slave name	N	Station name string for the slave ID	The slave name
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

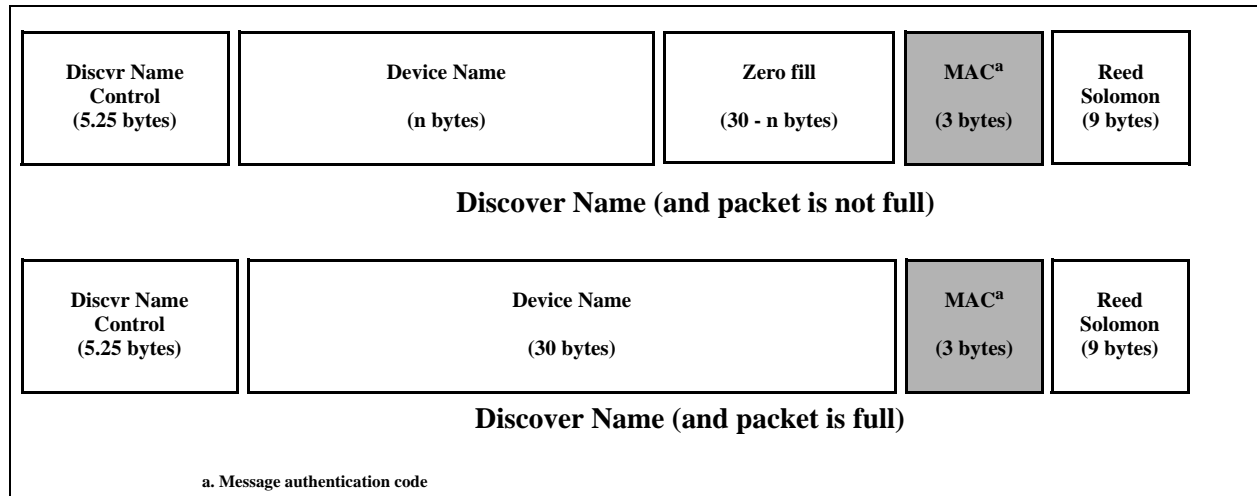
1. The size of 1 if the status is not successful. The size of N+8 is otherwise.
2. This status can occur if the master receives a discover stop service request (while the discover service duration is active). It can additionally occur if emergency interrupts discover.

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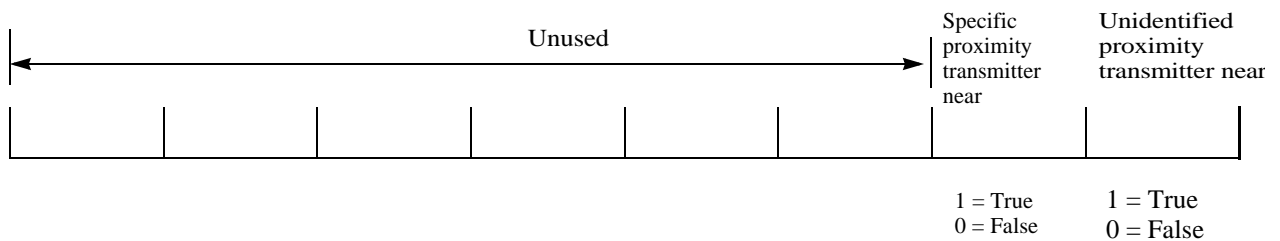
### First Packet



### Ensuing Packet(s)



**Figure 34: Discover Name Response Packet**



**Figure 35: Proximity status type byte**



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### TLMC\_S\_023 - DISCOVER FULL - RESPONSE PARTITIONING

The slave will partition the Discover Name response packet(s) using **Table 26 (DISCOVER NAME RESPONSE FRAGMENTATION)**.

[Note that if a Discover Name (ensuing, not full) packet is needed, it must be the last packet of the transaction.]

**TABLE 26: DISCOVER NAME RESPONSE FRAGMENTATION**

INPUTS		RESPONSE PACKETS			
NAME SIZE (N)	(N-17) MOD 30 EQUAL 0	NAME (FIRST, FULL)	NAME (ENSUING, FULL)	NAME (FIRST, NOT FULL)	NAME (ENSUING, NOT FULL)
N < 17 BYTES	-	0	0	1	0
N >= 17 BYTES	TRUE	1	INT[(D-17)/30]	0	0
N >= 17 BYTES	FALSE	1	INT[(D-17)/30]	0	1

If a valid Discover Name response is not received by the master, the master shall request the Station Name String again by issuing another Discover Name packet.

### TLMM\_M\_273 - DISCOVER FULL - TIMEOUT INDICATION

The master will send a discover indication (with a status of timeout) when the discover full service duration expires. See **Table 25 (DISCOVER INDICATION (MASTER))**.

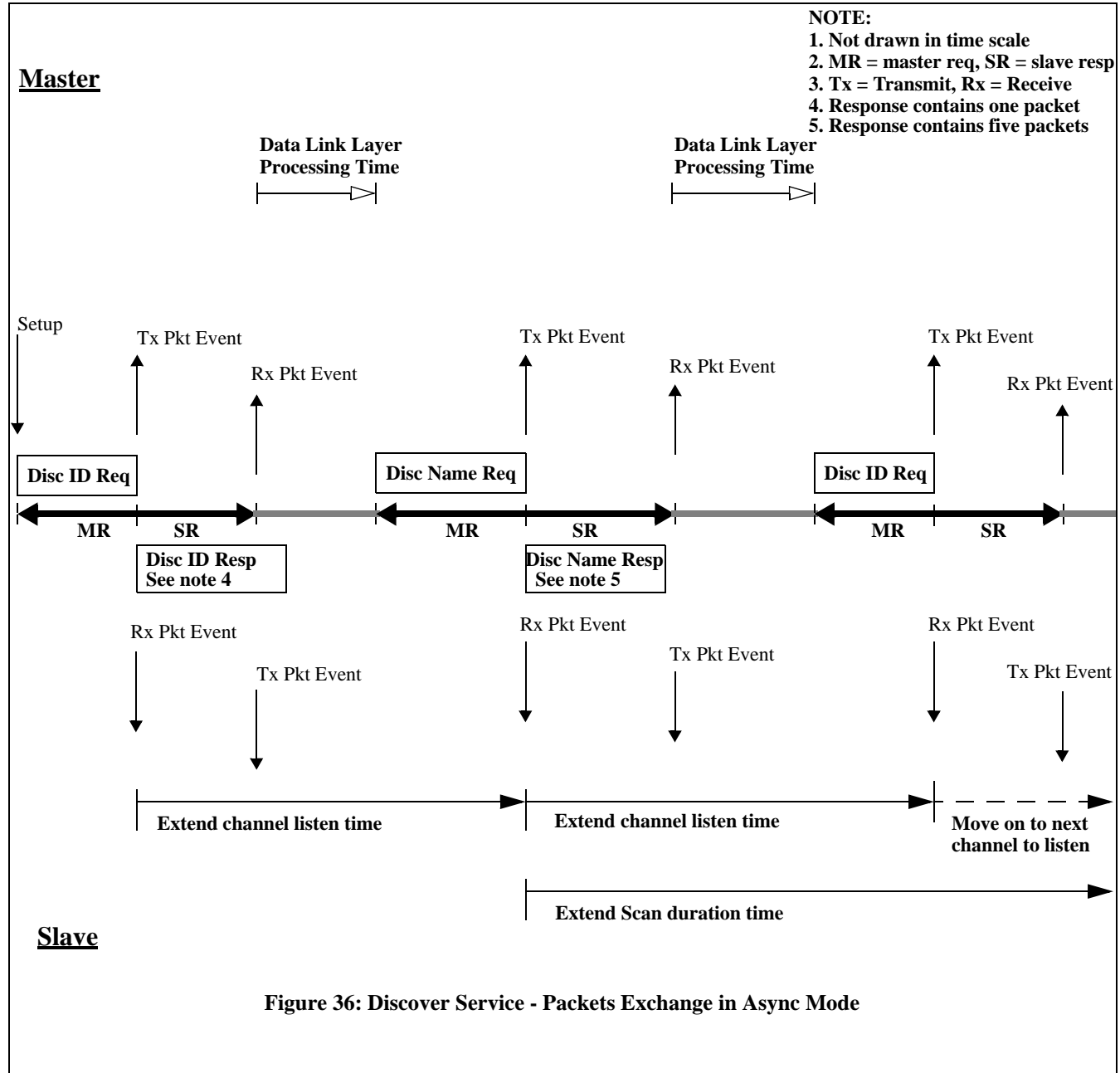
### TLMM\_M\_274 - DISCOVER FULL - STOP

The master will stop the discover full service and send a service response if it receives a stop discover full service request. Additionally it will send a discover indication (status of cancelled). See **Table 25 (DISCOVER INDICATION (MASTER))**.

#### 5.2.9.3 DISCOVER EXAMPLE

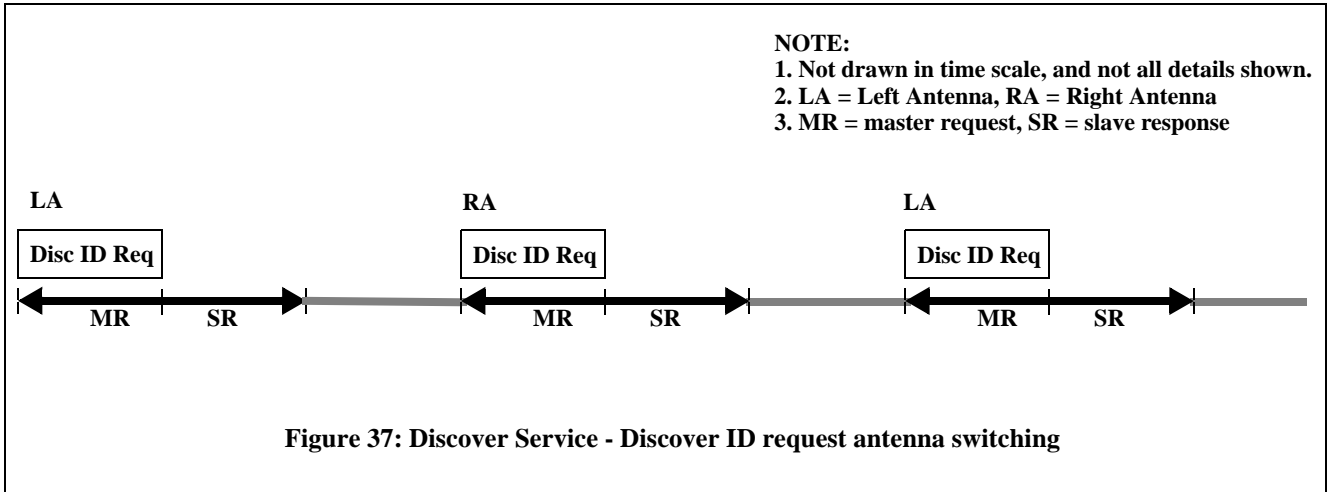
**Fig. 36 (Discover Service - Packets Exchange in Async Mode)** illustrates the exchange of request packets by the Data Link Layer for the Discover services. The response packets may or may not be received properly. At 'Setup', the Data Link Layer invokes the physical layer to transmit the request packet. The physical layer provides an event when the packet is transmitted and another event if the packet is correctly received. The time between the slave packet and the next master packet is used by the master Data Link Layer to process the slave packet. (In **Fig. 36 (Discover Service - Packets Exchange in Async Mode)**, Disc ID Req = Discover ID request, Disc ID Resp = Discover ID response, and so forth.)

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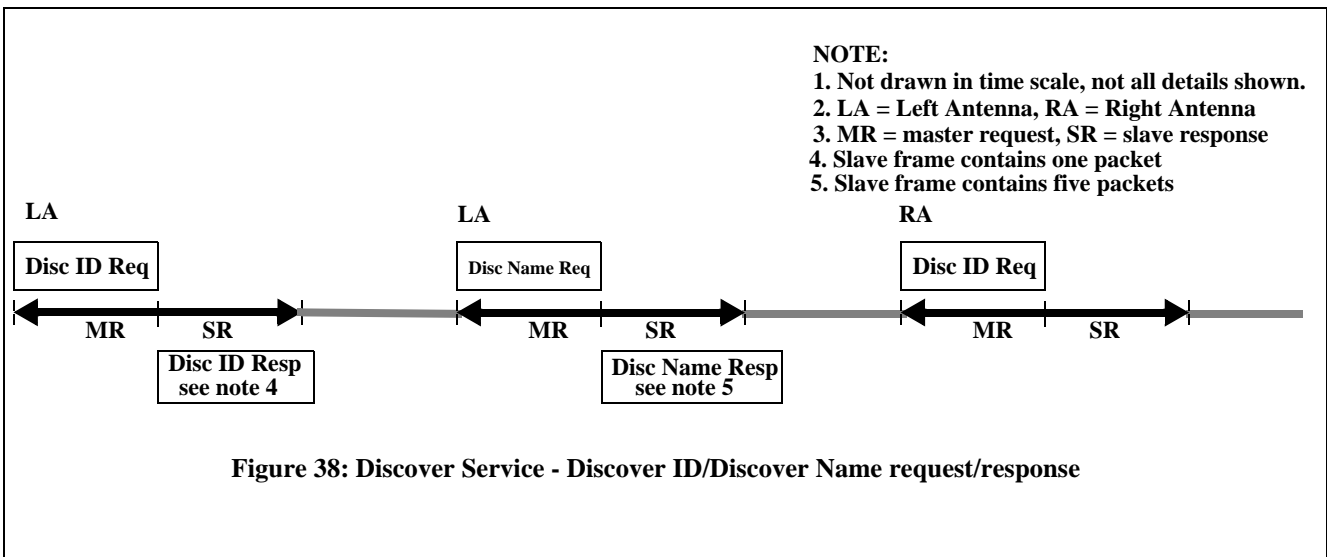


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**Fig. 37 (Discover Service - Discover ID request antenna switching)** shows antenna switching for Discover ID request packets in Async mode.



**Fig. 38 (Discover Service - Discover ID/Discover Name request/response)** shows antenna switching for Discover ID/Discover Name request/response master packets.



The data collected by the master during the Discover services for each slave include the slave ID, the Station Name String, the slave Telemetry M Protocol version, and the antenna on which the responses were received for each slave.

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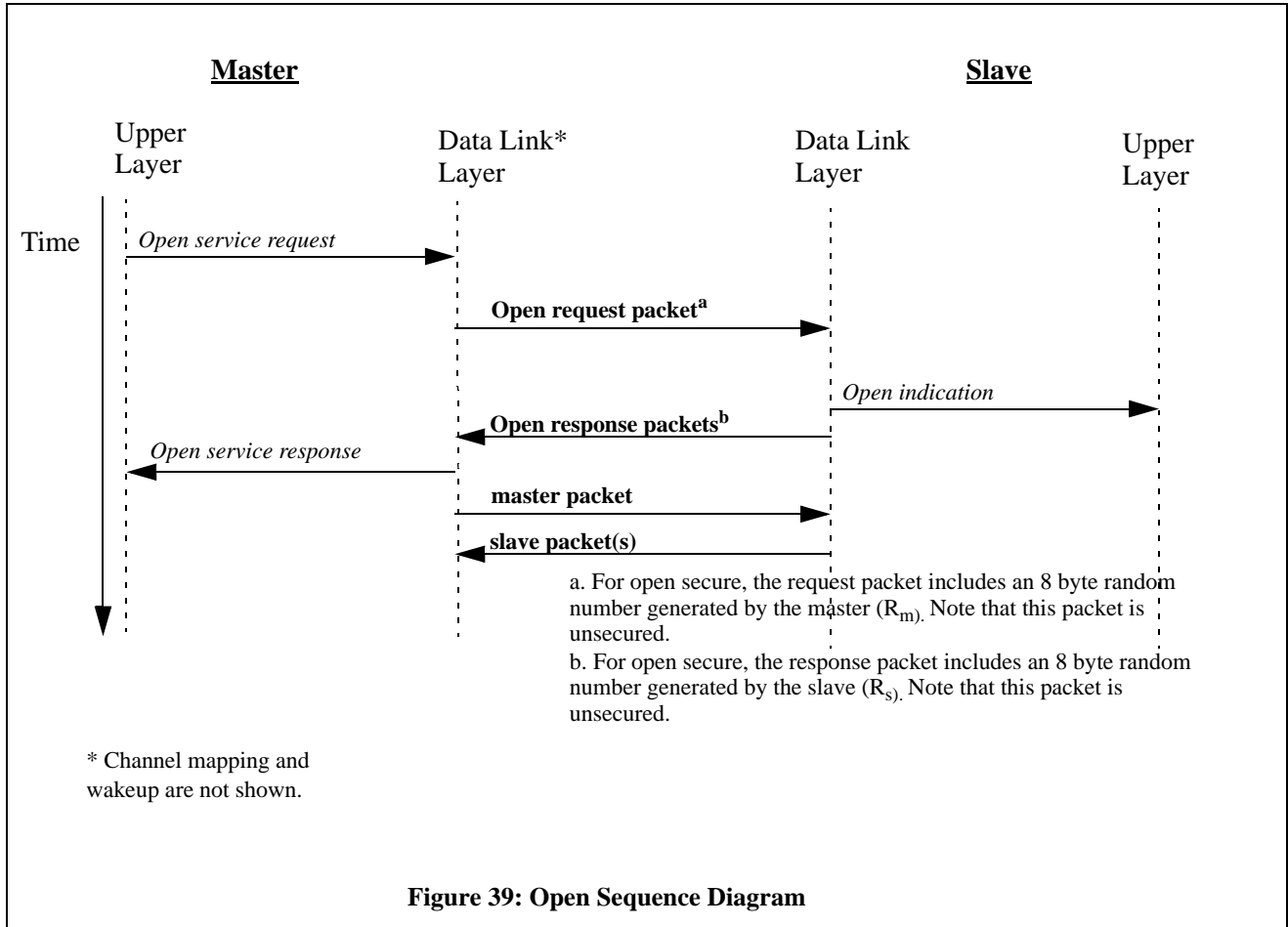
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5.2.10 OPEN SESSION

A station uses this service to establish communications with another station. Normally a master uses the open service to establish communications with a slave. The following bullets briefly summarize this service:

- Upper Layer generates the Open request to the Data Link Layer.
- The Data Link Layer selects a channel and transmits Open requests. The station remains on the selected channel until communication is established or a Service Duration Timeout occurs.
- If an Open response is received, the Data Link Layer verifies the response contents. If the contents are correct, then communication is established between the two stations.
- The Data Link Layer notifies the Upper Layer with the service results.
- To open a secured communication session requires the use of one the two keys:
  - $K_{BAN}$  - Key used during a secure communication session, or
  - $K_{EBAN}$  - Temporary key is used for a duration of a session. This key expires based on a timer or when session is closed.
- A fixed known token value is used to open an unsecured communication session
  - $K_{Token}$  - A fixed known token value is used among the intended stations.

When invoking this service the Upper Layer provides the station ID of the slave station to establish communication. An operational example of the Open service is shown in **Fig. 39 (Open Sequence Diagram)**.



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5.2.10.1 OPEN — GENERAL REQUIREMENTS

**TLMC\_M\_040 - OPEN - UPPER LAYER PARAMETERS**

When invoking an Open service request, the Upper Layer will provide information as specified in **Table 27 (OPEN SERVICE REQUEST (MASTER))**.

**TABLE 27: OPEN SERVICE REQUEST (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x83 =Open service request
Sub-type	N/A	1	The service request sub-type	0x00 = Open unsecure 0x02 = Open secure using $K_{BAN}$ 0x04 = Open unsecure (for Tel. M only) 0x06 = Open secure using $K_{EBAN}$ Note: there are no illegal sub-types. The host supplied sub-type will be “anded” with 0x06. Stated differently bits 1 and 2 are pertinent; bits 0 and 3-7 are imper-tinent.
Size	N/A	2	The size of the info field	6
Info <sup>(1)</sup>	Open Slave ID	6	Slave ID consists of six bytes: Model ID - two bytes, SubModel ID - one byte, Serial # - three bytes.	Slave ID (Model ID, SubModel ID, and Serial# must all be specified.). Model ID must match the model ID in the config file. Slave ID may not change from one open request to another (without an intervening close service request).
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

1. The open service has one additional parameters which control its behavior: open service duration. See **Table 123 (Master parameters from host)**.

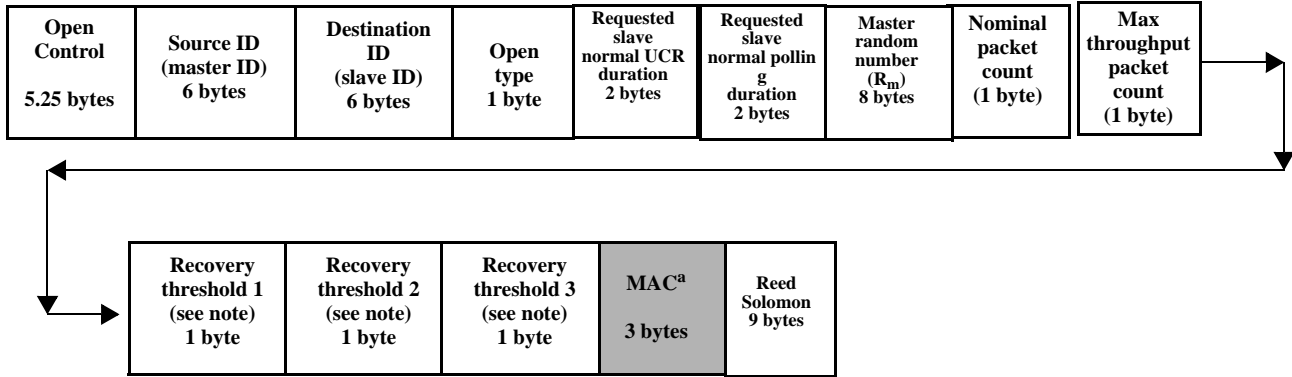
The open master packet is used to establish a bidirectional communication link between a master and a slave where the open request type field is initialized to zero.

**TLMM\_MS\_281 - OPEN - REQUEST PACKET FORMAT**

The open request packet has the format indicated in **Fig. 40 (Open Secure/Unsecure Request Packet)**

The “normal values” for the slave’s unspecified channel recovery (UCR) duration and slave’s polling duration will come from the initialize service request from the master host (**Table 123 (Master parameters from host)**).

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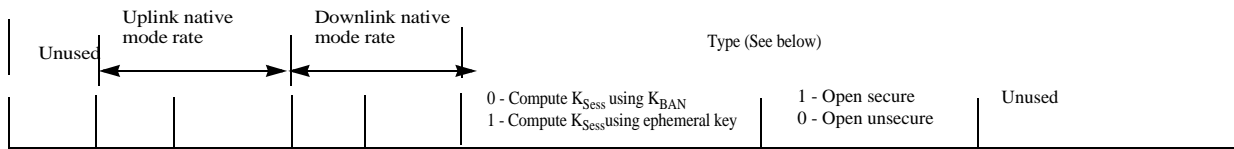


a. Message authentication code

Note: The effective channel recovery threshold is controlled by the power inhibit mode. Recovery threshold 1 is used when the power inhibit mode is idle immediate or roll through mode 1. Recovery threshold 2 is used when the power inhibit mode is roll through mode 2. Recovery threshold 3 is used when the power inhibit mode is roll through mode 3.

**Figure 40: Open Secure/Unsecure Request Packet**

The description of open type byte is as follows:



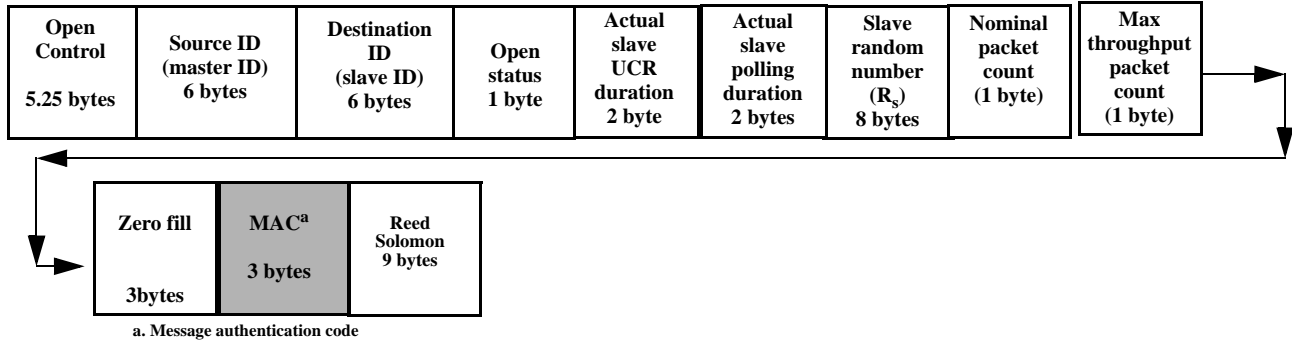
**Figure 41: Open type byte (Request)**

### TLMM\_MS\_282 - OPEN - RESPONSE PACKET FORMAT

The open response packet has the format indicated in Fig. 42 (Open Secure/Unsecure Response Packet)

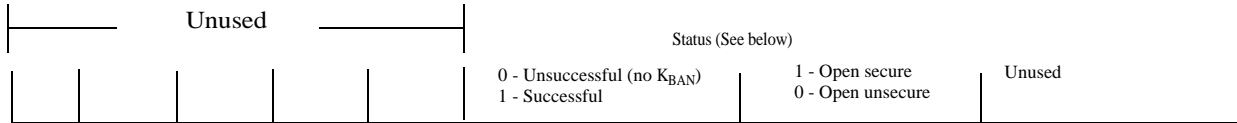
[Nominal packet count and Max. throughput packet count in the open response packet is to support verification testing when Protocol Analyzer is used.]

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**Figure 42: Open Secure/Unsecure Response Packet**

The description of open status byte is as follows



**Figure 43: Open status byte (Response)**



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### **TLMM\_M\_283 - OPEN - TRANSMIT MASTER PACKET**

Upon receiving an open service request, the master will start a service duration timer and transmit the open request packet.

[Start the service duration timer; select the least interfered channel (takes approximately 275 +/- 50 msec<sup>(2)</sup>); start the Listen Before Talk (LBT) timer; perform instigator wireless wakeup (including unsecured or secured user data if any exists); transmit the open request packet (including the 8 byte random number used to compute a session key); send a “first request packet sent” event indication to the Upper Layer (see **Table 23 (FIRST REQUEST PACKET SENT INDICATION (MASTER))**).

Note that instigator wireless wakeup is suppressed if the master knows the slave is scanning. Time now, time of last uplink, and remaining polling duration at the time of the last uplink are used to determine this.

Also note that the master will perform clear channel assessment before and after transmitting wakeup (if the wakeup is not suppressed and the slave scans during polling). The master will restart the Listen Before Talk (LBT) timer after the second clear channel assessment. This minimizes the interaction between the time it takes the slave to scan all channels and the time before the master starts transmitting wakeup again.]

[The algorithm for generating a random number is described in the appendix (see section **7.3 Pseudo Random Number Generation**). Note that the master random number ( $R_m$ ) can be re-used for the entire open secure service. When communication is established and subsequently lost, a new random number ( $R_m$ ) must be generated during open and session recovery.]

### **TLMM\_M\_284 - OPEN - NO VALID SLAVE RESPONSE RETRY REQUEST**

If no response is received, the master will resend the open request till the Service Duration timer is expired.

[If no valid open response packet is received, the master will perform the following:

1. Transmit an open request packet on the alternate antenna.

This process shall be continued until a valid open response packet is received, a Service Duration Timeout occurs, or a Listen Before Talk timer expires.]

### **TLMM\_M\_285 - OPEN - LISTEN BEFORE TALK TIMER OPERATIONS**

If the listen before talk timer expires during an open service, the master will transition to unspecified channel recovery.

[As part of unspecified channel recovery following actions are performed: Re-select the least interfered channel for communication, Start the Listen Before Talk timer, toggle the antenna, perform instigator wireless wakeup, and transmit an open request.

Also note that the master will perform clear channel assessment before and after transmitting wakeup (if the slave scans during polling). The master will restart the Listen Before Talk (LBT) timer after the second clear channel assessment. This minimizes the interaction between the time it takes the slave to scan all channels and the time before the master starts transmitting wakeup again.]

2. CCA of the MICS band takes approximately 275 msec. CCA of the MEDS band takes approximately 550 msec. CCA of both bands takes approximately 825 msec. Note that if HDR mode is enabled, assessment of each channel, antenna pair is lengthened by 5 msec (to allow the HDR synthesizer to stabilize). This means the CCA of the MICS band is lengthened from 275 msec to 375 msec

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**TLMC\_S\_286 - OPEN - RESPONSE TO A VALID OPEN REQUEST**

Upon receiving a valid open request packet, during polling operation, the slave will fill up the transmit frame with N open response packets (“N” = open uplink packet count in **Table 129 (PARAMETERS FROM EEPROM)**). Slave will update the unspecified channel recovery duration and polling duration using the values in the open request packet.

Upon completion of uplinking all the open response packets, the slave will terminate the polling operation; It will then transition to the Comm State. An open indication will be sent to the upper layer (see indication **Table 28 (OPEN INDICATION (SLAVE))**). Additionally the slave will transition to the desired downlink rate and uplink rate specified in the open downlink packet. Finally the slave will reset (to zero) the waveform sequence number.

[Note that the open response packets will include the actual UCR duration and actual polling duration and an 8 byte slave random number ( $R_s$ ).

Slave will restart the native mode time, channel listen time or the medical event transmit time if the timer (native mode time, channel listen time or the medical event transmit time) times out during the uplinking of the open response packets.]

**TLMM\_S\_287 - OPEN - NO RESPONSE TO A VALID OPEN REQUEST**

When slave’s “authorized to talk unsecurely” parameter is false as provided by the host, and a valid open “unsecure” request is received then slave will not transmit any response packets.

[When this happens, slave will continue polling.]

[Host authorizes Tel M to open and/or unsecure session as part of initialization]

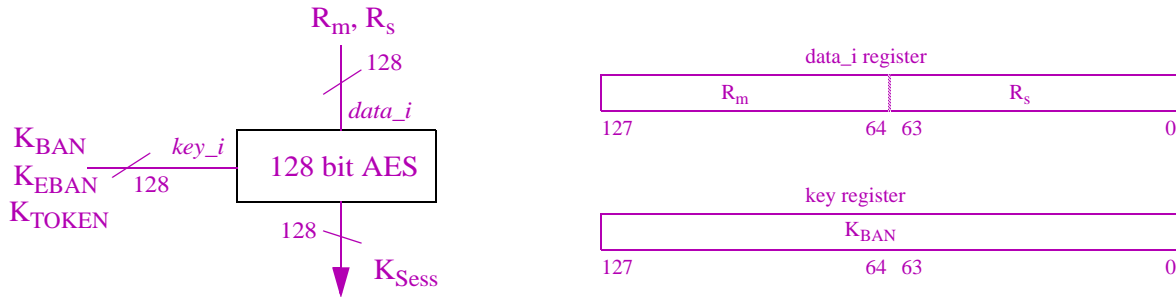
**TLMM\_S\_288 - OPEN - RESPONSE TO A VALID OPEN UNSECURE REQUEST**

When slave is authorized to open an “unsecure” session by the host, and a valid open “secure or unsecure” request is received then slave will accordingly transmit the response packets.

[Host authorizes Tel M to open secure and/or unsecure session as part of initialization]

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The security block of the hardware will be enabled during the communication session.



**Figure 44: Computing a session key**

**TLMM\_S\_289 - OPEN - SESSION KEY COMPUTATION UPON VALID OPEN REQUEST**

Upon the receipt of a valid open request the slave will compute a session key using the eight byte master random number ( $R_m$ ), the eight byte slave random number ( $R_s$ ) and one of the K values using the block cipher: the BAN key ( $K_{BAN}$ ), ephemeral BAN key ( $K_{EBAN}$ ), a fixed known token value ( $K_{token}$ ). See **Fig. 44 (Computing a session key)**.

[The eight byte master random number ( $R_m$ ), slave random number ( $R_s$ ) and BAN Key ( $K_{BAN}$ ) or Ephemeral  $K_{EBAN}$  will be loaded into the appropriate registers of the AES hardware block to generate the Session Key  $K_{Sess}$ . For an unsecure session - A fixed known token value ( $K_{Token}$ ) is loaded to the AES hardware block instead of the  $K_{BAN}$  or  $K_{EBAN}$  key(s)]

**TLMM\_S\_290 - OPEN - RESPONSE SUCCESSFUL**

Open successful status will be transmitted in the open response packet if:

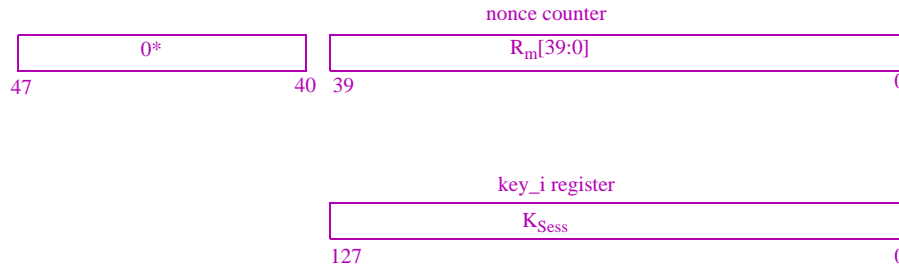
1. Slave has the appropriate Ban Key as request by the master, or
2. Slave is authorized to communication unsecurely and open request is for unsecure open.

**TLMM\_S\_292 -OPEN - ENABLE SECURITY BLOCK**

Upon transmitting the open response the slave will enable the hardware's security block (security register to on). The slave will start the block cipher for message integrity, privacy, and freshness checking. This will be done by writing the session key to the block cipher key register. Additionally, the slave will initialize the block cipher nonce counter using the lower 5 bytes of the master random number ( $R_m$ ). The most significant byte of the nonce counter is set to zero to allow a very long session because once the nonce reaches its max value it stops.

[Slave enables the hardware security block even if an unsecured session is opened - See **Fig. 45 (Open - block cipher initialization)**.]

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\* Note:  $2^{48} - 2^{40}$  packets to be exchanged during a session

**Figure 45: Open - block cipher initialization**

**TABLE 28: OPEN INDICATION (SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0x23 - Open indication
Sub-type	N/A	1	The indication sub-type	0x01 - Open secured 0x02 - Open unsecured
Size	N/A	2	The size of the info field	1
Info	open indication status	1	status of the indication	0x01 - successful
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

[Note: An open indication is sent to the upper layer indicating that a session is opened; continue the Synchronous Mode operation and wait for a valid master packet. The algorithm for generating a random number is described in the appendix (see section 7.3 Pseudo Random Number Generation).]

**TLMM\_S\_293 - OPEN - UNSUCCESSFUL - MISSING KEY**

The slave will send an unsuccessful open response if the following occurs:

1. The slave receives a valid open request and the open type is secured, and
2. The slave does not have the  $K_{BAN}$  or  $K_{EBAN}$  filled that was specified in the open type byte (See Fig. 41 (Open type byte (Request)))

The slave will set the open response type byte to unsuccessful. See Fig. 42 (Open Secure/Unsecured Response Packet).

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### TLMM\_M\_294 - OPEN - A VALID SLAVE RESPONSE

If a valid open response packet is received, the master will perform the following:

1. Return a successful open service response to the Upper Layer.
2. Transition to the Comm State.
3. Compute a session key using the eight byte master random number ( $R_m$ ), the eight byte slave random number ( $R_s$ ) and the BAN key ( $K_{BAN}$ ) using the block cipher. See **Fig. 44 (Computing a session key)**.
4. Transition to the desired downlink rate and uplink rate. Note that these originally came from **Table 123 (Master parameters from host)**.
5. Enable the hardware's security block (security register to on).
6. Start the block cipher for message integrity, privacy and freshness checking. This is done by writing the block cipher key register with the session key. Additionally, the nonce counter is initialized using the lower 5 bytes of the master random number ( $R_m$ ). The most significant byte of the nonce counter is set to zero to allow a very long session because once the nonce reaches its max value it stops. See **Fig. 45 (Open - block cipher initialization)**.
7. Clear the wakeup internal service user data buffer to prevent retransmission of stale user data.
8. Reset (to zero) the expected waveform sequence number.

[Note that the recently exchanged ephemeral BAN key will be used (to calculate a session key) if the ephemeral key is still valid. The ephemeral BAN key is valid until the ephemeral BAN key timer expires. Note: if open type is unsecure,  $K_{token}$  is used.]

### TLMM\_M\_295 - OPEN - RESPONSE WITHOUT $K_{BAN}$ OR $K_{EBAN}$

If a valid open secure response packets is received with unsuccessful status, then master will stop transmitting open requests.

[The master will transition to the standby state if the open uplink indicates the slave lacks the appropriate key.]

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The open secure service status will be returned to the Upper Layer.

### TLMM\_M\_296 - OPEN - RESPONSE TO UPPER LAYER

An open service response will be generated to the Upper Layer when the open service is completed.

[The content of the response to the Upper Layer is specified in **Table 29 (OPEN SERVICE RESPONSE (MASTER))**.]

**TABLE 29: OPEN SERVICE RESPONSE (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x83 - Open service response
Sub-type	N/A	1	The service response sub-type	0x00 = open unsecure 0x02 = open secure (with Kban) 0x04 = open unsecure 0x06 = open secure (with Keban)
Size	N/A	2	The size of the info field	1
Info	Open secure service status	1	Status of the service request	0x01 - Request successful 0x02 - Request invalid in current state (state is Comm) 0x03 - Request invalid in current state (state is Recovery; slave scanning) <sup>(1),(2)</sup> 0x04 - Request invalid in current state (state is Recovery; slave not scanning) <sup>(1),(2)</sup> 0x05 - Request invalid in current state (state is Inactive) 0x07 - Request invalid in current state (listening for Medical Event) 0x08 - Request invalid in current state (state is disable, not reading EEPROM) 0x0A - Parameter value error <sup>(3)</sup> 0x0C - Service cancelled (interrupted by emergency) 0x0F - Request not serial (another service is in progress) 0x10 - Bad CRC on service request 0x12 - Invalid size (info size >506) <sup>(3)</sup> 0x18- Slave has no ephemeral BAN key 0x1E - slave has no permanent key 0x1F - master has no EBAN key 0x20 - master has no permanent BAN key 0x25 - Buffer/ service request mismatch <sup>(4)</sup>
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

1. The slave is considered to be still scanning if (time now - time of last valid slave packet) is less than (slave recovery duration + slave polling duration). Note that a service duration timeout will result in a Data Link response status of 3 or 4 (invalid state, state is Recovery). This is done to aid the upper layer (application) in case the open immediate request fails. A Data Link status of 9 (service duration timeout) would not provide any benefit.
2. Note that this status can also occur when open unsecure is attempted and the slave is not authorized to talk unsecurely.

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3. If the request info size is greater than 506, 0x12 - Invalid size (info size >506) will be used; if the info size or subtype (if applicable) does not match the value in the request table or the slave ID is incorrect, 0x0A - Parameter value error will be used.
4. This status can occur if the master host attempts to send a open service request using service request buffer 1 (instead of buffer 0).

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5.2.11

DATA

The data service request is used for four purposes in Mozart:

1. Transmit a transaction from the master host to the slave host. Upon receipt, the slave host answers with a data service request of its own. The original (master) data service request is typically a read or write request (read slave host memory or write slave host memory). This is the most common use of the data service request.
2. Transmit a RAMware patch from the master host directly to the slave Mozart module. Note the the slave host may never know of this service request.
3. Transmit a RAMware patch from the master host to the master Mozart module. Note that no telemetry packets are needed in this instance.
4. Transmit a RAMware patch from the slave host to the slave Mozart module. Note that no telemetry packets are needed in this instance.

Refer to **7.6 Ramware** for reading or writing to the telemetry module.

This service is used for both master and slave to transfer user data. The following bullets briefly summarize this service operation.

- The user on the source station requests the Data Link Layer to transmit data to the destination station.
- The Data Link Layer on both stations ensures the packets are transmitted and received without error.
- In the destination station, the Data Link Layer notifies the Upper Layer that data was received.
- In the source station, the Data Link Layer notifies the Upper Layer of the data service result.

The Data Link Layer does not generate or interpret the contents of the user data. The Data Link Layer merely transfers the user data between the two stations. The Data Link Layer is responsible for error free delivery of the user data between Data Link Layers of the stations.

The Data service indication is used to inform the Upper Layer that data are received and available. This data includes master and slave Memory Data; slave Supplemental Markers; and Waveform data.

The timing of user data transfers initiated by the master is handled by the master. User data transfers initiated by the slave, such as supplemental markers, are constrained by the parameters of that data transfer.

User data transfers are prioritized in the following manner:

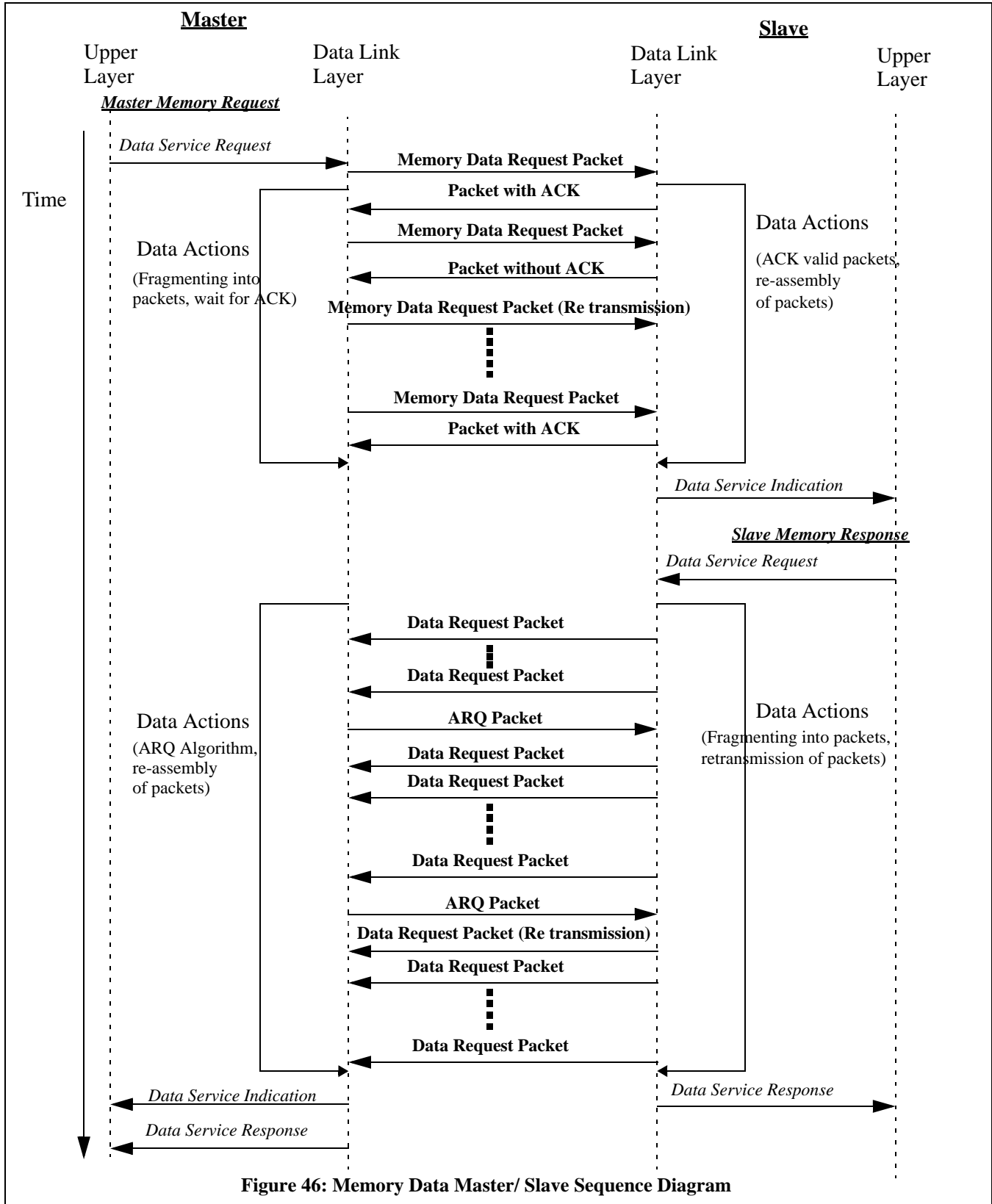
1. Master data transfers have priority over slave data transfers.
2. Slave real-time data transfers have priority over slave Memory Data transfers.

Slave real-time data is interleaved with master communications or within slave communications.

[Note that **5.2.13 Emergency** is implemented by borrowing significantly from components of the Data service.]

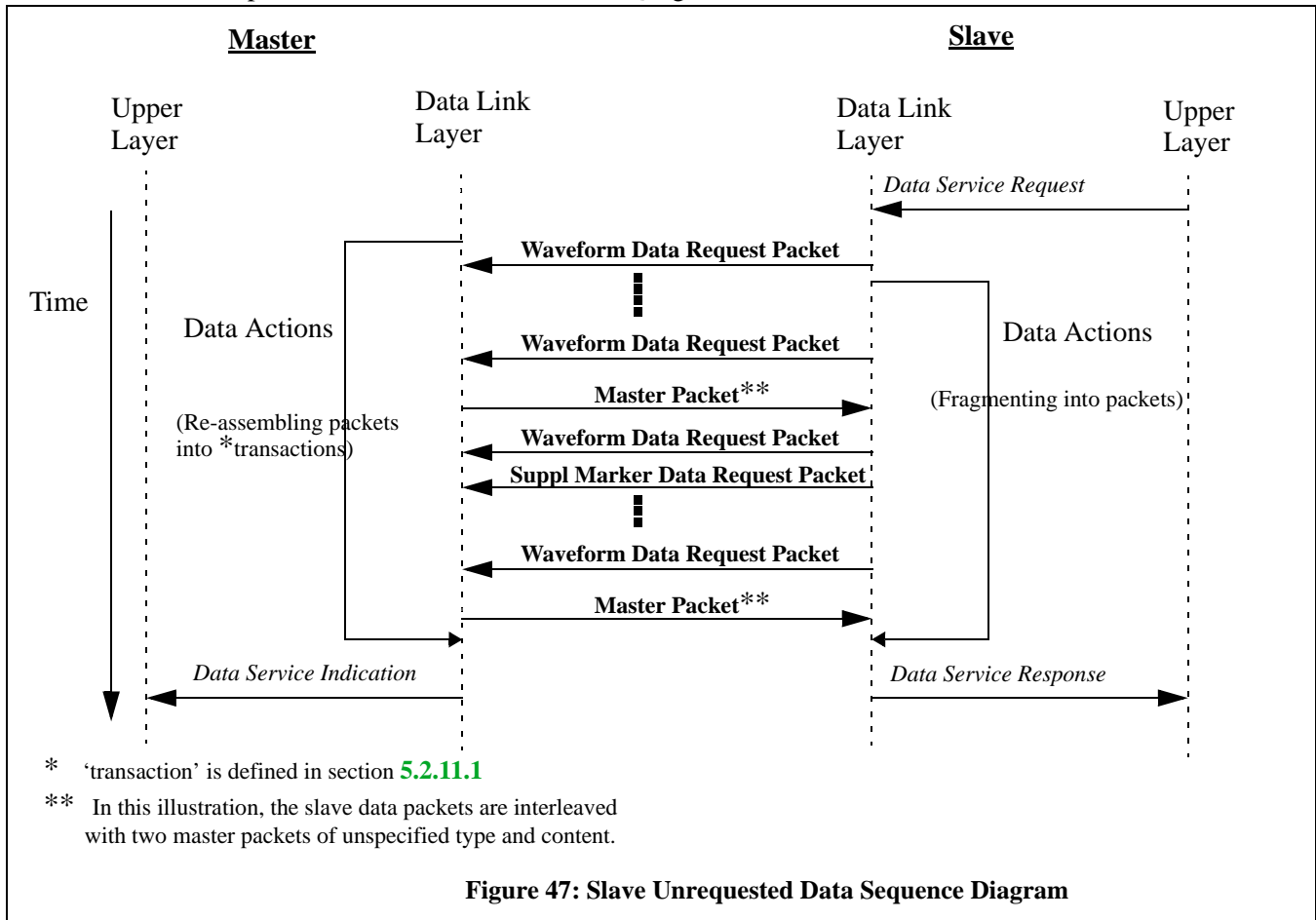
**Fig. 46 (Memory Data Master/ Slave Sequence Diagram)** is a sequence diagram; it depicts an master transmitting a Memory Data request and the slave responding with Memory Data. In this case, the ARQ algorithm is used to acknowledge the slave memory data.





**Figure 46: Memory Data Master/ Slave Sequence Diagram**

**Fig. 47 (Slave Unrequested Data Sequence Diagram)** illustrates the slave transmitting unrequested data packets which do not use the ARQ algorithm.



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### 5.2.11.1 REQUIREMENTS

Each Data service request is considered a *transaction*. The maximum number of data bytes that can be transmitted by the master via one Data service request is the MAX\_DATA\_TRANS\_SIZE. The maximum number of data bytes for a slave is dependent on the maximum transaction buffer size (MAX\_DATA\_TRANS\_SIZE).

User data to be transmitted via a Data request shall have the Upper Layer Header (ULH).

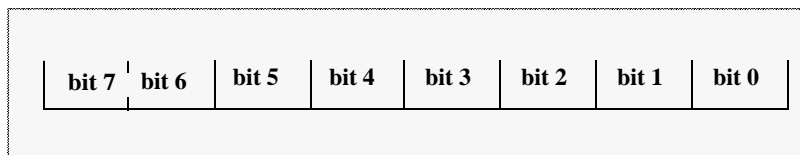
### 5.2.11.2 MASTER'S UPPER LAYER HEADER (ULH) BYTE FORMAT

The data service, emergency service, and network data service request is used to transmit a transaction from the master to the slave. An upper layer message from the master consists of one or more transactions. This message is used to read or write a slave node's memory.

The master's upper layer will add an upper layer header (ULH) byte to the start of each transaction. The master's upper layer header byte contains two active bits:

- **Transaction Type** - This allows the slave to distinguish between a Data and Emergency request.
- **Max throughput data transfer mode enabled** - allows the master to utilize max throughput mode when receiving memory data from the slave. This mode is typically disabled when the slave is performing periodic power inhibit.
- **Reset** - Cancel an (in-progress) master or slave message. A cancelled master message occurs when a transaction (with reset) is received before the final transaction of a multi-transaction master message.
- **Final transaction** - This allows the slave to assemble a multi-transaction request message. Note that this bit must be set for emergency (multi-transaction emergency requests are not allowed).
- **Destination** - These bits are used to indicate the intended destination of the data being sent. The intended receipt could be slave host. Data intended for telemetry module slave, or telemetry module master see section **7.6 Ramware** in **7.0 Appendices** for details.
- **Application reply requested** - If true, the master is requesting an application response from the slave. This is typically true. It can be false in certain cases (to save energy). This field is pertinent to the network service only.

The format of the master's upper layer header byte is given in **Fig. 48 (Master's ULH byte)**.



- bit 7, bit 6 - Transaction Type (01 = Emergency, 00 = Data)
- bit 5 - max throughput data transfer mode enabled
- bit 4 - Reset
- bit 3 - Final Transaction (1 = Final, 0 = More)
- bit 1,2 = destination
  - 00 - Slave host
  - 01 - Tel\_module slave data
  - 10 - Tel\_module master data
  - 11 - Slave host
- bit 0 - Application reply requested (pertinent to the network service only)

**Figure 48: Master's ULH byte**

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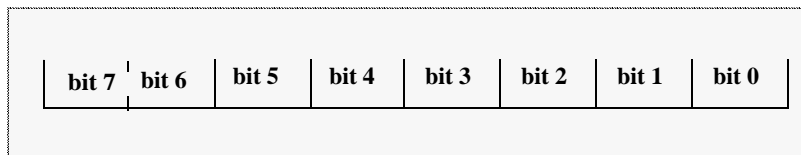
### 5.2.11.3 SLAVE'S UPPER LAYER HEADER BYTE FORMAT

The data service and network data service request is also used to transmit a transaction from the slave to the master. A network data message from the slave consists of one transaction. This message is used to respond to a read or write request.

The slave's upper layer will add an upper layer header (ULH) byte to the start of each transaction. The slave's upper layer header byte contains two active bits:

- **Final transaction** - This allows the master to assemble a multi-transaction response message.
- **Transaction type** - This allows the master to distinguish between a Data and Emergency response.
- **Destination** - These bits are used to indicate the intended destination of the data being sent. The intended receipt could be master host. Data intended for telemetry module slave, see section **7.6 Ramware** in **7.0 Appendices** for details.
- **First transaction** - This is set and used by the master, it is not used by the slave.
- **Buffer transaction number from host**- These are set by the slave host. This helps the telemetry module to determine which transaction should be transmitted first<sup>(3)</sup> The slave host should start with a transaction number of zero and increment thereafter.

The format of the slave's upper layer header byte is given in **Fig. 49 (Slave's ULH byte)**.



**bit 7 - Transaction Type (1 = Emergency, 0 = Data)**

**bit 4 - Final Transaction (1 = Final, 0 = More)**

**bit 5, 6 - destination:**

**00 - Master host**

**01 - Tel\_module slave data**

**10 - Master host**

**11 - Master host**

**bit 3 - First transaction (1 = first, 0 = not first)**

**bits 0, 1, 2 - Buffer transaction numbers from host**

**Figure 49: Slave's ULH byte**

3. If the slave host does not utilize this field, the intended response may be received out of order at the master host.

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#### 5.2.11.4 MASTER DATA

Memory Data requests from the Upper Layer are serialized. One Data request from the Upper Layer has to be completed before the next Data request can be processed.

#### TLMC\_MS\_049 - DATA - UPPER LAYER TO DATA LINK LAYER PARAMETERS

When invoking the Data service request, the master Upper Layer will provide information as specified in **Table 30 (DATA SERVICE REQUEST (MASTER OR SLAVE))**.

**TABLE 30: DATA SERVICE REQUEST (MASTER OR SLAVE)**

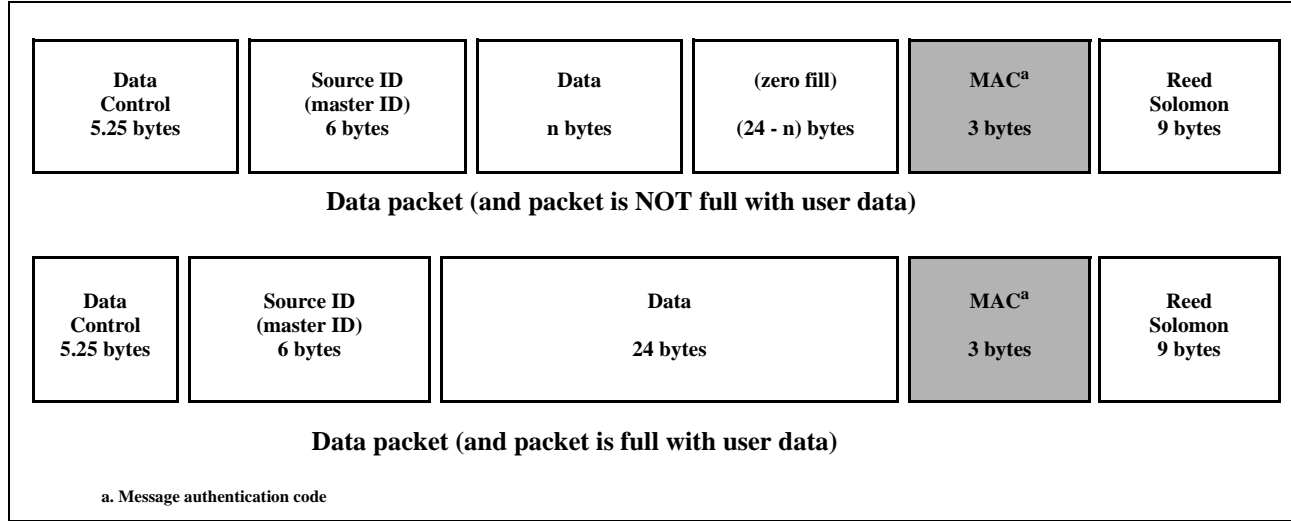
FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x84 - Master Data service request <sup>(1)</sup> 0x04 - Slave Data service request
Sub-type	N/A	1	The service request sub-type	0 - Memory data <sup>(2)</sup> , 1 - Unrequested data <sup>(3)</sup> , 2 - Waveform data <sup>(4)</sup> Note, this field applies to Slave only
Size	N/A	2	The size of the info field	1 to MAX_DATA_TRANS_SIZE (480 - size of STATION_ID) 480 - sizeof (ID) = memory and unrequested data 240 - sizeof (ID) = waveform data
Info <sup>(5)</sup>	Data	N	Transaction to be transmitted	The data to be transmitted. Memory data includes the Upper Layer Header (ULH) as the first byte. See <b>5.2.11.2</b> and <b>5.2.11.3</b> for the master's ULH byte and the slave's ULH byte respectively. Supplemental marker and waveform data do not have a ULH byte.
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

1. A master data service request is used to request the slave to write memory (or to read the slave's memory).
2. A (slave) memory data service request is used to respond to the memory read or write request.
3. A (slave unrequested) supplemental marker data request is used to send the slave's therapy status.
4. A (slave) waveform data service request is used to send the slave's waveform data. The table content will not be checked when data link layer receives the waveform service request interrupt. Data link layer will move the data into the info field and clear the corresponding service request interrupt.
5. The data service has one additional parameters which control its behavior: reply duration. See **Table 123 (Master parameters from host)**.

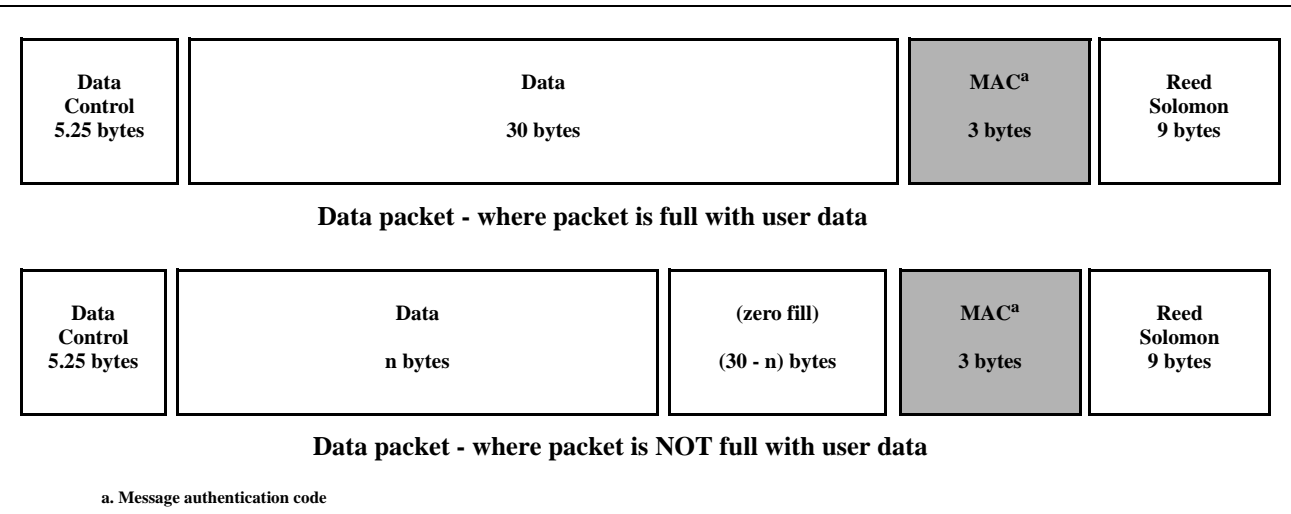
#### TLMC\_MS\_050 - DATA - MASTER REQUEST PACKET FORMAT(S)

The master data request has the format shown in **Fig. 50 (Master data packet formats)**

**First data packet(s) format:**



**Ensuing data packet(s) format:**



**Figure 50: Master data packet formats**

**TLMC\_M\_051 - DATA - TRANSMISSION OF MASTER DATA PACKET**

When the Data service request is invoked, the master will start the reply timer, format the user data into data fragment(s)/packet(s) and transmit the data packet(s).

[Initiate the Internal Service Reset if the reset parameter is True, Add the master ID in the first fragment, transmit the packet(s), send a first request packet sent event indication to the Upper Layer after sending the first data packet (see Table 23)]

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## TLMC\_S\_052 - DATA - ACKNOWLEDGEMENT OF MASTER DATA PACKET

The slave shall set the ACK bit in the slave packet(s) when it receives a master packet with good message authentication code (MAC). The ACK bit in the slave packet(s) will not be set if the master packet was received with a bad MAC.

[Note: A packet with a bad sequence number will also be ACKed and the data will be ignored.]

[See requirement **TLMC\_S\_055 - DATA - MASTER PACKETS WITH DUPLICATE SEQUENCE NUMBERS.**]

Each master data packet has a unique sequence number. The Last Fragment bit in the control byte indicates the end of a master transaction.

The master shall perform all the Internal Services necessary for the successful transmission of the packets to the slave station. The packet will be retransmitted until positively acknowledged or a Service Duration Timeout occurs.

## TLMC\_M\_053 - DATA - PACKETIZATION OF THE MASTER DATA

The master will fragment the user data into packets per **Table 31 (PACKETIZATION OF MASTER DATA)**.

[Note that if a data (ensuing, not full) packet is needed, it must be transmitted as the last packet of the transaction.]

**TABLE 31: PACKETIZATION OF MASTER DATA**

INPUTS		MASTER PACKETS			
DATA SIZE <sup>(1)</sup> (D)	(D-24) MOD 30 EQUAL 0	DATA (FIRST, FULL)	DATA (ENSUING, FULL)	DATA (FIRST, NOT FULL)	DATA (ENSUING, NOT FULL)
D < 24 bytes	-	0	0	1	0
D >= 24 bytes	TRUE	1	int[(D-24)/30]	0	0
D >= 24 bytes	FALSE	1	int[(D-24)/30]	0	1

1. Excludes master ID.

[For example, if the size of the user data is 53 bytes, the transaction is fragmented as follows:

- a. One data (first, full) packet - 30 bytes (6 bytes master ID, and 24 bytes of user data)
- c. One data (ensuing, not full) packet - 29 bytes of user data]

## TLMC\_M\_054 - DATA - RETRANSMISSION OF MASTER PACKET - NO ACK RECEIVED

After transmitting a data packet, if no slave packet with the ACK bit set is received, that master data packet shall be retransmitted. Only after an slave packet with the ACK bit set is received, the next data packet shall be transmitted.

[The master data service uses the Stop and Wait algorithm.]

## TLMC\_S\_055 - DATA - MASTER PACKETS WITH DUPLICATE SEQUENCE NUMBERS

If the master data request packet has the same sequence number as the previous master data request packet, the slave will toss the data packet and retransmit unacknowledged Memory Data packets, if any exist.

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### TLMC\_S\_056 - DATA - VALIDATION OF MASTER DATA REQUEST

The slave shall process the master data packet if it is valid per **Table 10 (MASTER PACKET VALIDATION)**.

### TLMC\_S\_057 - DATA - MASTER PACKETS INTO TRANSACTION

The master data packets are assembled into a transaction and are passed on to the slave's upper layer (application).

[The data indication to the slave Upper Layer will be generated by the slave data link layer, after it successfully receives and assembles all the data packets of a given transaction. The content of the Indication to the Upper layer is defined in **Table 32 (DATA INDICATION (MASTER/SLAVE))**]

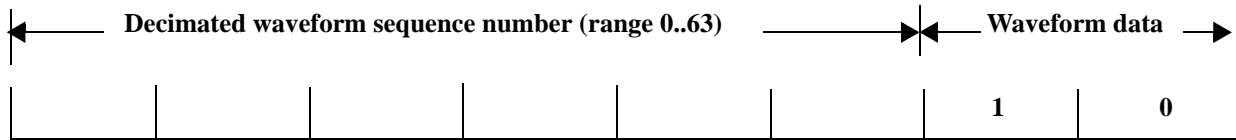
**TABLE 32: DATA INDICATION (MASTER/SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0xA4 - Master Data indication 0x24 - Slave Data indication
Sub-type	N/A	1	The indication sub-type	0 - Memory data (Master/Slave) 1 - Unrequested data (Master) 2 - Waveform data (Master). See <b>Fig. 51 (Waveform indication sub-type byte)</b> <sup>(1),(2)</sup>
Size	N/A	2	Number of data bytes	1 to K1 <sup>(3)</sup> for data and emergency.
Info	Data	N	Data received	The received transaction. Memory data includes the Upper Layer Header (ULH) as the first byte. See <b>5.2.11.3</b> for the slave's ULH byte and See <b>5.2.11.2</b> for the Master's ULH byte. Supplemental marker data and waveform data do not have a ULH byte.
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

- The master will copy a decimated version of the general sequence number into the most significant bits of the waveform sub-type. The master host can then detect any missing waveform indications. If the master host knows there is one packet/ indication, the sequence numbers should increment by "1". Similarly if the master host knows there are two packets/ indication, the sequence numbers should increment by "2" (0, 2, 4,...).
- If there are 8 packets/transaction, a "false rest" can occur in the missed waveform indication logic as follows: master host receives waveform indication with sequence number 0, it subsequently misses sequence number 8, 16, 24, 32, 40, 48, 56, and 0. If it finally gets 8, it may not realize it missed any waveform indications. To mitigate this issue the master host could use a timer as well. If "too much" time goes by, a waveform has been missed (even if the sequence number advanced in an expected manner).
- K1 is equal to 480 - sizeof(STATION-ID). (480 = 30 bytes/packet \* 16 packets/transaction)



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**Figure 51: Waveform indication sub-type byte**

The information in the control bytes of the data packets are used to reassemble the packets into the user data, and sequence numbers control the relative order of the data packets. The Last Fragment bit in the control bytes indicates the end of each transaction.

**TLMC\_M\_058 - DATA - RESPONSE TO UPPER LAYER**

When slave's upper layer response is completely received or a reply timeout occurs then a data service response to the master upper layer will be generated. No slave upper layer response is expected when the master transaction is not final. In this case the data service response is generated when all the master data packets have been acknowledged by the slave.

[The content of the response to the Upper Layer is defined in **Table 33 (MASTER DATA SERVICE RESPONSE)**.]

**TABLE 33: MASTER DATA SERVICE RESPONSE**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x84 - Data service response

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**TABLE 33: MASTER DATA SERVICE RESPONSE**

Sub-type	N/A	1	The service response sub-type	0 - Memory data
Size	N/A	2	The size of the info field	1
Info	Data service status	1	Status of the service request	0x01 - Request successful 0x02 - Request invalid in current state (state is communication) <sup>(1)</sup> 0x03 - Request invalid in current state (state is Recovery; device scanning) <sup>(2)</sup> 0x04 - Request invalid in current state (state is Recovery; device not scanning) <sup>(2)</sup> 0x05 - Request invalid in current state (state is Inactive) 0x07 - Request invalid in current state (listening for Medical Event) 0x08 - Request invalid in current state (state is disable, not reading EEPROM) 0x09 - Request invalid in current state (state is standby) 0x0A - Parameter value error <sup>(3)</sup> 0x0C - Service cancelled <sup>(4)</sup> (interrupted by emergency) 0x0F - Request not serial (another service is in progress) 0x10 - Bad CRC on service request 0x11 - Reply timeout 0x12 - Invalid size (info size >506) <sup>(3)</sup> 0x24 - Request invalid in current state (state is disable, reading EEPROM) 0x25 - Buffer/ service request mismatch <sup>(5)</sup> 0x29 - Request invalid when max throughput transfer mode is enabled and power inhibit roll through is enabled (Telemetry M only)
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

1. This status occurs when a local data service request (destination is master mozart). A local data service request is only valid in the standby state.
2. The slave is considered to be still scanning if (time now - time of last valid slave packet) is less than (slave recovery duration + slave polling duration). Note that a reply timeout will result in a Data Link response status of 3 or 4 (invalid state, state is Recovery). This is done to aid the upper layer (application). A Data Link status of 9 (service duration timeout) would not provide any benefit.
3. If the request info size is greater than 506, 0x12 - Invalid size (info size >506) will be used; if the info size or subtype (if applicable) does not match the value in the request table, "Parameter out of range" will be used.
4. This can occur if an emergency service interrupts "this" data service.
5. This status can occur if the master host attempts to send a data service request using service request buffer 1 (instead of buffer 0).

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### **TLMM\_M\_297 - DATA - WAIT FOR INDICATION**

The master will send a data indication to the Upper Layer when the data transaction completes.

- For the (master) Memory Data service, when all the data packets are acknowledge by the slave (and the master transaction was the message’s final transaction) the master will wait for slave data packet(s). It will re-assemble these packets into complete transactions (indications). It will forward these indications (in-order) to the Upper Layer. It will cancel the reply timer if it forwards the final slave indication to the Upper Layer;
- For the (slave) Unrequested Data (or Waveform) service, the master will reassemble all the slave data packets into a complete indication and forward it to the Upper Layer.

[The content of the Indication to the Upper layer is defined in **Table 32 (DATA INDICATION (MASTER/SLAVE))**].

If the reply timer expires while waiting for the final indication an (unsuccessful) data response will be sent to the Upper Layer.]

### **TLMM\_M\_298 - DATA - RECOVERY**

The master will “suspend” the data service request if channel recovery is triggered. If channel recovery is successful (and the reply timer is still active), the master will retry the data service request.

### **TLMM\_M\_299 - DATA - REPLY TIMEOUT**

The master will send an (unsuccessful) data service response to the upper layer if the reply timer expires during the data service request.

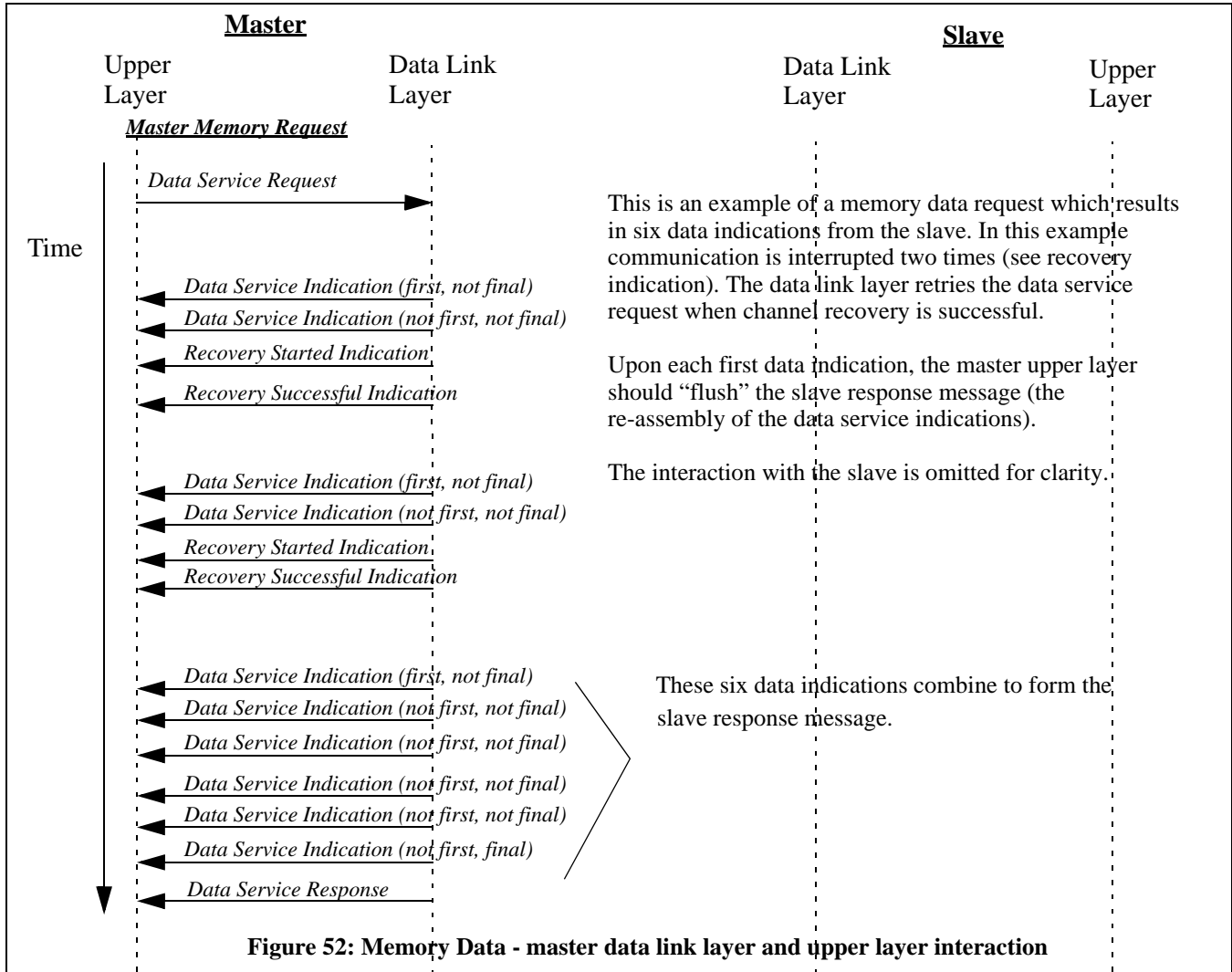
[The Upper Layer should consider the data “message” service unsuccessful if it receives a failed data service response.]

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## TLMM\_M\_300 - DATA - FIRST INDICATION

The master will set the first indication bit in the slave upper layer header byte before it forwards the first indication to the upper layer.

[Note: upper layer may receive multiple “first” data indications. This can occur during retry. The upper layer should restart the re-assembly of the response message each time it receives a “first” data indication.]



### 5.2.11.5 SLAVE DATA

The slave uses the Data service (each time) to transmit Memory Data, Supplemental Marker Data, and Waveform Data. The ARQ algorithm is used only for Memory Data retransmission. The slave data is prioritized as follows: Waveform Data, Supplemental Marker Data, Memory Data. For more details see section **7.5 Firmware Interaction between host and Telemetry**.

## TLMC\_S\_059 - DATA - SLAVE UPPER LAYER PARAMETERS

When invoking the Data service request, the slave Upper Layer will provide information as specified in **Table 30 (DATA SERVICE REQUEST (MASTER OR SLAVE))**.

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## TLMC\_S\_058 - DATA - RESPONSE TO UPPER LAYER

When Data request is received, the Data Link Layer will validate the Data service request and will send the response to the upper layer.

[The content of the response to the Upper Layer is defined in **Table 34 (SLAVE DATA SERVICE RESPONSE)**.]

**TABLE 34: SLAVE DATA SERVICE RESPONSE**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x04 - Data service response
Sub-type	N/A	1	The service response sub-type	0 - Memory data 1 - Unrequested data 2 - Waveform data <sup>(1)</sup>
Size	N/A	2	The size of the info field	1
Info	Data service status	1	Status of the service request	0X01 - Successful 0X15 - Request in invalid state <sup>(2)</sup> 0x0C - Cancelled due to new data request downlink recvd <sup>(3)</sup> 0x0D - Cancelled due to channel recovery started, close packet received, or initialization request is received <sup>(4)</sup> 0X10 - Invalid CRC
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

1. No response will be generated - only the corresponding service request interrupt will be cleared.
2. See **Table 7 (EXTERNAL SERVICES REQUEST VERIFICATION)** for the invalid states.
3. Only applicable to Sub-type = Memory data.
4. While in Disable state, if Data request interrupt was pending (a valid data service request had been previously generated by host), then 0x0D will occur if initialization request was received.

## TLMC\_S\_060 - DATA - SLAVE TRANSMISSION OF DATA PACKETS

When the Data service request is invoked the data link layer will fragment the user data into slave packet(s) which then will be transmitted. The first fragment of the user data will contain the slave ID.

Note that if bit “Enable WF in Recovery” (see **Table 124 (SLAVE PARAMETERS FROM HOST)**) is set to “1”, Data service requests (sub-type Waveform data) received during recovery state will be transmitted when the channel recovery is successful.

[The data link layer will fragment the user data and format them into slave packets, add slave ID in the first fragment, format the packet control byte according the Data type specified, transmit the packets via Synchronous Mode operation.]

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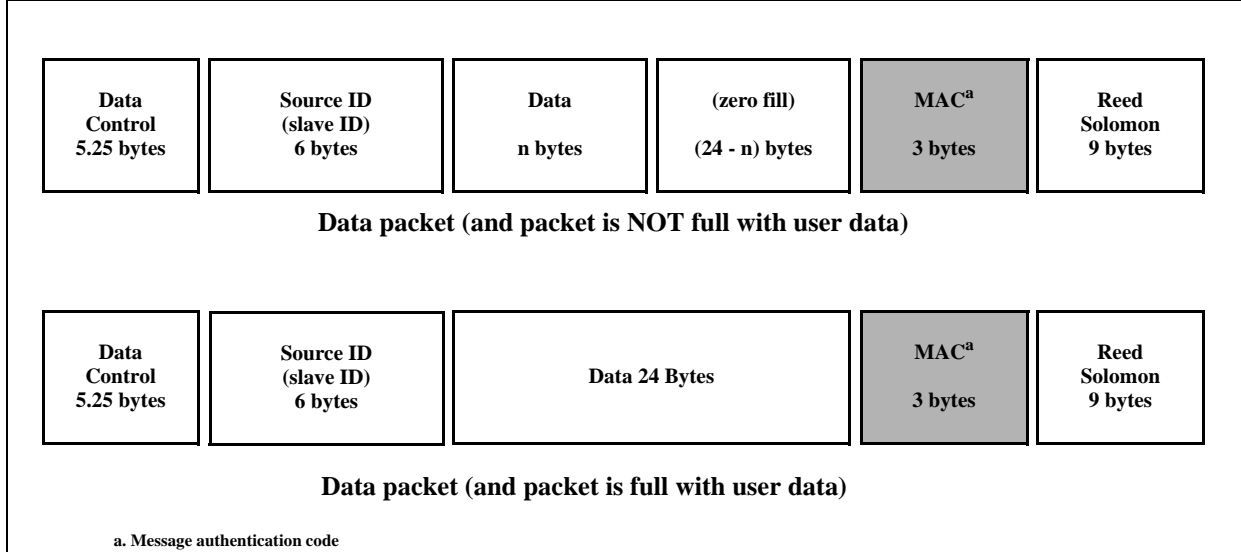
Slave Mozart will always save the last two Waveform data requests (one from service data request 3 and one from service data request 4) as they are received during Communication state, and recovery state if bit “Enable WF in Recovery” (see **Table 124 (SLAVE PARAMETERS FROM HOST)**) is set to “1”. Slave will start to transmit the waveform data during communication state. Slave host should select the slave transmit and receive data rate properly based on the amount of the real time data they have. If more waveform data requests are received before the saved Waveform data requests have been transmitted, the saved Waveform data requests will be lost.

All the slave data packets of the same external data service request will have the same transaction number, but each packet will have its own fragment number.

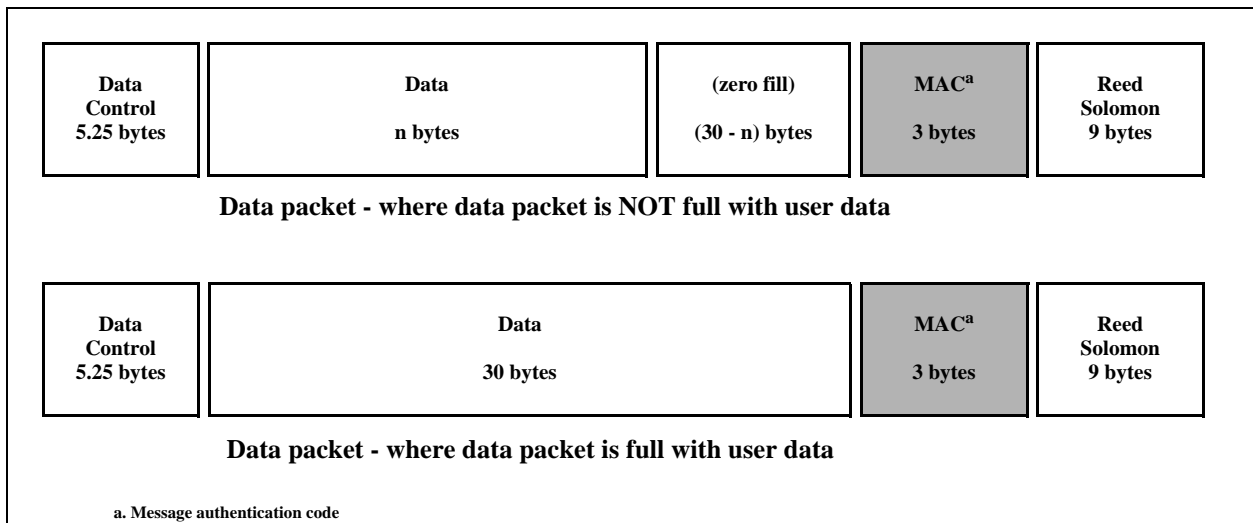
**TLMC\_S\_061 - DATA - SLAVE DATA PACKET FORMAT(S)**

The slave will use one or more of the slave packet(s) formats shown in **Fig. 53 (Slave Data Packet(s) Format)**.

**First data packet(s) format:**



**Ensuing data packet(s) format:**



**Figure 53: Slave Data Packet(s) Format**

**TLMC\_S\_062 - DATA - PACKETIZATION OF SLAVE DATA**

The slave will packetize the user data into slave packets per **Table 35 (DATA PACKET RECEPTION VALIDATION)**.

[Note: If a data (ensuing, not full) packet is needed, it must be the last packet of the transaction.]

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**TABLE 35: DATA PACKET RECEPTION VALIDATION**

INPUTS		SLAVE PACKETS			
DATA SIZE (D)	(D-24) MOD 30 EQUAL 0	DATA (FIRST, FULL)	DATA (ENSUING, FULL)	DATA (FIRST, NOT FULL)	DATA (ENSUING, NOT FULL)
D<24 bytes	-	0	0	1	0
D>=24 bytes	True	1	int[(D-24)/30]	0	0
D>=24 bytes	False	1	int[(D-24)/30]	0	1

**TLMC\_M\_063 - DATA - RECEIPT OF AN INVALID SLAVE PACKET**

The master shall use the ARQ algorithm to acknowledge or request the retransmission of invalid or not received Memory Data packets See **Table 11 (SLAVE PACKET VALIDATION)**.

[A packet with an invalid sequence number is ignored.]

This slave response received may be an unrequested packet or the result of a previous master request. After all the packets of one transaction are received correctly, the Data Link Layer shall assemble all the packets in order and return the data via the Data service indication to the Upper Layer.



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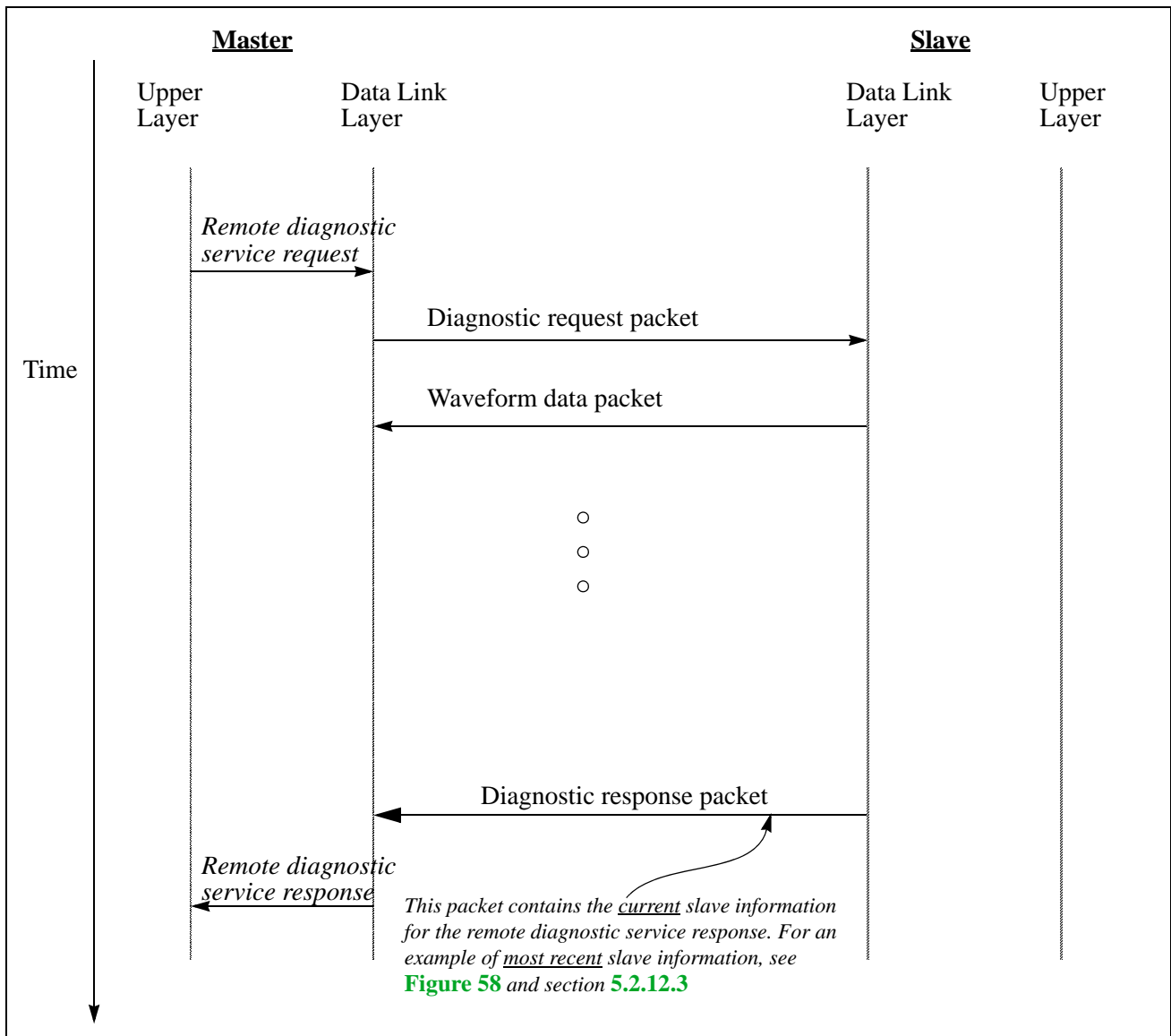
## 5.2.12 DIAGNOSTIC

The Diagnostic service is intended to be used during development to analyze the performance of the system. It is not intended for Medtronic's customers.

There are three types of diagnostic services:

- Remote Diagnostic - this service returns the most recent mapping information, the current slave information, and the current master Data Link information.
- Local Diagnostic - this service returns the most recent mapping information, the most recent slave information, and the current master Data Link information.
- Mapping Diagnostic - this service returns the current mapping information.

**Fig. 54 (Remote Diagnostic Request)** illustrates the Remote Diagnostic request.



**Figure 54: Remote Diagnostic Request**

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5.2.12.1 REQUIREMENTS

**TLMC\_M\_066 - DIAGNOSTIC SERVICE REQUEST FROM UPPER LAYER**

When the Upper Layer invokes the diagnostic service it will provide information as specified in **Table 36 (DIAGNOSTIC SERVICE REQUEST (MASTER))**.

**TABLE 36: DIAGNOSTIC SERVICE REQUEST (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x89 - Diagnostic service request
Sub-type	N/A	1	The service request sub-type	0 - Remote, 1 - Local, 2 - Mapping
Size	N/A	2	The size of the info field	2
Info <sup>(1)</sup>	Address <sup>(2)</sup>	2	Remote address for diagnostic data	2 byte address Address value: 0x0F00 <sup>(3)</sup>
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

1. The diagnostic service has one additional parameters which control its behavior: diagnostic service duration. See **Table 123 (Master parameters from host)**.
2. This applies to Remote only.
3. The address should be 0x0f00. The slave portion of the diagnostic response is then defined by **Table 106 (DIAGNOSTIC SERVICE RESPONSE — IMPLANT DATA)**. If the address is not 0x0F00, the slave will set the invalid address bit in the Slave diagnostic status byte, see TLMC\_S\_069 - REMOTE DIAGNOSTIC - STATUS BYTE FORMAT for detail.

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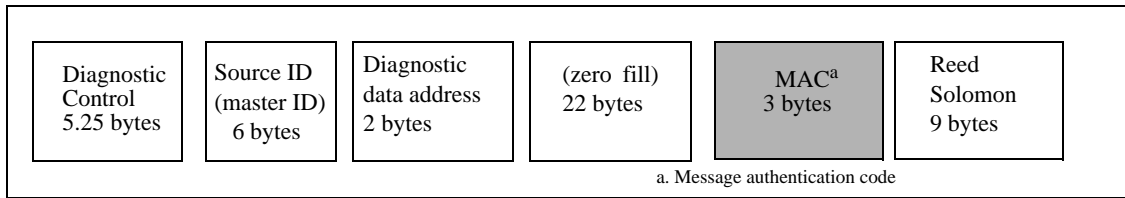
5.2.12.2 REMOTE DIAGNOSTIC

**TLMC\_M\_067 - REMOTE DIAGNOSTIC - MASTER PACKET FORMAT**

When a remote diagnostic service request is invoked by the Upper Layer, the master will:

1. Start the service duration timer.
2. Transmit a diagnostic packet as defined by **Fig. 55 (Master diagnostic (request) packet)**. The diagnostic packet sub-type bit (in master control byte 2) should be set to one (request packet, not filler packet).

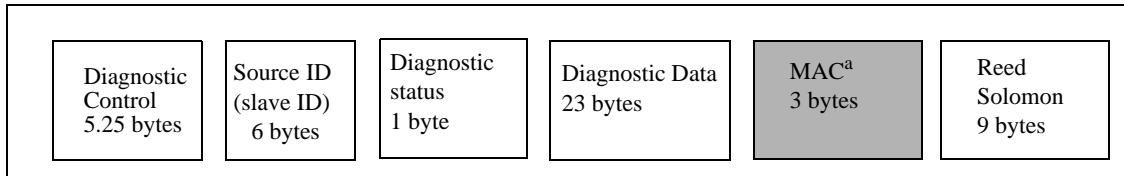
[Send a “first request packet sent” event indication to the Upper Layer (see **Table 23**).]



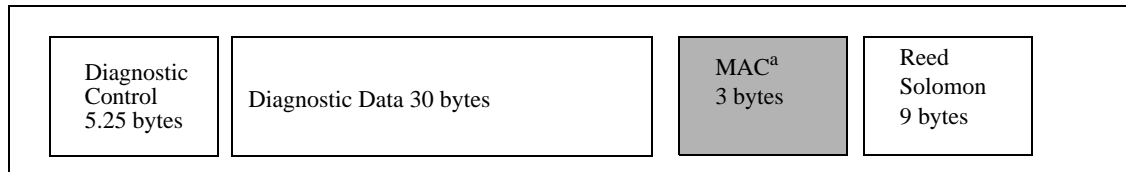
**Figure 55: Master diagnostic (request) packet**

**TLMC\_S\_068 - REMOTE DIAGNOSTIC - SLAVE PACKET FORMAT**

The slave will respond to a valid Diagnostic request packet with one or more diagnostic response packet. The diagnostic packet sub-type bit (in the diagnostic status byte) should be set to one (response packet, not filler packet). The format of the slave Diagnostic packet is indicated in **Fig. 56 (Slave diagnostic packet)**.



**First slave diagnostic packet**



**Ensuing slave diagnostic packet**

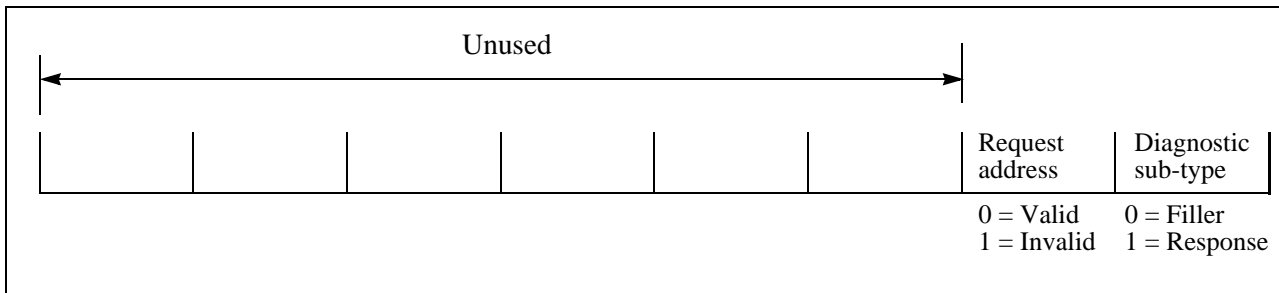
a. Message authentication code

**Figure 56: Slave diagnostic packet**

**TLMC\_S\_069 - REMOTE DIAGNOSTIC - STATUS BYTE FORMAT**

Upon receipt of a diagnostic request packet, the slave will update the diagnostic status byte. If the diagnostic data address (in the request packet) is valid, the slave will set the request address bit to valid, and the diagnostic sub-type bit to response. If the diagnostic data address (in the request packet) is invalid, the slave will set the request address bit to invalid, and the diagnostic sub-type bit to filler. The format of the diagnostic status byte is shown in **Fig. 57 (Slave diagnostic status byte)**

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**Figure 57: Slave diagnostic status byte**

### TLMC\_S\_070 - REMOTE DIAGNOSTIC - SLAVE RESPONSE PACKET

The diagnostic response will be transmitted when there is available room in the frame, based on the slave packet priorities. The diagnostic response is cancelled if Channel Recovery is triggered.

The contents of this transaction are shown in **Table 106 (DIAGNOSTIC SERVICE RESPONSE — IMPLANT DATA)**.

A diagnostic response transaction will utilize these bytes as follows:

1. Diagnostic data byte 1 = content of diagnostic (request) address
2. Diagnostic data byte 2 = content of diagnostic (request) address+1
3. .
4. .
5. Diagnostic data byte n = content of diagnostic (request) address + (n-1)

[A diagnostic transaction shall be limited in size to (240 bytes - size of (slave station ID))]

### TLMC\_M\_071 - REMOTE DIAGNOSTIC - MASTER REQUEST RETRANSMISSION

The master will continue to transmit the diagnostic request packet until it is ACKed, service duration timeout, channel recovery, or interrupted by emergency. Once ACKed, the master will wait for the slave diagnostic (response) transaction. The master will transmit filler packets while waiting for the slave transaction. Transmission of diagnostic filler packets continues until successful, service duration timeout, channel recovery, or interrupted by emergency.

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**TLMC\_M\_072 - REMOTE DIAGNOSTIC - RESPONSE TO UPPER LAYER**

A Remote Diagnostic service response to the Upper Layer will be generated at the completion of the Remote Diagnostic service.

[The content of the response is shown in **Table 37 (REMOTE DIAGNOSTIC SERVICE RESPONSE (MASTER))**. Note that a service response status of 0x26 occurs if the service is interrupted by a PLL lock error (and a subsequent successful trim).]

**TABLE 37: REMOTE DIAGNOSTIC SERVICE RESPONSE (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x89 - Diagnostic service response
Sub-type	N/A	1	The service response sub-type	0 - Remote diagnostic
Size	N/A	2	The size of the info field	1 to 480
Info	Diagnostic service status	1	Status of the service request	0x01 - Request successful 0x03 - Request invalid in current state (state is Recovery; slave scanning) <sup>(1)</sup> 0x04 - Request invalid in current state (state is Recovery; slave not scanning) <sup>(1)</sup> 0x05 - Request invalid in current state (state is Inactive) 0x07 - Request invalid in current state (listening for Medical Event) 0x08 - Request invalid in current state (state is disable, not reading EEPROM) 0x09 - Request invalid in current state (state is Standby) 0x0A - Parameter value error <sup>(2)</sup> 0x0B - Service duration timeout 0x0C - Service cancelled (interrupted by emergency) 0x0D - Service cancelled (interrupted by recovery) 0x0E - Invalid diagnostic address <sup>(3)</sup> 0x0F - Request not serial (another service is in progress) 0x10 - Bad CRC on service request 0x12 - Invalid size (info size >506) <sup>(2)</sup> 0x24 - Request invalid in current state (state is disable, reading EEPROM) 0x25 - Buffer/ service request mismatch <sup>(4)</sup>
	Mapping info	20	Most recent mapping information	For further details, see <b>7.0 Appendices</b> .
	Master info	N2	Current master Data Link information	For further details, see <b>7.0 Appendices</b> .
	Slave info	N1	Current slave information <sup>(5)</sup>	For further details, see <b>7.0 Appendices</b> .

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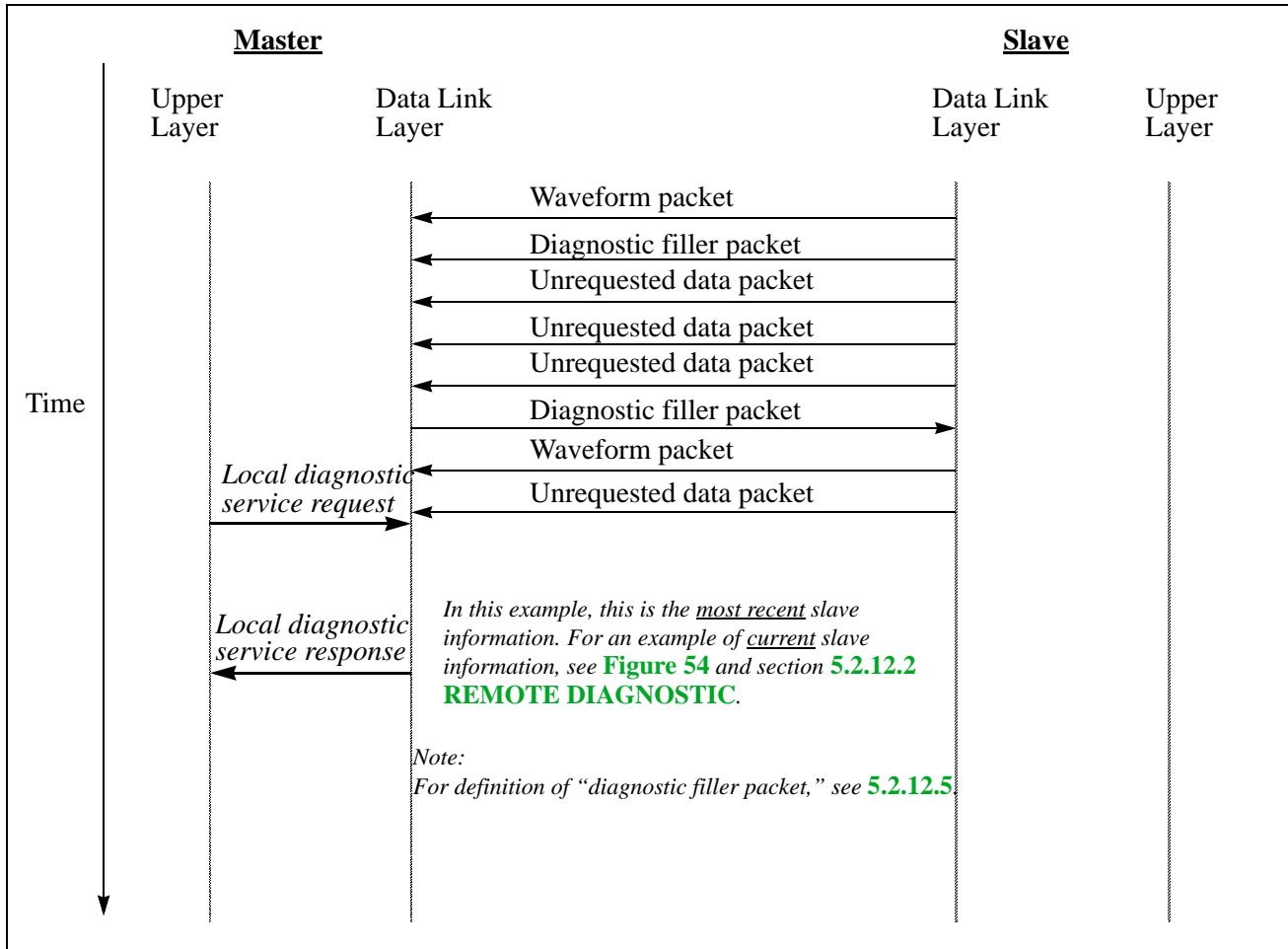
**TABLE 37: REMOTE DIAGNOSTIC SERVICE RESPONSE (MASTER)**

CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.
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1. The slave is considered to be still scanning if (time now - time of last valid slave packet) is less than (slave recovery duration + slave polling duration).
2. If the request info size is greater than 506, 0x12 - Invalid size (info size >506) will be used; if the info size or subtype (if applicable) does not match the value in the request table, "Parameter out of range" will be used.
3. This occurs when the slave diagnostic response packet indicates an invalid address in the status byte.
4. This status can occur if the master host attempts to send a diagnostic service request using service request buffer 1 (instead of buffer 0).
5. The current slave information is a copy of the slave diagnostic response packet (content field). Note that this packet has just been received from the slave.

### 5.2.12.3 LOCAL DIAGNOSTIC

When the Upper Layer invokes the Local Diagnostic service, the Data Link Layer will respond immediately. See **Fig. 58 (Local diagnostic sequence)**.



**Figure 58: Local diagnostic sequence**

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## TLMC\_M\_073 - LOCAL DIAGNOSTIC - RESPONSE TO UPPER LAYER

The local diagnostic service response to the Upper Layer will be generated immediately.

[The content of the response is shown in **Table 38 (LOCAL DIAGNOSTIC SERVICE RESPONSE (MASTER))**.]

**TABLE 38: LOCAL DIAGNOSTIC SERVICE RESPONSE (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x89 - Diagnostic service response
Sub-type	N/A	1	The service response sub-type	1 - Local diagnostic
Size	N/A	2	The size of the info field	1 to 480 bytes
Info	Diagnostic service status	1	Status of the service request	0x01 - Request successful 0x08 - Request invalid in current state (state is disable, not reading EEPROM) 0x0A - Parameter value error <sup>(1)</sup> 0x10 - Bad CRC on service request 0x12 - Invalid size (info size >506) <sup>(1)</sup> 0x24 - Request invalid in current state (state is disable, reading EEPROM) 0x25 - Buffer/ service request mismatch <sup>(2)</sup>
	Mapping info	20	Most recent mapping information <sup>(3)</sup>	For further details, see <b>7.0 Appendices</b> .
	Master info	N2	Current master Data Link information	For further details, see <b>7.0 Appendices</b> .
	Slave info	N1	Current slave information <sup>(4)</sup>	For further details, see <b>7.0 Appendices</b> .
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

1. If the request info size is greater than 506, 0x12 - Invalid size (info size >506) will be used; if the info size or subtype (if applicable) does not match the value in the request table, "Parameter out of range" will be used.
2. This status can occur if the master host attempts to send a diagnostic service request using service request buffer 1 (instead of buffer 0).
3. This is part of the "attached data". It is included only if the service is successful.
4. The current slave information is a copy of the slave diagnostic response packet (content field). Note that this packet has just been received from the slave.

When a local diagnostic service is invoked by the slave's Upper Layer, the Data Link Layer will provide the stored diagnostic data.

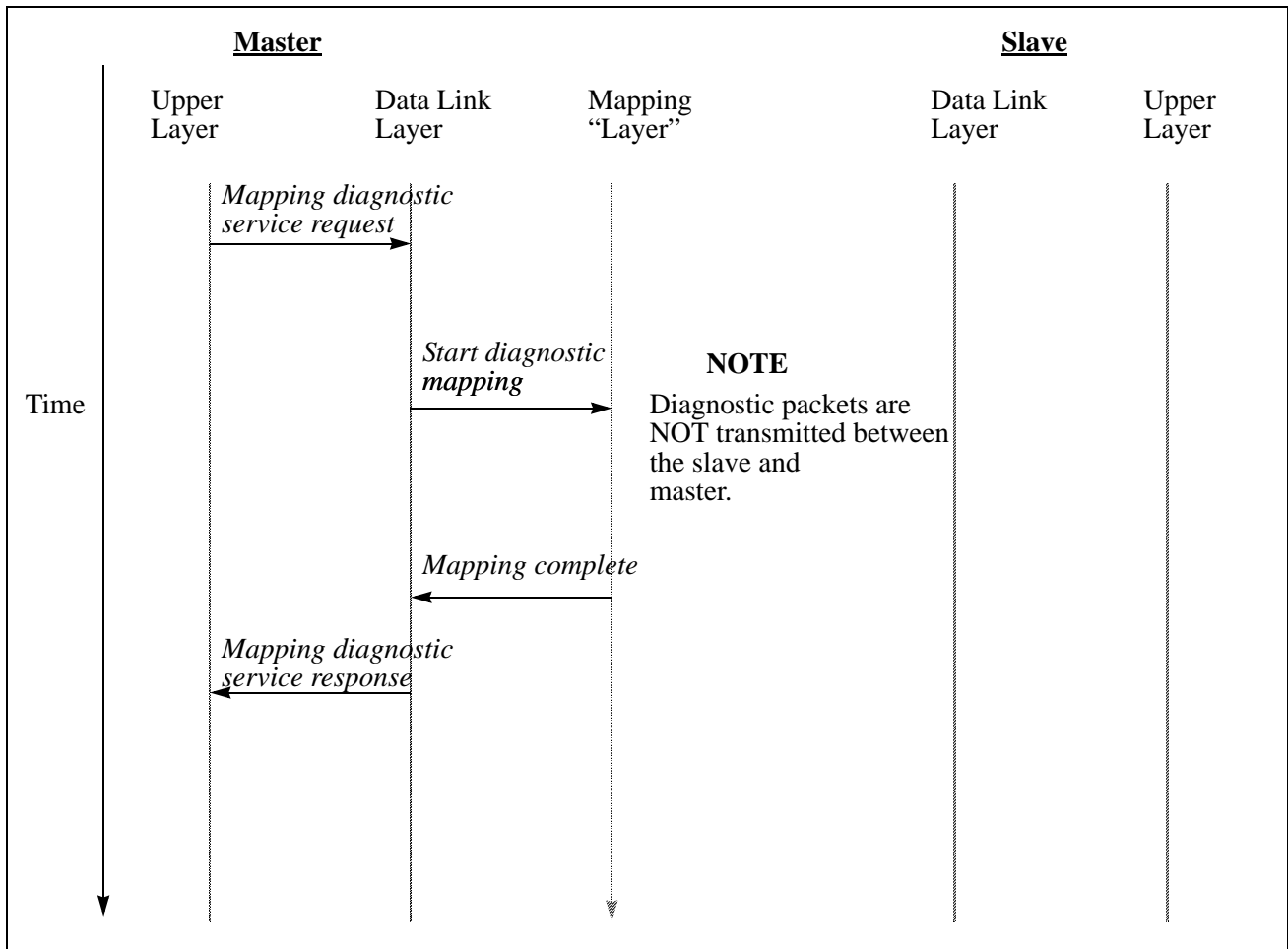
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#### 5.2.12.4 MAPPING DIAGNOSTIC

When the master's Upper Layer invokes the Mapping Diagnostic service, the Data Link Layer will initiate diagnostic mapping. When complete, the Data Link Layer responds back to the Upper Layer.

Diagnostic mapping consists of a "long" screen (but no evaluate phase). A "short" screen and an evaluate phase is used in channel (selection) mapping.

Diagnostic mapping can be used to characterize the noise in a room. See [Fig. 59 \(Mapping diagnostic sequence\)](#).



**Figure 59: Mapping diagnostic sequence**



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## TLMC\_M\_074 - MAPPING DIAGNOSTIC - RESPONSE TO UPPER LAYER

When the master's Upper Layer invokes the Mapping Diagnostic service, the Data Link Layer will initiate diagnostic mapping. When complete, the Data Link Layer responds back to the Upper Layer.

[The content of the response is shown in **Table 39 (MAPPING DIAGNOSTIC SERVICE RESPONSE (MASTER))**. Note that a service response status of 0x26 occurs if the service is interrupted by a PLL lock error (and a subsequent successful trim).]

**TABLE 39: MAPPING DIAGNOSTIC SERVICE RESPONSE (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x89 - Diagnostic service response
Sub-type	N/A	1	The service response sub-type	2 - Mapping diagnostic
Size	N/A	2	The size of the info field	21 bytes if successful, 1 byte if unsuccessful
Info	Diagnostic service status	1	Status of the service request	0x01 - Request successful 0x02 - Request invalid in current state (state is Comm) 0x03 - Request invalid in current state (state is Recovery; slave scanning) <sup>(1)</sup> 0x04 - Request invalid in current state (state is Recovery; slave not scanning) <sup>(1)</sup> 0x05 - Request invalid in current state (state is Inactive) 0x07 - Request invalid in current state (listening for Medical Event) 0x08 - Request invalid in current state (state is disable, not reading EEPROM) 0x0A - Parameter value error <sup>(2)</sup> 0x0B - Service duration timeout 0x0C - Service cancelled (interrupted by emergency) 0x0F - Request not serial (another service is in progress) 0x10 - Bad CRC on service request 0x12 - Invalid size (info size >506) <sup>(2)</sup> 0x24 - Request invalid in current state (state is disable, reading EEPROM) 0x25 - Buffer/ service request mismatch <sup>(3)</sup>
	Mapping info	20	Most recent mapping information	For further details, see <b>7.0 Appendices</b> .
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

1. The slave is considered to be still scanning if (time now - time of last valid slave packet) is less than (slave recovery duration + slave polling duration).
2. If the request info size is greater than 506, 0x12 - Invalid size (info size >506) will be used; if the info size or subtype (if applicable) does not match the value in the request table, "Parameter out of range" will be used.

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- This status can occur if the master host attempts to send a diagnostic service request using service request buffer 1 (instead of buffer 0).

### 5.2.12.5 DIAGNOSTIC FILLER PACKET

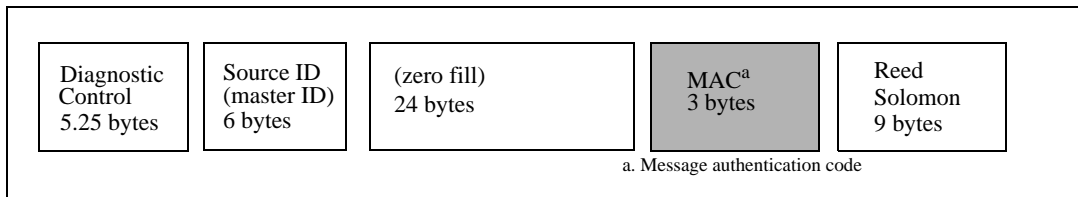
A diagnostic (filler) packet is used as a “space filler” when there is no active External Service in progress.

A diagnostic request packet and a diagnostic filler packet are differentiated by a single sub-type bit in the master control byte header. The diagnostic sub-type bit can be set or cleared by the master. The setting of the diagnostic sub-type bit to a one is an indication of a diagnostic request to the slave. The clearing of the bit to a zero is an indication to the slave that it is a filler packet.

#### TLMC\_M\_075 - DIAGNOSTIC FILLER - MASTER FILLER PACKETS

When the master does not have any other packets to transmit it will transmit diagnostic filler packet(s) as follows:

- The diagnostic sub-type bit (in master control byte 2) will be cleared to a zero.
- The filler packet will be transmitted to the slave during the absence of user data (and an ARQ packet).
- The filler packet format will be as indicated in **Fig. 60 (Master diagnostic (filler) packet)**.



**Figure 60: Master diagnostic (filler) packet**

A filler packet will be transmitted by the slave when user Memory Data is not being transmitted. A filler packet will not be retransmitted as part of the ARQ algorithm. Each filler packet will contain data from a default (pre-defined) address. The size of the filler packets is limited by the size of a slave packet.

#### TLMC\_S\_076 - DIAGNOSTIC FILLER - SLAVE FILLER PACKETS

The slave will transmit filler transactions when there is no Data Packet to transmit.

See **Fig. 56 (Slave diagnostic packet)** for the packet format. The diagnostic sub-type bit (in the status byte) will be set to a zero (filler packet, not response packet). The contents of this transaction are shown in **Table 106 (DIAGNOSTIC SERVICE RESPONSE — IMPLANT DATA)**.

A diagnostic response transaction will utilize these bytes as follows:

- Diagnostic data byte 1 = content of diagnostic (default) address
- Diagnostic data byte 2 = content of diagnostic (default) address+1
- .
- .
- n. Diagnostic data byte n = content of diagnostic (default) address + (n-1)

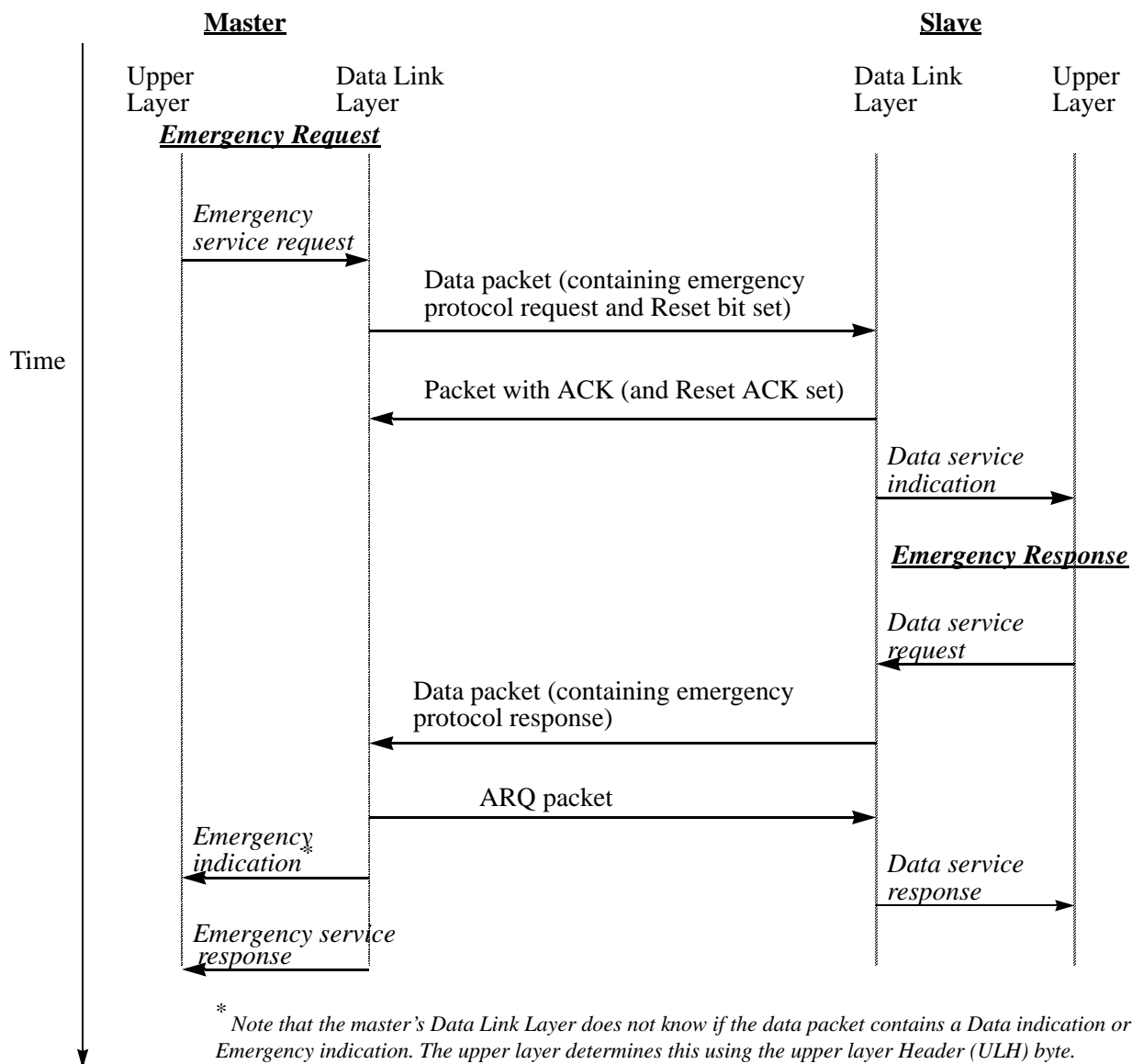
[The slave does not respond with a filler packet each time it receives a filler packet from the master. The diagnostic filler packets are not transmitted during the low energy transfer mode.]

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### 5.2.13 EMERGENCY

Emergency can only be transmitted or received during a bidirectional communication session. Telemetry M uses a data packet (with the Reset bit set) to transmit the emergency request. The master will send Emergency only if it is in the Comm State. The slave device will process Emergency only if it is in the Comm State (already).

A separate Emergency service allows the Data Link Layer to enforce serialization of service requests. Without an Emergency service, Data service #2 could interrupt data service #1 (provided data service #2 was for Emergency). The Data Link Layer would have to “look at the content of the Data service” (to see if it is OK to interrupt data service #1). [Another benefit is that it makes the upper layer design simpler.]



**Figure 61: Emergency master/slave sequence diagram**

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5.2.13.1 REQUIREMENTS

Each Emergency service request is considered a *transaction* (defined in [5.2.11.1](#)).

5.2.13.2 MASTER

Service requests from the Upper Layer must be serialized. Emergency is an exception. It can be received while processing another request (most likely a data service request). If so, it will stop the service request in progress (so it can do “this” emergency request). Note that Emergency will never interrupt Emergency (consecutive Emergency button “presses” are separated by at least two seconds; an Emergency response must be sent within two seconds).

**TLMC\_M\_077 - EMERGENCY - UPPER LAYER PARAMETERS**

When invoking the Emergency service request, the master Upper Layer will provide information as specified in [Table 40 \(EMERGENCY SERVICE REQUEST \(MASTER\)\)](#).

**TABLE 40: EMERGENCY SERVICE REQUEST (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x86 - Emergency service request
Sub-type	N/A	1	The service request sub-type	N/A
Size	N/A	2	The size of the info field	1 to MAX_DATA_TRANS_SIZE (480 - size of STATION_ID)  480 - 30 bytes/packet * 16 packets/transaction
Info <sup>(1)</sup>	Data	N	Message to be transmitted <sup>(2)</sup>	The data to be transmitted. This includes the Upper layer header as the first byte. See <a href="#">5.2.11.2 MASTER’S UPPER LAYER HEADER (ULH) Byte Format</a> .
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

1. The emergency service has one additional parameters which control its behavior: reply duration. See [Table 123 \(Master parameters from host\)](#).
2. For further details, see requirement DEVICE PROG\_INST EMERGENCY REQUEST DEFINITION in Medtronic’s Document 217420 (System B Telemetry Communication Protocol Specification)

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**TLMC\_M\_078 - EMERGENCY - TRANSMISSION OF EMERGENCY REQUEST**

When the Emergency service request is invoked, the master shall:

1. Stop the service request in progress (if there is one in progress)
2. Generate a “cancelled” response to the Upper Layer for the cancelled service (if any)
3. Start the reply duration timer
4. Format the user data into a data packet
5. Set the Reset bit to 1 in control byte1 of the data packet
6. Set the sequence number to 0 in control byte2 of the data packet
7. Transmit the packet to the slave

The master retransmits the emergency protocol request until successful (or until timeout occurs); see data requirement(s) in **5.2.11.4**.

The slave sets the ACK bit in the next slave packet(s) upon receiving the emergency protocol request; see **5.2.11.4**.

The slave sets the Reset ACK bit in the next slave packet(s) upon receiving the data packet (with the Reset bit set); see reset requirement(s) in **5.3.5**.

The master resets several Data Link parameters when it receives the Reset ACK bit set; see **5.3.5**.

The slave sends a data indication to the Upper Layer after it receives the Emergency protocol request. See **5.2.11.4**.

**TLMC\_M\_079 - EMERGENCY - MASTER REQUEST NOT ACKNOWLEDGED**

The master Emergency service request is considered not successful if the Emergency request is not acknowledged by the slave within the reply duration.

**TLMC\_M\_081 - EMERGENCY - STATUS RESPONSE TO UPPER LAYER**

An Emergency service response to the master’s Upper Layer will be generated. When the slave’s upper layer response is completely received or a reply timeout occurs.

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[The content of the response to the Upper Layer is defined in **Table 41 (EMERGENCY SERVICE RESPONSE (MASTER))**.]

**TABLE 41: EMERGENCY SERVICE RESPONSE (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x86 - Emergency service response
Sub-type	N/A	1	The service response sub-type	N/A
Size	N/A	2	The size of the info field	1 byte
Info	Emergency service status	1	Status of the service request	0x01 - Request successful 0x03 - Request invalid in current state (state is Recovery; slave scanning) <sup>(1)</sup> 0x04 - Request invalid in current state (state is Recovery; slave not scanning) <sup>(1)</sup> 0x05 - Request invalid in current state (state is Inactive) 0x07 - Request invalid in current state (listening for Medical Event) 0x08 - Request invalid in current state (state is disable, not reading EEPROM) 0x09 - Request invalid in current state (state is standby) 0x0A - Parameter out of range <sup>(2)</sup> 0x0F - Request non-serial (emergency already in progress) 0x10 - Invalid CRC 0x11 - Reply timeout 0x12 - Invalid size (info size >506) <sup>(2)</sup> 0x29 - Request invalid when max throughput transfer mode is enabled and power inhibit roll through is enabled (Telemetry M Only)
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

1. The device is considered to be still scanning if (time now - time of last valid slave packet) is less than (slave recovery duration + slave polling duration). Note that a reply timeout will result in a Data Link response status of 3 or 4 (invalid state, state is Recovery). This is done to aid the upper layer (application). A Data Link status of 9 (service duration timeout) would not provide any benefit.
2. If the request info size is greater than 506, 0x12 - Invalid size (info size >506) will be used; if the info size or subtype (if applicable) does not match the value in the request table, "Parameter out of range" will be used. This status will also be used if the final bit of the upper layer header byte is not set (multi-transaction emergency requests are not allowed).

The slave will invoke the Data service request to transmit the Emergency protocol response (receive ready or reject); see slave data requirement(s) in **5.2.11.5**.

The slave will use a data packet to execute the Data service; see **5.2.11.5**.

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**TLMM\_M\_301 - EMERGENCY - WAIT FOR INDICATION**

The master will wait for slave packets when all emergency request packets are acknowledged by the slave (and the master transaction was the message’s final transaction). It will re-assemble these packets into complete transactions (indications). It will forward these indications (in-order) to the Upper Layer. It will cancel the reply timer if it forwards the final slave indication to the Upper Layer.

[The content of the Indication to the Upper layer is defined in **Table 42 (EMERGENCY INDICATION (MASTER))**.]

**TLMM\_M\_302 - EMERGENCY - RECOVERY**

The master will “suspend” the emergency service request - if channel recovery is triggered. If channel recovery is successful (and the reply timer is still active), the master will retry the emergency service request.

**TLMM\_M\_303 - EMERGENCY - REPLY TIMEOUT**

The master will send an (unsuccessful) emergency service response to the upper layer if the reply timer expires during the emergency service request.

[The Upper Layer should consider the data “message” service unsuccessful if it receives a failed emergency service response.]

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The master will send an Data indication to the Upper Layer when it receives the Emergency protocol response. Note that both Memory Data and Emergency are sent (to the Upper Layer) in a Data indication. The Upper Layer uses the Upper Layer header (ULH) byte to differentiate between Memory Data and Emergency; see 5.2.11.5.]

**TABLE 42: EMERGENCY INDICATION (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0xAC - Master emergency indication
Sub-type	N/A	1	The indication sub-type	n/a
Size	N/A	2	Number of data bytes	1 to K1 <sup>(1)</sup>
Info	Data	N		The received transaction. Memory data includes the Upper Layer Header (ULH) as the first byte. See 5.2.11.3 for the slave's ULH byte. Supplemental marker data and waveform data do not have a ULH byte.
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

1. K1 is equal to 480 - sizeof(STATION-ID). (480 = 30 bytes/packet \* 16 packets/transaction)

### TLMC\_M\_304 - EMERGENCY DURING CLOSE

The data link layer will send an unsuccessful emergency service response if the emergency service request is received while processing a close service request. The emergency service response status is Request invalid in current state (state is recovery; slave scanning).

### TLMC\_M\_305 - EMERGENCY - SECOND EMERGENCY REQUEST WHILE PROCESSING FIRST

The master will do the following if it receives an Emergency service request (if an emergency service request is already in progress):

1. Send the (unsuccessful) Emergency service response to the upper layer.

[The response status will be "Emergency already in progress".]

## 5.2.14 RAW MODE (DEVELOPMENT USE ONLY)

This service provides a mechanism for sending and receiving data directly, without mediation by the lower layers. It is intended to be used only in the development and testing environments. This service is divided into a single type:

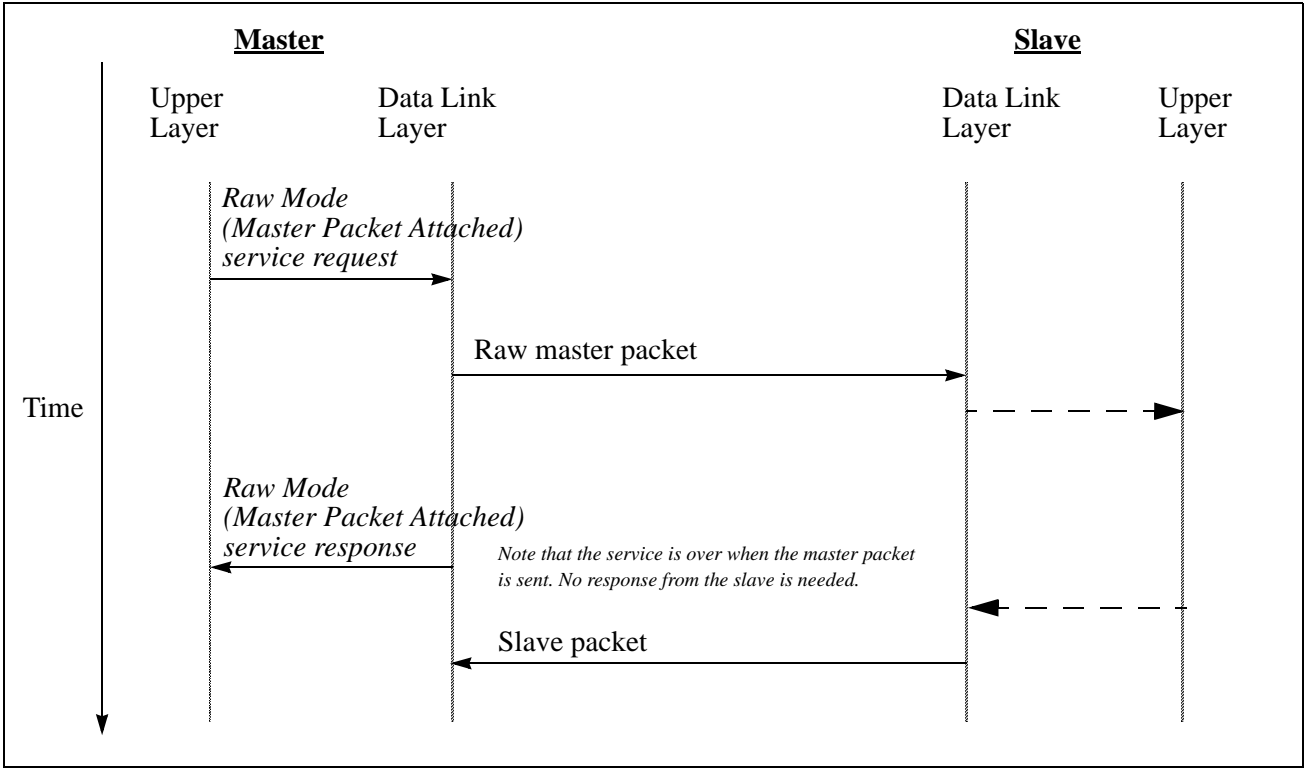
- **Master Packet Attached** — This allows the user to transmit a raw packet to the slave.

*Note:* the user can set the control bytes as well as the information field. For example, the user can transmit a diagnostic filler packet with a bad master ID.



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**Figure 62: Raw Mode (Master Packet Attached) Sequence Diagram**

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## 5.2.14.1 REQUIREMENTS

### TLMC\_M\_082 - RAW MODE - UPPER LAYER RAW MODE PARAMETERS

When the Upper Layer invokes the Raw Mode service it will provide information as specified in **Table 43 (RAW MODE SERVICE REQUEST (MASTER))**.

**TABLE 43: RAW MODE SERVICE REQUEST (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x8B - Raw mode service request
Sub-type	N/A	1	The service request sub-type	N/A
Size	N/A	2	The size of the info field	36 bytes
Info <sup>(1)</sup>	Data	36	Packet to be transmitted	Raw master packet to be transmitted including the control bytes.
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

1. The emergency service has one additional parameters which control its behavior: reply duration. See **Table 129 (PARAMETERS FROM EEPROM)**.

## 5.2.14.2 RAW MODE (MASTER PACKET ATTACHED)

### TLMC\_M\_083 - RAW MODE - MASTER PACKET ATTACHED OPERATION

When a valid Raw Mode (Master Packet Attached) service is invoked, the master shall:

1. Start the service duration timer (comes from **Table 129 (PARAMETERS FROM EEPROM)**)
2. Transmit the raw packet
3. Send the Raw Mode service response to the Upper Layer (status of successful)

[Note that the service is complete after the master packet is sent. This service does not wait for positive acknowledgement from the slave.]

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## TLMC\_M\_084 - RAW MODE - MASTER PACKET ATTACHED RESPONSE

The Raw Mode (Master Packet Attached) service response to the Upper Layer will be generated at the completion of the service.

[The content of the response is shown in **Table 44 (RAW MODE SERVICE RESPONSE (MASTER))**.]

**TABLE 44: RAW MODE SERVICE RESPONSE (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x8B - Raw mode service response
Sub-type	N/A	1	The service response sub-type	N/A
Size	N/A	2	The size of the info field	1 byte
Info	Raw mode service status	1	Status of the service request	0x01 - Request successful <sup>(1)</sup> 0x03 - Request invalid in current state (state is Recovery; slave scanning) <sup>(2)</sup> 0x04 - Request invalid in current state (state is Recovery; slave not scanning) <sup>(2)</sup> 0x05 - Request invalid in current state (state is Inactive) 0x07 - Request invalid in current state (listening for Medical Event) 0x08 - Request invalid in current state (state is disable, not reading EEPROM) 0x09 - Request invalid in current state (state is Standby) 0x0A - Parameter value error <sup>(3)</sup> 0x0B - Service duration timeout 0x0C - Service cancelled <sup>(4)</sup> (interrupted by emergency) 0x0D - Service cancelled <sup>(5)</sup> (interrupted by recovery) 0x0F - Request not serial (another service is in progress) 0x10 - Bad CRC on service request 0x12 - Invalid size (info size >506) <sup>(3)</sup> 0x25 - Buffer/ service request mismatch <sup>(6)</sup> 0x27 - Raw mode not enabled via initialize request
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

1. Master packet transmitted and acknowledged successfully.
2. The slave is considered to be still scanning if (time now - time of last valid slave packet) is less than (slave recovery duration + slave polling duration).
3. If the request info size is greater than 506, 0x12 - Invalid size (info size >506) will be used; if the info size or subtype (if applicable) does not match the value in the request table, "Parameter out of range" will be used.
4. This can occur if an emergency service interrupts "this" raw mode service.
5. This can occur if Channel Recovery interrupts "this" raw mode service.
6. This status can occur if the master host attempts to send a raw mode service request using service request buffer 1 (instead of buffer 0).

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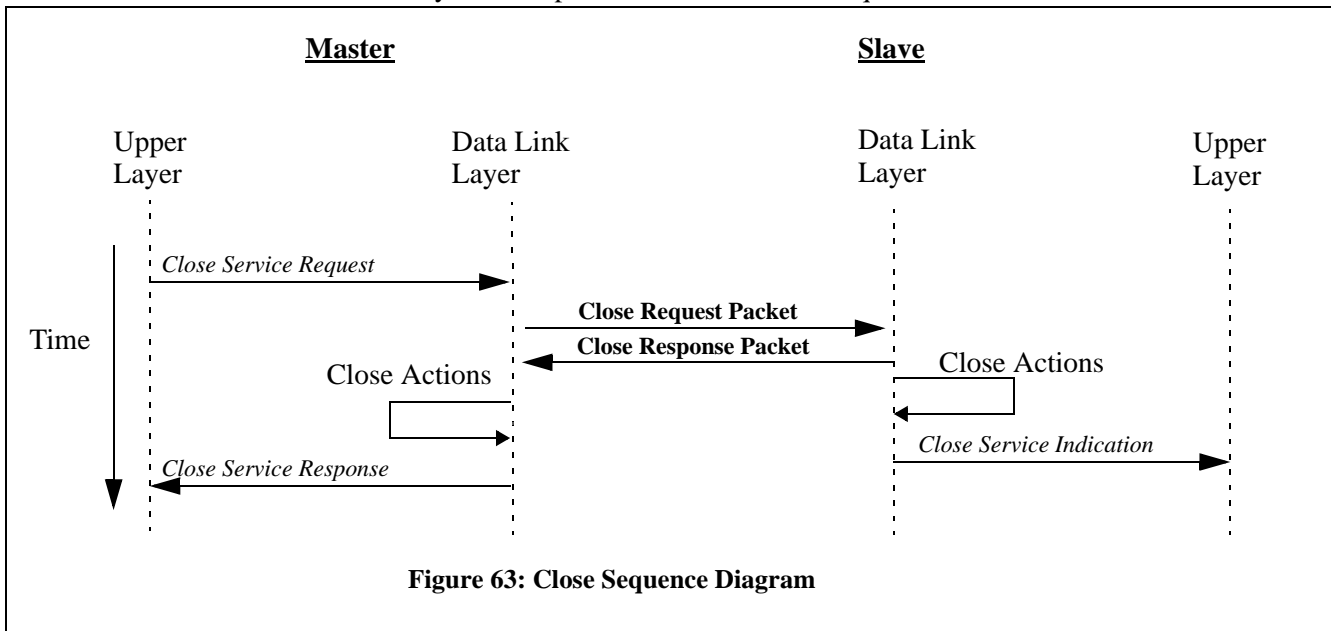
5.2.15 CLOSE

When this service is invoked, both Telemetry M stations can quickly terminate Telemetry M operations, saving energy and preventing unnecessary RF transmissions see **Fig. 63 (Close Sequence Diagram)**.

The following bullets briefly summarize this service:

- The upper layer on the master generates the Close request to the Data Link Layer.
- The Data Link Layer on the slave informs the Upper Layer after acknowledging the Close request.
- The upper layer on the slave terminates the communication.

No Channel Recovery shall be performed after a close request has been transmitted.



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## 5.2.15.1 REQUIREMENTS

### TLMC\_M\_089 - CLOSE - UPPER LAYER CLOSE PARAMETERS

When invoking a Close service request, the Upper Layer will provide information as specified in **Table 45 (CLOSE SERVICE REQUEST (MASTER))**.

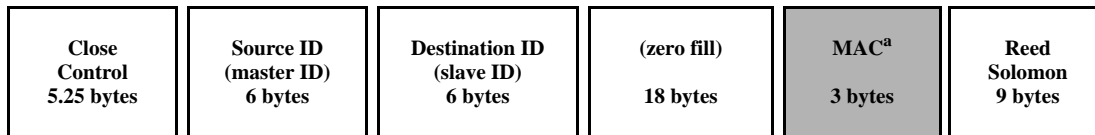
**TABLE 45: CLOSE SERVICE REQUEST (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x87 - Close service request
Sub-type	N/A	1	The service request sub-type	N/A
Size	N/A	2	The size of the info field	0 bytes
Info <sup>(1)</sup>	N/A	0	N/A	N/A
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

1. The close service has one additional parameters which control its behavior: close service duration. See **Table 123 (Master parameters from host)**.

### TLMC\_MS\_090 - CLOSE - MASTER PACKET FORMAT

The Close Request packets have the layout indicated in **Fig. 64 (Master Close Request Packet)**.

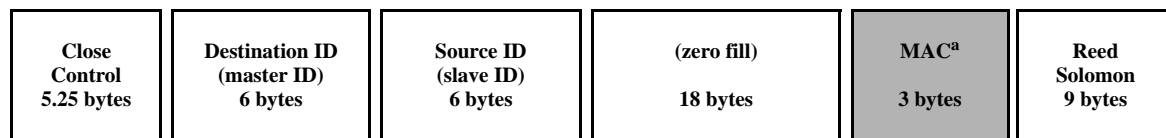


a. Message authentication code

**Figure 64: Master Close Request Packet**

### TLMC\_MS\_091 - CLOSE - SLAVE PACKET FORMAT

The Close Response packets have the layout in **Fig. 65 (Slave Close Response Packet)**.



a. Message authentication code

**Figure 65: Slave Close Response Packet**

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### TLMC\_M\_092 - CLOSE - MASTER REQUEST

The actions performed upon receiving the Close service request when the state is Comm:

1. Start the service duration timer.
2. Transmit Close Request Packet and wait for the Close Response Packet.

[Send a “first request packet sent” event indication to the Upper Layer (see **Table 23**).]

### TLMC\_M\_093 - CLOSE - RETRANSMISSION OF MASTER REQUEST

If no valid Close Response Packet is received from the slave, the Data Link Layer shall retransmit the Close Request packet. The master shall continue this until a valid Close Response packet is received or a Service Duration Timeout occurs or until recovery is triggered. Note that recovery is not initiated (if triggered).

### TLMC\_S\_094 - CLOSE - RECEIPT OF A VALID CLOSE REQUEST

Upon receiving a valid master Close Request packet, the slave will transmit a close response packet and will stop the transmission of data packets.

[The security hardware will be disabled if slave starts to poll again upon polling request or sniff when standby timer times out.]

### TLMC\_S\_095 - CLOSE - INDICATION TO SLAVE UPPER LAYER

The Close service indication will be generated to the Upper Layer when a successful Close response packet is transmitted.

[The indication to the Upper Layer may consist of Polling ON or Polling OFF based on the value of the Total Polling Duration Time in the open request (i.e., Zero meaning Polling OFF, otherwise Polling ON.)]

**TABLE 46: CLOSE INDICATION (SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0x25 - Close indication
Sub-type	N/A	1	The indication sub-type	N/A
Size	N/A	2	The size of the info field	2
Info	Close indication status	2	Status of the indication	1st byte: 0x01 - successful 2nd byte: 0x01 - without poll, or 0x02 - with poll
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

### TLMC\_M\_096 - CLOSE - RECEIPT OF A VALID RESPONSE

Upon receiving a valid Close Response Packet from the slave, or if a Close Service Duration Timeout occurs, the master will return a successful close service response to the Upper layer.

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**TLMC\_M\_097 - CLOSE - IMPLICITLY SUCCESSFUL**

Upon receiving a valid close service request from the Upper Layer when the state is Channel Recovery or Standby or Inactive or Medical Event, the master will disable the security hardware and return a successful close service response to the Upper layer.

[Terminate physical layer communication, return a successful Close service response to the Upper Layer, transition to Standby State - Note: Close packet is not transmitted. The Close service is implicitly successful.]

**TLMC\_M\_098 - CLOSE - RESPONSE TO UPPER LAYER**

The security hardware will be disabled and a close service response will be generated after the close service is complete. The content of the response to the Upper Layer is specified in **Table 47 (CLOSE SERVICE RESPONSE (MASTER))**.

**TLMC\_M\_099 - CLOSE - RECOVERY DURING CLOSE**

If channel recovery is triggered during the close service, the service is implicitly successful. The master will disable the security hardware and return successful to the Upper layer.

[Terminate physical layer communication, return success to upper layer, transition to Standby.]

**TABLE 47: CLOSE SERVICE RESPONSE (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x87 - Close service response
Sub-type	N/A	1	The service response sub-type	N/A
Size	N/A	2	The size of the info field	1 byte
Info	Close service status	1	Status of the service request	0x01 - request successful <sup>(1)</sup> 0x08 - Request in invalid state (state is disable, not reading EEPROM) 0x0A - Parameter value error <sup>(2)</sup> 0x0F - Request not serial (another service is in progress) 0x10 - Invalid CRC 0x12 - Invalid size (info size >506) <sup>(2)</sup> 0x24 - Request invalid in current state (state is disable, reading EEPROM) 0x25 - Buffer/ service request mismatch <sup>(3)</sup>
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

- Note that request successful is returned:
  - if a valid Close packet is received from the slave, or
  - if a service duration timeout occurs, or
  - if Channel Recovery is triggered, or
  - if the Close service request occurs when the telemetry state is Standby or Channel Recovery or Inactive or Medical Event.
- If the request info size is greater than 506, 0x12 - Invalid size (info size >506) will be used; if the info size or subtype (if applicable) does not match the value in the request table, "Parameter out of range" will be used.

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3. This status can occur if the master host attempts to send a close service request using service request buffer 1 (instead of buffer 0).

### 5.2.16 MEDICAL EVENT

The medical event service is somewhat analogous to an Open service except the roles of the master and slave are reversed. During a medical event the slave will duty cycle between transmitting and listening for the medical event service duration. First slave will send medical event packet as a “beacon” signal and then will listen for an Open request. The master will listen indefinitely for medical event packets. Upon hearing a medical event packet it will inform the host via indication, upon which the application could then issue an open service request.

Master’s role:

- The data link layer send a successful service response to the host upon receipt of a medical event service request, selects a channel and listens for a Medical Event transmission. Every five seconds it will re-select the best channel and listen for a medical event.
- If a medical event packet is received, the data link layer verifies the content. If the contents are correct, the data link layer will send a medical event indication to the host.
- The master host should send an open service request.

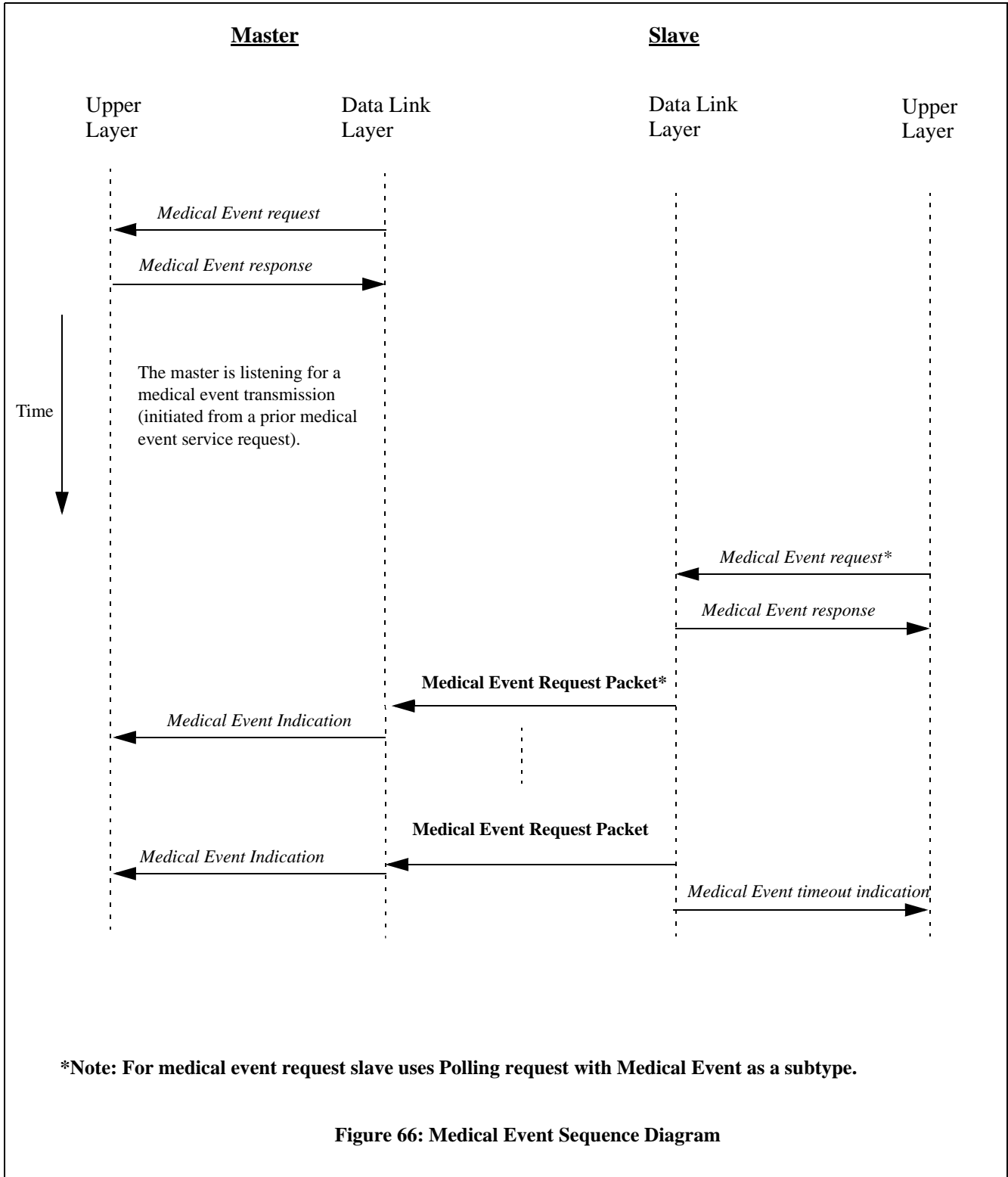
Slave’s role:

- When a medical event is triggered the host will enable Mozart and send a medical event request (polling request with medical event as a sub-type)
- The data link layer will transmit one medical event packet (as specified by medical event channel transmit time **Table 124 (SLAVE PARAMETERS FROM HOST)** on each channel for the service duration.
- Upon receipt of an open request an open successful indication will be send to the host and the data link layer will transition to communication state.



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When invoking this service the Upper Layer provides the station ID of the sequentially transmitting station to establish communication. An operational example of the Medical Event service is shown in **Figure 66**.



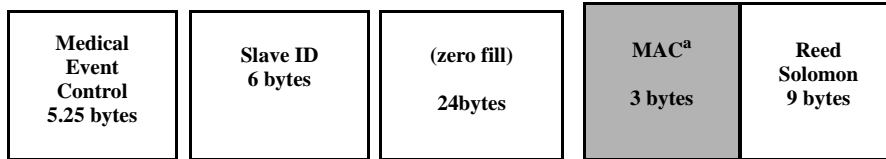
**Figure 66: Medical Event Sequence Diagram**

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5.2.16.1 REQUIREMENTS

**TLMC\_S\_414 - MEDICAL EVENT - SLAVE PACKET FORMAT**

The slave Medical Event response packet has the format is indicated in **Fig. 67 (Medical Event Packet)**



**Figure 67: Medical Event Packet**

**TLMC\_S\_229 - MEDICAL EVENT - REQUEST**

When medical event request is received, the Upper Layer will provide information as specified in **Table 48 (MEDICAL EVENT SERVICE REQUEST (SLAVE))**.

**TABLE 48: MEDICAL EVENT SERVICE REQUEST (SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x0A - Polling Service
Sub-type	N/A	1	The service request sub-type	0x04 - Poll upon Medical Event
Size	N/A	2	The size of the info field	Size of <b>Table 126 (SLAVE POLLING REQUEST)</b>
Info <sup>(1)</sup>	N/A	N	Polling info.	See <b>Table 126 (SLAVE POLLING REQUEST)</b>
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

1. The medical event service has one additional parameters which control its behavior: medical event service duration. See **Table 124 (SLAVE PARAMETERS FROM HOST)**

**TLMC\_S\_307 - MEDICAL EVENT - CHANNEL TRANSMIT TIMOUT**

The slave will restart native mode (transmit first) operation and re-send the Medical Event packet upon medical event channel transmit timeout. It will re-send this packet on a new channel.

[Slave will send Medical Event packet at a regular intervals as defined in **Table 124 (SLAVE PARAMETERS FROM HOST)**]

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### TLMC\_S\_416 - MEDICAL EVENT - INVALID OPEN REQUEST

The slave will restart native mode (transmit first) operation and re-send the Medical Event packet if it receives an Invalid Open packet.

If a valid Discover ID packet is received, Slave shall send a Discover Indication (i.e., Discover ID received while uplink medical events) to the host. See **Table 24 (DISCOVER INDICATION (SLAVE))**.

[An Invalid Open packet includes Open with mismatched slave ID, a packet other than Open, and packet with MAC error. Receipt of an invalid open packet causes the slave to transmit another medical event packet (and listen for an open packet).It will resend this packet on a new channel.]

### TLMM\_S\_440 - MEDICAL EVENT - POLL UPON TELM REQUEST

If a poll upon Tel M request is received while uplink medical events, slave will stop uplink medical event, send polling response to host, and then slave shall start polling.

[See **TLMM\_S\_035 - POLLING - SERVICE REQUEST FROM UPPER LAYER**,  
**TLMM\_S\_256 - POLLING - SERVICE RESPONSE TO UPPER LAYER** and  
**TLMM\_S\_241 - POLLING ENABLING CRITERIA** for details]

### TLMC\_S\_417 - MEDICAL EVENT - SERVICE DURATION

The slave will send Medical Event packets (and listen for open packets) until the Medical Event service duration timer expires.

### TLMC\_S\_418 - MEDICAL EVENT - RESPONSE

When medical event request is received, the Data Link Layer will validate the medical event service request. A medical event service response will be sent to the host (see **TABLE 49: MEDICAL EVENT SERVICE RESPONSE (SLAVE)**). If the service status is successful, the slave will start the Medical Event Service Duration timer, and send a medical event packet.

**TABLE 49: MEDICAL EVENT SERVICE RESPONSE (SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x0A - Polling Service
Sub-type	N/A	1	The service response sub-type	0x04 - Poll upon Medical Event
Size	N/A	2	The size of the info field	1 byte
Info	Medical event service status	1	Status of the service request	0x01 - Successful 0x12 - Invalid size 0x14 - Invalid Poll subtype 0x15 - Request in invalid state <sup>(1)</sup> 0x10 - Invalid CRC 0x2A - Request invalid during EEPROM write
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

1. See **Table 7 (EXTERNAL SERVICES REQUEST VERIFICATION)** for the invalid states.

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**TLMC\_S\_257 - MEDICAL EVENT - INDICATION TO UPPER LAYER**

A medical event service will be stopped under the following conditions:

1. Medical event service duration timer expires medical event timeout indication will be generated to the upper layer **Table 50 (MEDICAL EVENT INDICATION (SLAVE))**.
2. A valid open packet is received an open successful indication will be generated to the upper layer. **Table 28 (OPEN INDICATION (SLAVE))**

**TABLE 50: MEDICAL EVENT INDICATION (SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0x28 - Medical event indication
Sub-type	N/A	1	The indication sub-type	N/A
Size	N/A	2	The size of the info field	1
Info	Medical event indication status	1	Status of the indication	• 0x03 - timeout
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

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**TLMC\_M\_230 - MEDICAL EVENT - HOST PARAMETERS**

When invoking a Medical Event service request, host will provide information as specified in **Table 51 (MEDICAL EVENT SERVICE REQUEST (Master))**

**TABLE 51: MEDICAL EVENT SERVICE REQUEST (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x85 - Medical Event Service
Sub-type	N/A	1	The service request sub-type	n/a
Size	N/A	2	The size of the info field	6 bytes
Info	N/A	6	Slave ID	6 bytes of slave ID
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

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### TLMC\_M\_231 - MEDICAL EVENT - RESPONSE TO HOST

A Medical Event response will be generated when the Medical Event service is initiated.

[The content of the response is shown in **Table 52 (MEDICAL EVENT SERVICE RESPONSE (Master))**].

**TABLE 52: MEDICAL EVENT SERVICE RESPONSE (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x85 - Medical Event Service Response
Sub-type	N/A	1	The service response sub-type	n/a
Size	N/A	2	The size of the info field	1 byte
Info	Medical event service status	1	Status of the service request	1 = request successful 2 = request invalid in current state (state is Comm) 3 = request invalid in current state (state is Recovery, device scanning) 4 = request invalid in current state (state is Recovery, device not scanning)(2) 5 = request invalid in current state (state is Inactive) 0x08 - Request invalid in current state (state is disable, not reading EEPROM) 0x0A - Parameter value error <sup>(1)</sup> 0x0F - Request not serial (another service is in progress) 0x10 - Bad CRC on service request 0x12 - Invalid size (info size >506) <sup>(1)</sup> 0x24 - Request invalid in current state (state is disable, reading EEPROM) 0x25 - Buffer/ service request mismatch <sup>(2)</sup>
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

1. If the request info size is greater than 506, 0x12 - Invalid size (info size >506) will be used; if the info size or subtype (if applicable) does not match the value in the request table, "Parameter out of range" will be used.
2. This status can occur if the master host attempts to send a medical event service request using service request buffer 1 (instead of buffer 0).

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**TLMC\_M\_232 - MEDICAL EVENT - MEDICAL EVENT PACKET**

If the master receives a valid medical event packet it will send a medical event indication to the host as specified in **Table 53 (MEDICAL EVENT INDICATION (Master))**

[The indication will be generated to the host no more frequently than one/second]

**TABLE 53: MEDICAL EVENT INDICATION (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0xA8 - Medical event indication
Sub-type	N/A	1	The indication sub-type	N/A
Size	N/A	2	The size of the info field	1
Info	Medical event indication status	1	Status of the indication	• 0x01 - Successful
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

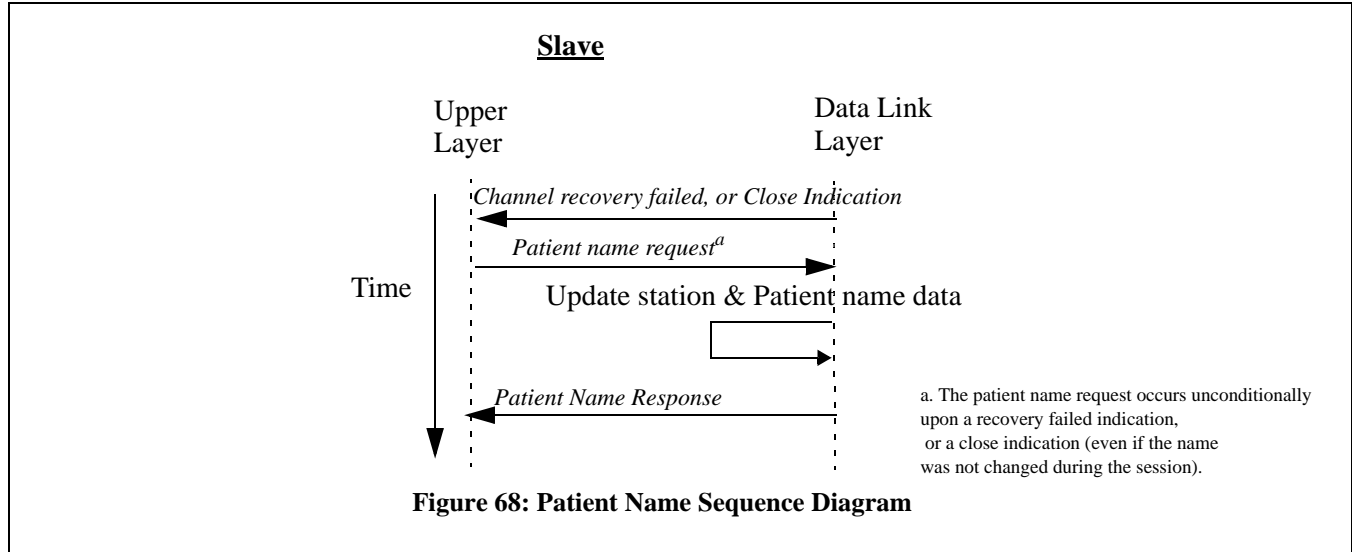
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5.2.17 PATIENT NAME REQUEST

The device and patient name data is provided by the host to Telemetry M when:

- Telemetry M issues following indications:  
 Channel recovery failed with polling ON and Close with polling ON.

**Fig. 68 (Patient Name Sequence Diagram)** illustrates the Patient Name request operations.



The patient name request is an “implied” polling request. The patient name and polling functionality are “tied” so that a stale name is not shown to the user after recovery fails or after close. The slave state machine returns to standby after recovery fail or close. It transitions to acquire upon a patient name (implied polling). Slave will start to poll once poll upon patient name request is received. See **TLMM\_S\_240 - POLLING INITIATION** for details.



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**TABLE 54: PATIENT NAME SERVICE REQUEST (SLAVE)**

FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	1	The type of service request	0x0A -Polling service
Sub-type	1	The service request sub-type	0x05 -Poll upon Patient Name
Size	2	The size of the info field	
Info		See <b>Table 126 (SLAVE POLLING REQUEST)</b>	See <b>Table 126 (SLAVE POLLING REQUEST)</b>
CRC	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

**TLMC\_S\_258 - PATIENT NAME REQUEST**

When Patient name request is invoked host will provide the patient name information.

[In the case of CRM this information resides in the device-specific system parameters database.]

**TLMC\_S\_259 - PATIENT NAME SERVICE RESPONSE TO UPPER LAYER**

When patient name request is received the Data Link Layer will validate the Patient Name service request (see **Table 54 (PATIENT NAME SERVICE REQUEST (SLAVE))**) and will generate an appropriate response (see **Table 55 (PATIENT NAME SERVICE RESPONSE (SLAVE))**).

**TABLE 55: PATIENT NAME SERVICE RESPONSE (SLAVE)**

FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	1	The type of service request	0x0A -Polling service
Sub-type	1	The service response sub-type	0x05 -Poll upon Patient Name
Size	2	The size of the info field	1 byte
Info	1	Status of the service request	0x01 - Successful 0x12 - Invalid size 0x15 - Request in invalid state <sup>(1)</sup> 0x10 - Invalid CRC 0x14 - Invalid subtype 0x2A Request invalid during EEPROM write
CRC	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

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1. See **Table 7 (EXTERNAL SERVICES REQUEST VERIFICATION)** for the invalid states.

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## 5.2.18 NETWORK

The term “network” used in this section is not an industry standard as used in the telecommunication industry. The network in this document refers to an external service which could be invoked by the user of this communication protocol specification. This network service allows the communication between two nodes (known as one to one communication). The network service also allows communication between 1 to N nodes. Time slots are used to avoid collisions between multiple nodes. See **Fig. 78 (Network Multiple Nodes Response)**.

The network service does not require a communication session to be opened via open service. There are two sub-services which are associated with the network service.

- **Configure Network:** is used to configure the network.
- **Network Data:** is used to exchange data between nodes. It uses wireless local wakeup.

In order to define and setup a network, the node(s) wakeup internal service (Section 5.3.6) along with a Discover external service (Section 5.2.7) are used to identify the nodes within the vicinity.

Facilitator’s (network node or third party) upper layer is responsible for building the network table and insuring that table is securely transmitted to all the network nodes as identified in the configuration table. The host for each node will use the configure network service to provide the table to the data link layer each time the content of the configuration table is changed.

### 5.2.18.1 BUILDING LOCAL NETWORK

The network is initially built by first performing the Discover Full Service request on a facilitator, to find nodes who do not belong to a network. A facilitator can be a network node or a third party. An example of the third party is a clinician’s programmer. The user (clinician) selects the nodes for the local network and identifies one node as the network coordinator. The network table is sequentially transmitted to each network node using the data service. When all network nodes have received the network table, a local network is considered formed. Once the local network is formed host on each node uses the configure network request to pass the network table to its data link layer.

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## 5.2.18.2 NETWORK SERVICES

The network service consists of two sub-services:

1. Configure network - service is used by the host to provide the network configuration table to the data link layer. Upon a successful completion of the network service the configuration table is stored in the data link layer, it may also be stored by the upper layer (host). When network config values change or a reset occurs host must provide the network configuration table. A typical example of network table is shown in **Table 56 (NETWORK TABLE)**.

**TABLE 56: NETWORK TABLE**

TABLE INDEX (SHORT ID)	ID
0	Station ID of coordinator <sup>(1)</sup>
1	Station ID of child #1
2	Station ID of child #2 <sup>(2)</sup>
3	Station ID of child #3 <sup>(2)</sup>

1. The coordinator's ID is the network ID. The coordinator must always be the first ID in the network table.
  2. Unused nodes should be set to a station ID of all zeroes.
2. Network data - a service used by a network node to exchange a small amount of data. This exchange may be a one-to-one exchange. It may also be a one-to-N. An example of a one-to-one exchange follows: an external sensor transmits its sensor data to a device. The device transmits a network data indication to its (the device's) upper layer when it receives the network data packet from the sensor. The device's upper layer interprets the data (for therapy decisions, etc.). The service is complete when the device transmits a response message and it is acknowledged by the sensor.

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### 5.2.18.3 CONFIGURE NETWORK

The configure network service is used by this node's host to provide the network table to its data link layer. An example is shown in **Table 56 (NETWORK TABLE)**.

#### 5.2.18.3.1 CONFIGURE NETWORK SERVICE REQUIREMENTS

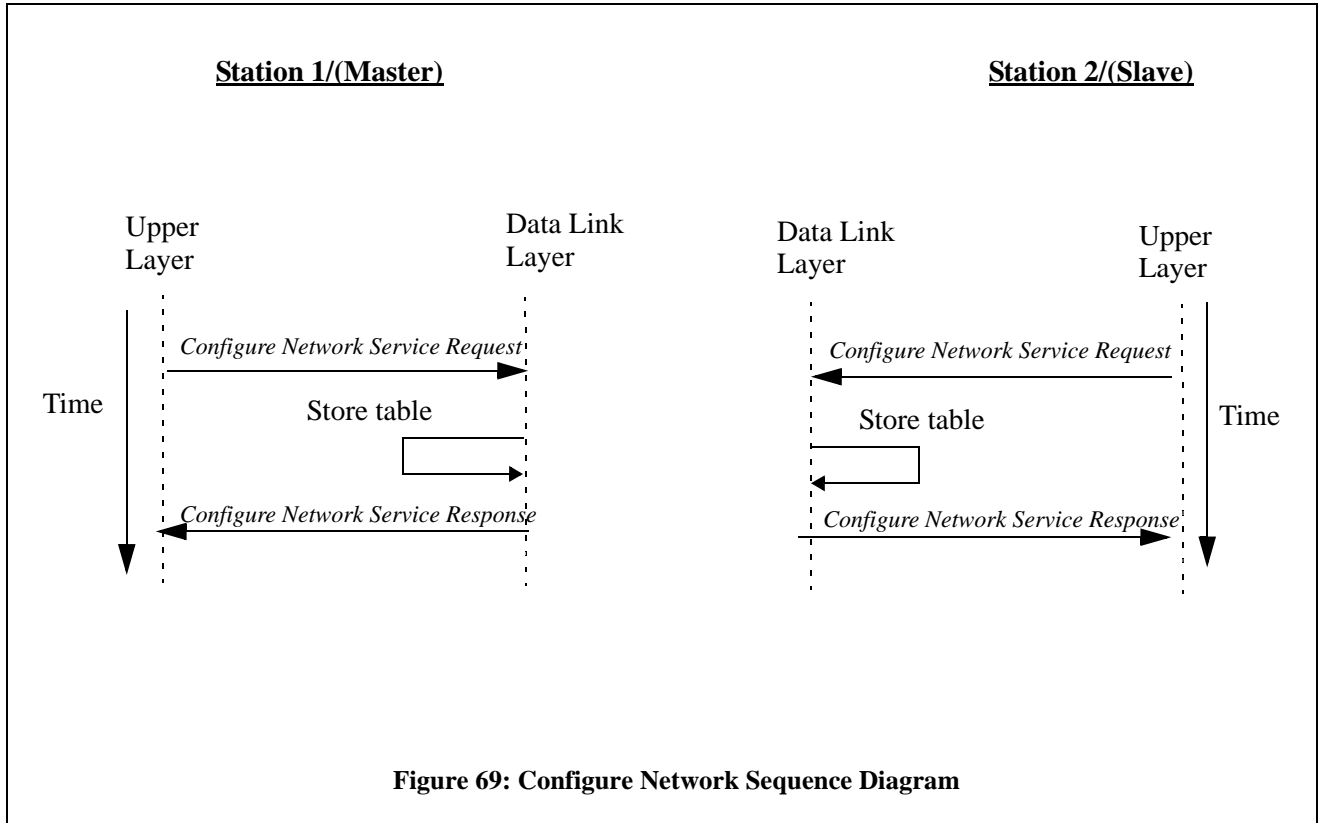
**TABLE 57: CONFIGURE NETWORK SERVICE REQUEST**

FIELD	INFO. FIELD	BYTES	DESCRIPTION	VALUES
Type	n/a	1	Type of service.	Network 0x0C - Slave 0x8C - Master
Sub-type	n/a	1	Sub-type of the service.	0x03 - Configure network service request
Size	n/a	2	Size of Info	26
Info	Network table	24	The IDs of all the network members.	See <b>Table 56 (NETWORK TABLE)</b> . 24 - 4 nodes
	Network table CRC	2	Network table CRC	
CRC	n/a	2	CRC of all fields above.	This is given by the upper layer.

Note the Network table is fixed at 24 bytes, if there are less than four nodes in the network, zero "00" should be used to fill the unused bytes. For example, if there are only two nodes in the network table, last 12 bytes should be "00" and the Network table CRC is the CRC of the 24bytes.

#### **TLMM\_MS\_309 - CONFIGURE NETWORK - UPPER LAYER PARAMETERS**

When invoking a configure network service request, the Upper Layer shall provide information as specified in **Table 57 (CONFIGURE NETWORK SERVICE REQUEST)**.



**Figure 69: Configure Network Sequence Diagram**

**TLMM\_MS\_310 - CONFIGURE NETWORK - RESPONSE TO UPPER LAYER**

Upon the receipt of the network configuration table data link layer will generate a response to upper layer as specified in **Table 58 (CONFIGURE NETWORK SERVICE RESPONSE)**.

**TABLE 58: CONFIGURE NETWORK SERVICE RESPONSE**

FIELD	INFO FIELD	BYTES	DESCRIPTION	VALUES
Type	n/a	1	Service type.	Network 0x0C - Slave 0x8C - Master
Sub-type	n/a	1	Sub-type of the service.	0x03 - Configure network service response.

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**TABLE 58: CONFIGURE NETWORK SERVICE RESPONSE**

Size	n/a	2	Size of Info	1
Info	Configure Network Service Result	1	Status of the service request	0x01 - request successful 0x0A - parameter value error <sup>(1)</sup> 0x10 - Bad CRC on service request 0x12 - Invalid size (info size >506) <sup>(1)</sup> 0x13 - Invalid Request (This code can occur if the service request is sent using an interrupt other than service request0 (there is a buffer/ service request mismatch). (Slave Only) 0x19 - Invalid configuration (Tel M only) 0x24 - request invalid during EEPROM read (slave only) 0x25 - Buffer/ service request mismatch (master only) <sup>(2)</sup>
CRC	n/a	2	CRC of all fields above.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

1. If the request info size is greater than 506, 0x12 - Invalid size (info size >506) will be used; if the info size or subtype (if applicable) does not match the value in the request table, "Parameter out of range" will be used.
2. This status can occur if the master host attempts to send a network service request using service request buffer 1 (instead of buffer 0).

#### 5.2.18.4 NETWORK DATA

A network node uses the network data service (secured) to communicate with another local network node (one-to-one exchange). A network node may also use this service for a one-to-N exchange. This service differs from the data service (during communication) in that a small amount of data is transferred (typically less than 20 bytes and fit into one network data request packet) and it does not require open communication session.

- Upper layer generates the request to the data link layer.
- A channel is selected, wakeup packet(s) are transmitted and the data link layer transmits the request. The station remains on the selected channel until the response is received, or a service duration occurs, or the LBT timeout occurs.
- If the response is received, the service is declared a success.
- The data link layer notifies the upper layer with the service results.

The network data service can be any of the following:

- Network data service with message level (upper layer) response. **Fig. 70 (Network data (with message level acknowledgement) diagram).**
- Network data service with data link layer response. **Fig. 71 (Network data (with data link acknowledgement) diagram).**
- Network data service with no response. A typical example of this service is a transmission-only device. See **Fig. 72 (Network data (no acknowledgement) diagram).**

#### **TLMM\_M\_311 - NETWORK DATA - UPPER LAYER PARAMETERS**

When invoking a network data service request, the upper layer shall provide information as specified in **Table 59 (NETWORK DATA SERVICE REQUEST(MASTER)).**

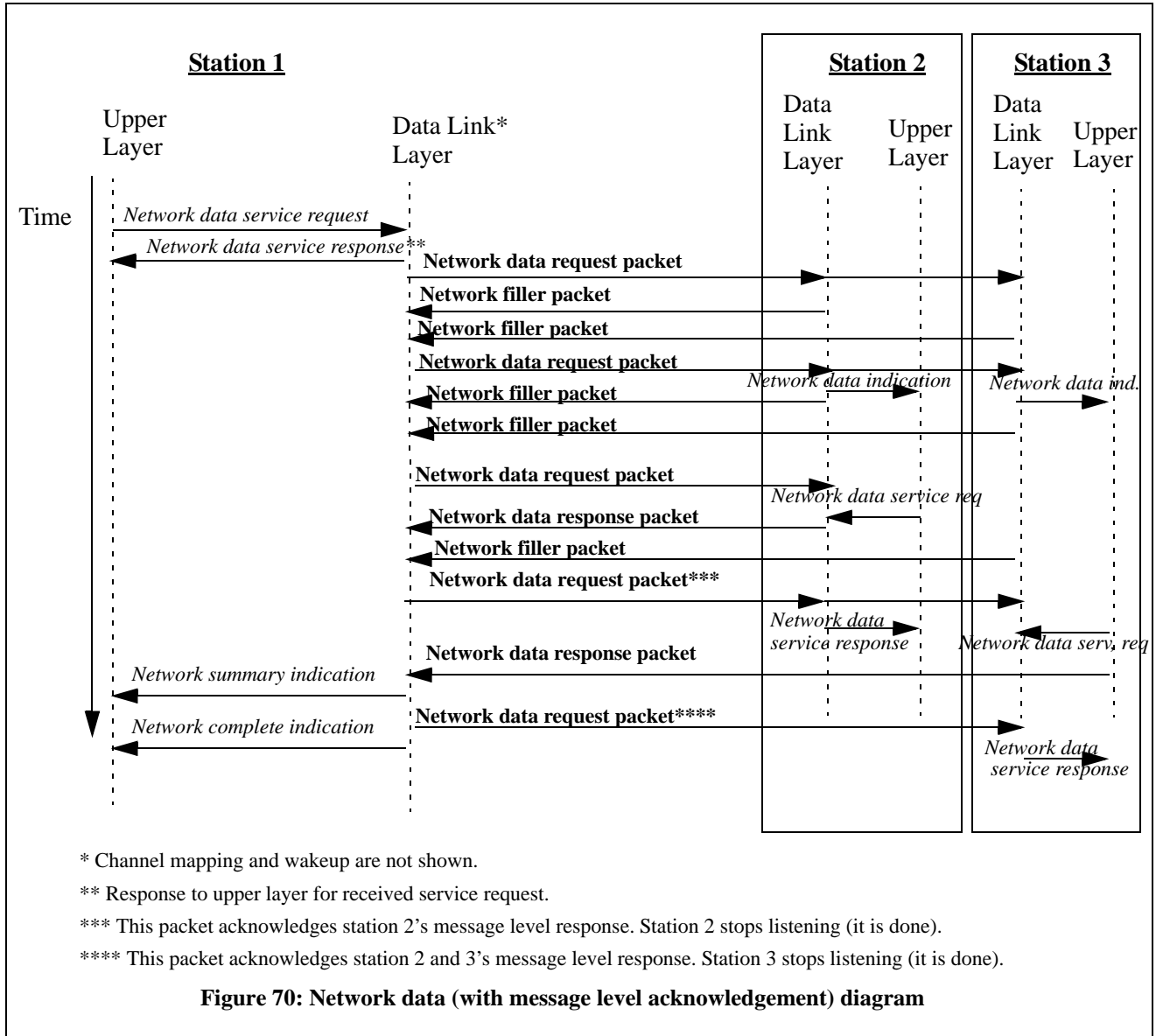
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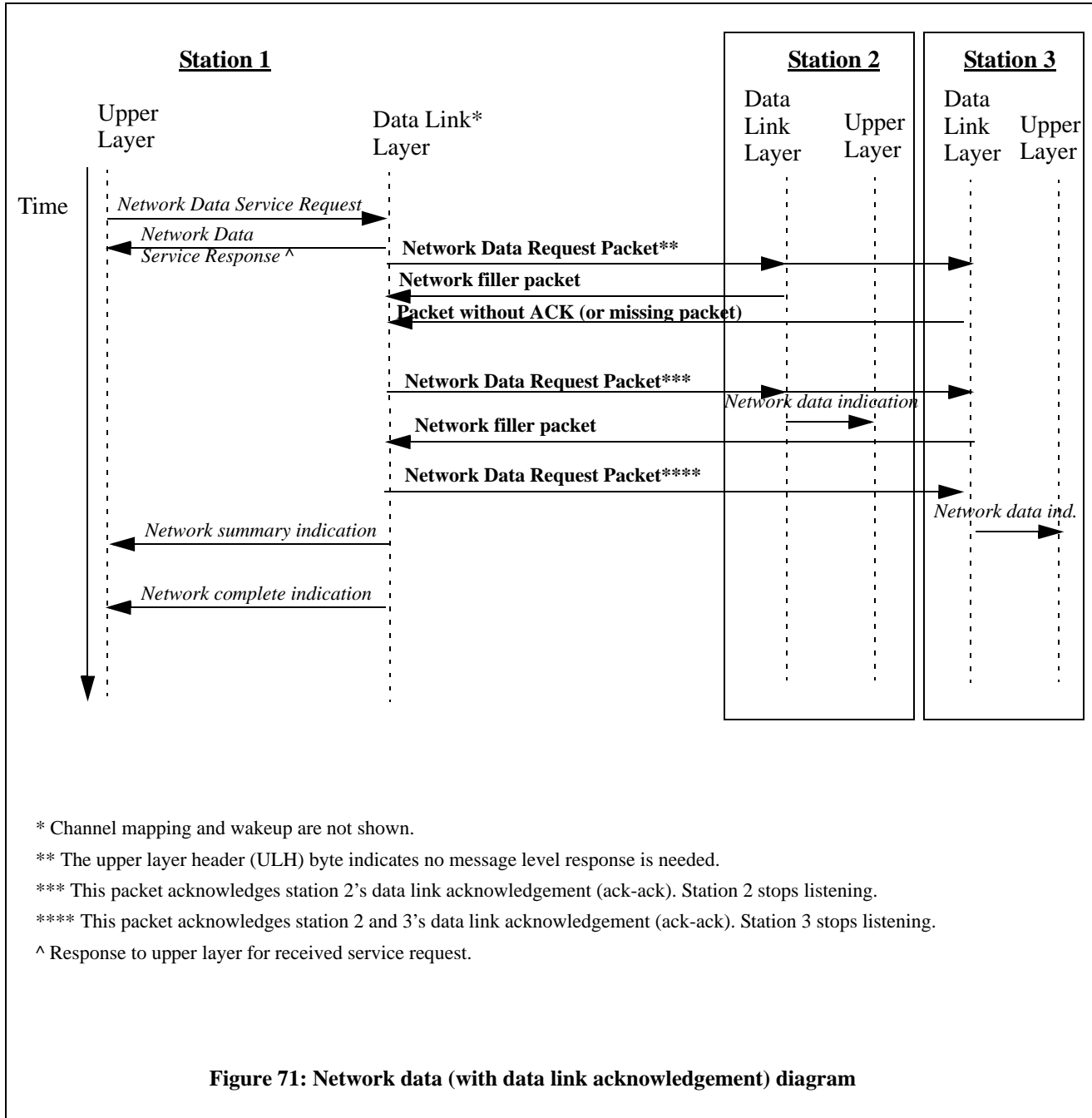
**TABLE 59: NETWORK DATA SERVICE REQUEST(MASTER)**

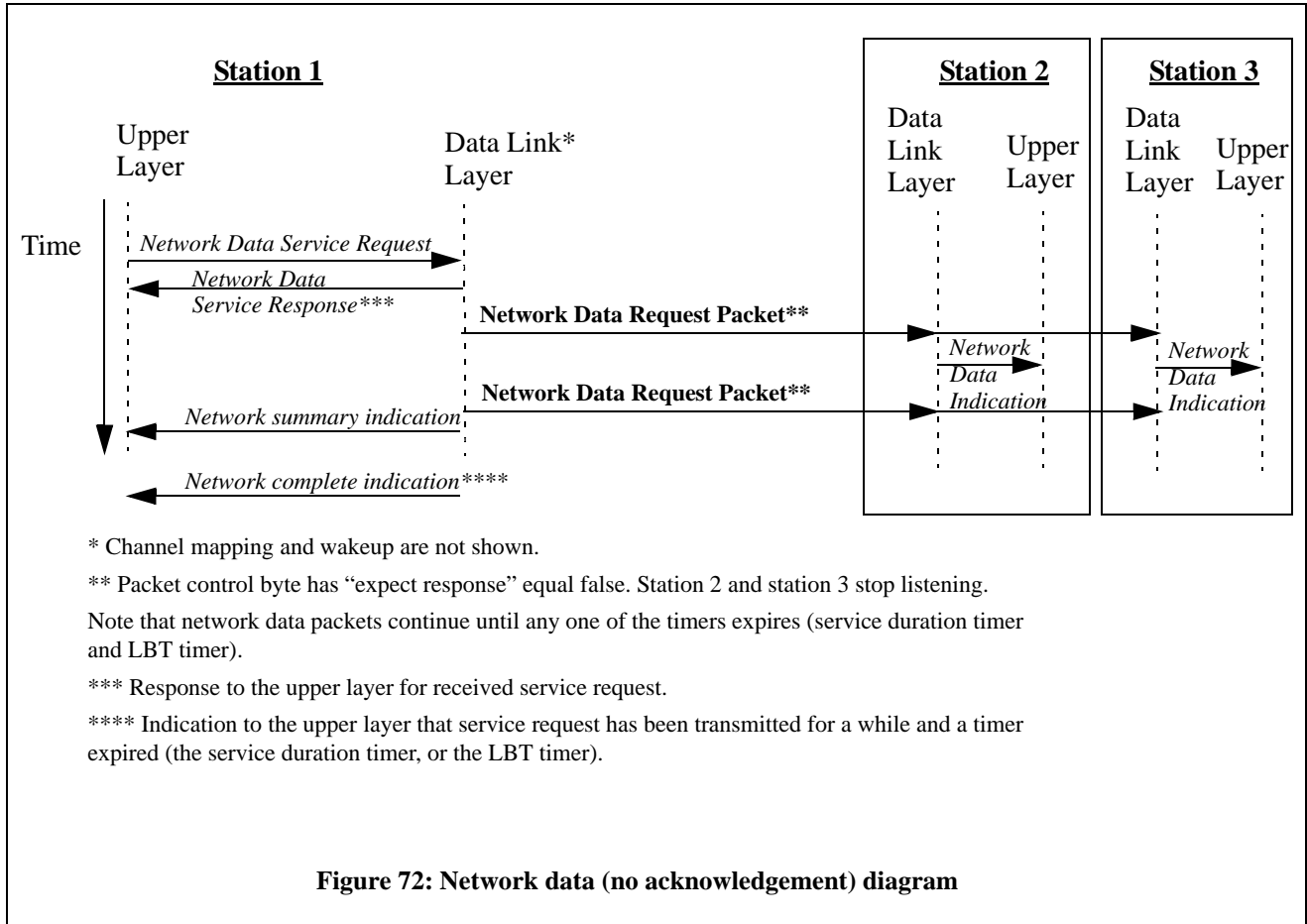
FIELD	INFO FIELD	BYTES	DESCRIPTION	VALUES
Type	n/a	1	The type of service network	0x8C - Master Network Request
Sub-type	n/a	1	The sub-type of service.	0x04 - Network data request.
Size	n/a	2	Size of Info.	4 - 13
Info. <sup>(1)</sup>	Deliver to coordinator <sup>(2)</sup>	1 bit	A flag telling if the network request should be delivered to the coordinator.	True = this network request should be delivered to the network coordinator False = otherwise
	Deliver to child #1 <sup>(2)</sup>	1 bit	A flag telling if the network request should be delivered to child #1.	True = this network request should be delivered to child #1 False = otherwise
	Deliver to child #2 <sup>(2)</sup>	1 bit	A flag telling if the network request should be delivered to child #2.	True = this network request should be delivered to child #2 False = otherwise
	Deliver to child #3 <sup>(2)</sup>	1 bit	A flag telling if the network request should be delivered to child #3.	True = this network request should be delivered to child #N False = otherwise
	Expect response	1	A flag indicating if a data link response is desired. This is communicated to the slaves via a bit in the control bytes.	True = the master expects an data link layer response from each slave. The master will re-transmit the request packet until all slaves have responded it or a service duration occurs, or the LBT timeout occurs. False = The master will transmit the network data request packets for a period of time, no response is required.
	User Data size	1	Number of user data bytes	1 to 10
	User Data	1 - 10	User data bytes to transmit	The data to be transmitted. This includes the upper layer header (ULH) as the first byte. See 5.2.11.2 for master ULH byte.
CRC	n/a	2	CRC for all fields above.	This is given by the upper layer.

1. This is one more parameter which controls the operation of the network data service: service duration. See **Table 123 (Master parameters from host)**. This value should be approximately 2 seconds longer than the total wakeup burst duration.  $T_{wu} + T_{cca} \leq \text{Service Duration} \leq T_{wu} + 2$ .  $T_{wu}$  is the wakeup burst duration,  $T_{cca}$  is the Clear-Channel-Assessment time. 2 seconds is coming from LBT 5 seconds minus wakeup last block time 3 seconds.
2. The combination of deliver to coordinator, deliver to child #1, deliver to child #2, deliver to child #3 yields the receptor bit map used by the wireless wakeup internal service (a field of the wakeup packet). The upper 4bits are unused.





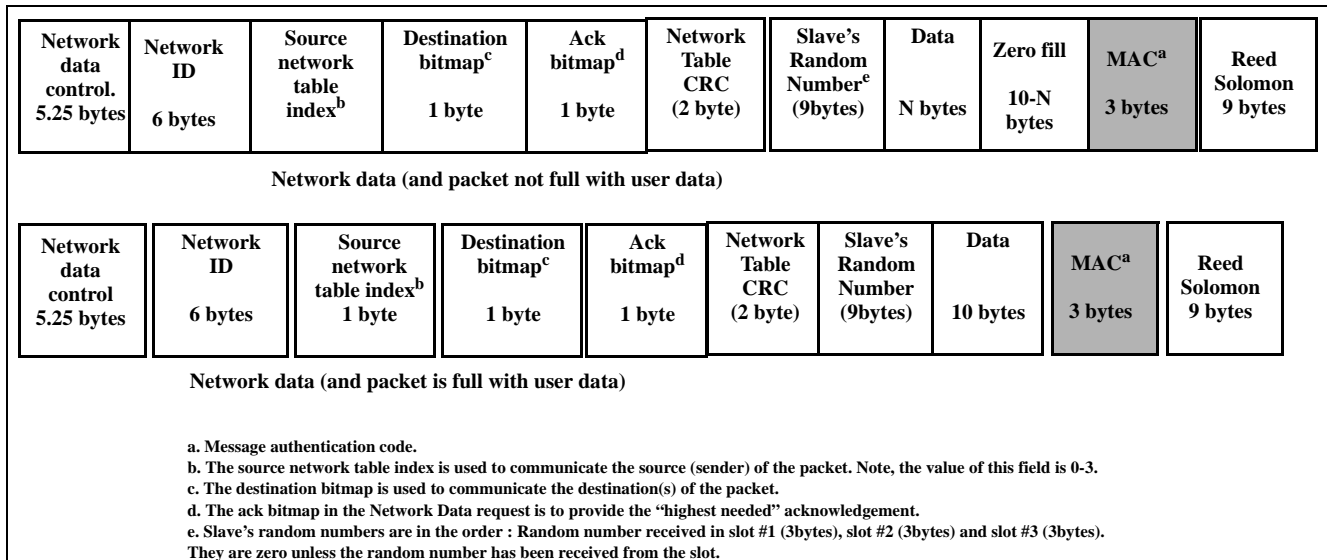




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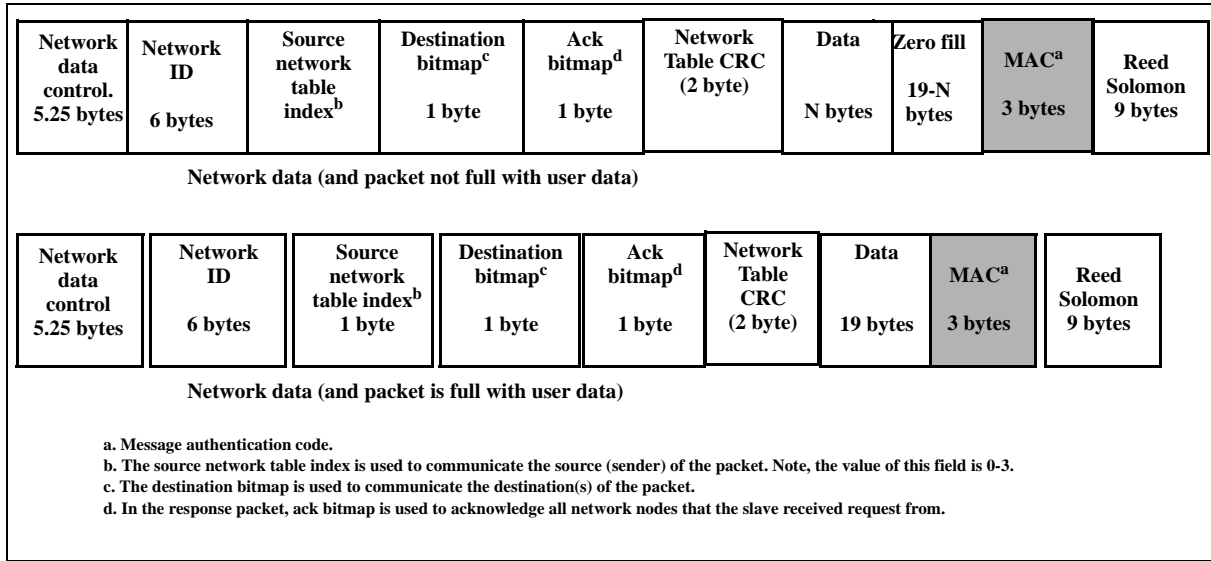
## TLMM\_M\_312 - NETWORK DATA - REQUEST AND RESPONSE PACKET FOR-MAT

The network data request and response packet shall have the format shown in **Fig. 73 (Network data Request packet)** and **Fig. 74 (Network data Response packet)**. In the request packet the source network table index shall be the index of the master. Master shall echo the slave's random numbers received in the network filler packets. In the response packet the source network table index shall be the index of a slave. The network ID shall be the station ID of the coordinator.

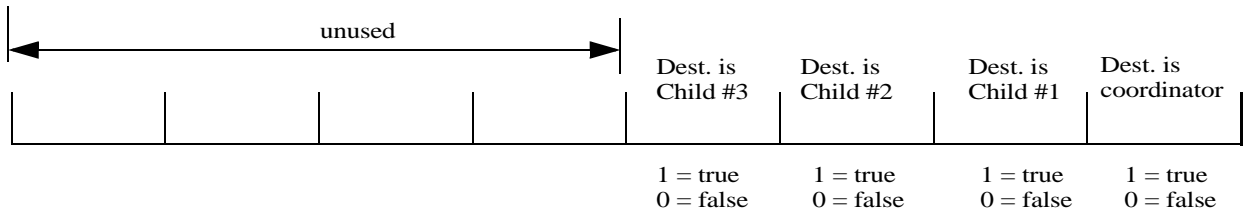


**Figure 73: Network data Request packet**

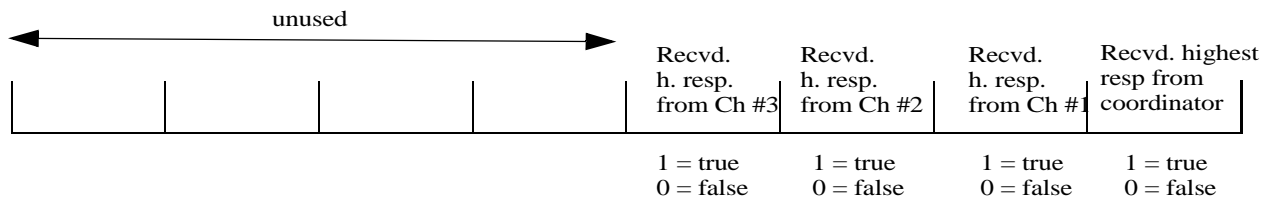
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**Figure 74: Network data Response packet**

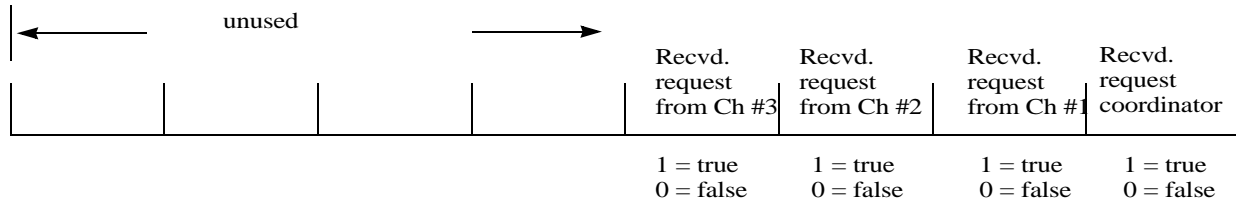


**Figure 75: Destination bitmap (Network Data Request and Response Packet)**



**Figure 76: Network Data Request Packet Ack bitmap**

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\* Note this is used in simultaneous multiple communications among network nodes.

**Figure 77: Network Data Response Packet Ack bitmap**

An example of one to N communication:

A local network contains 4 device nodes, Child #1 as master, Child #2, Child #3 are slave nodes. This is a network data service with upper layer (message level) response required. See **Fig. 78 (Network Multiple Nodes Response)**. The example below shows eight nodes:

1) First Network Data request packet:

Network ID = 0x112233445566 (local network coordinator's ID)

Source network table index = 0x01 (Child #1)

Destination bitmap = 0x0C (Child #2, #3)

Ack bitmap = 0x00

Data 1st byte ULH = 0x09 (Transaction Type(bit6,7)= 0 | Final Transaction(bit3)= 1 |

Application response requested(bit0) = 1)

Random Numbers = 9bytes of 00.

Network Filler packet from Child #2:

Network ID = 0x112233445566 (local network coordinator's ID)

Source network table index = 0x02 (Child #2)

Destination bitmap = 0x02 (Child #1)

Ack bitmap = 0x00 (Child #1)

Control Byte 1 bit7(ACK) = 1, this is the acknowledgement to the master to indicate Good MAC packet has been received.

Response time slot = 1

Random Number of slot 1 = Random number of child 2

Network Filler packet from Child #3:

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Network ID = 0x112233445566 (local network coordinator's ID)  
Source network table index = 0x03 (Child #3)  
Destination bitmap = 0x02 (Child #1)  
Ack bitmap = 0x00 (Child #1)  
Control Byte 1 bit7(ACK) = 1, this is the acknowledgement to the master to indicate Good MAC packet has been received.  
Response time slot = 2  
Random Number of slot 2= Random number of child 3

2) Second Network Data request packet (Child #2 and Child #3 not respond yet):  
Network ID = 0x112233445566 (local network coordinator's ID)  
Source network table index = 0x01 (Child #1)  
Destination bitmap = 0x0C (Child #2, #3)  
Ack bitmap = 0x00  
Data 1st byte ULH = 0x09 (Transaction Type(bit6,7)= 0 | Final Transaction(bit3)= 1 |  
Application response requested(bit0) = 1)  
Random Numbers = 3 bytes received from of slot1, 3 bytes received from of slot2, 3bytes of 00.

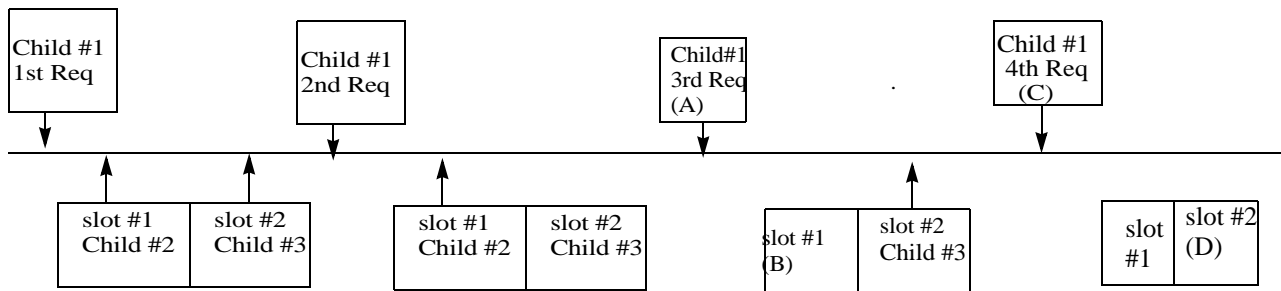
Network Data response packet from Child #2:  
Network ID = 0x112233445566 (local network coordinator's ID)  
Source network table index = 0x02 (Child #2)  
Destination bitmap = 0x02 (Child #1)  
Ack bitmap = 0x02 (Child #1)  
Control Byte 1 bit7(ACK) = 1, this is the acknowledgement to the master to indicate Good MAC packet has been received.  
Data 1st byte ULH = 0x10 (Transaction Type(bit6,7)= 0 | Final Transaction(bit4)= 1)  
Response time slot = 1

3) Third Network Data request packet (Child #3 not respond yet):  
Network ID = 0x112233445566 (local network coordinator's ID)  
Source network table index = 0x01 (Child #1)  
Destination bitmap = 0x0C (Child #2,#3)  
Ack bitmap = 0x04 (Child #2 responded)  
Data 1st byte ULH = 0x09 (Transaction Type(bit6,7)= 0 | Final Transaction(bit3)= 1 |  
Application response requested(bit0) = 1)

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Network Data response packet from Child #3:  
 Network ID = 0x112233445566 (local network coordinator's ID)  
 Source network table index = 0x03 (Child #3)  
 Destination bitmap = 0x02 (Child #1)  
 Ack bitmap = 0x02 (Child #1)  
 Control Byte 1 bit7(ACK) = 1, this is the acknowledgement to the master to indicate Good MAC packet has been received.  
 Data 1st byte ULH = 0x10 (Transaction Type(bit6,7)= 0 | Final Transaction(bit4)= 1)  
 Response time slot = 2

4) Last Network Data request packet (all Child #2,#3 responded):  
 Network ID = 0x112233445566 (local network coordinator's ID)  
 Source network table index = 0x01 (Child #1)  
 Destination bitmap = 0x0C (Child #2,#3)  
 Ack bitmap = 0x0C (Child #2,#3 responded)  
 Data 1st byte ULH = 0x09 (Transaction Type(bit6,7)= 0 | Final Transaction(bit3)= 1 | Application response requested(bit0) = 1))



**Figure 78: Network Multiple Nodes Response**

**Note:**  
 (A) Child #1 3rd Req. acked Child #2. (B) Child#2 receives the ack from Child #1 and goto standby.  
 (C) Child #1 4th Req. acked Child #2 and Child #3.  
 (D) Child#3 receives the ack from Child #1 and goto standby.



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## TLMM\_S\_313 - NETWORK DATA - FILLER PACKET FORMAT

The network filler packet shall be used by the slave to transmit its own random number to the master as well as respond to the network data request before the slave host responds to the network data request.

[The filler packet is to occupy the channel format of this packet is shown in **Fig. 79 (Network Filler Packet)**].

### Network filler packet format:

Network filler control. 5.25 bytes	Network ID 6 bytes	Source network table index <sup>b</sup> 1 byte	Destinatio n bitmap <sup>c</sup>	Ack bitmap <sup>d</sup> 1 byte	Network Table CRC (2 byte)	Random Number (3bytes)	Zero fill 16 bytes	MAC <sup>a</sup> 3 bytes	Reed Solomon 9 bytes
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- a. Message authentication code.
- b. The source network table index is used to communicate the source (sender) of the packet.
- c. A destination bitmap is used to communicate the destination(s) of the packet.
- d. Ack bitmap is used to acknowledge other network nodes in simultaneous multiple communications among network nodes.

**Figure 79: Network Filler Packet**

### 5.2.18.4.1 NETWORK DATA SERVICE REQUIREMENTS

### 5.2.18.4.2 MASTER

## TLMM\_M\_314 - NETWORK DATA - TRANSMITTING REQUEST PACKETS

Upon receiving a network data service request from the upper layer master will:

1. Start the service duration timer.
2. Select the least interfered channel (takes 275 +/- 50 msec<sup>(4)</sup>)
3. Start LBT timer.
4. Perform instigator wireless wakeup. See parameters in **Table 123 (Master parameters from host)** for Wakeup user data present, secure wakeup and user data.
5. Transmit the network data request packet.

4. CCA of the MICS band takes approximately 275 msec. CCA of the MEDS band takes approximately 550 msec. CCA of both bands takes approximately 825 msec. Note that if HDR mode is enabled, assessment of each channel, antenna pair is lengthened by 5 msec (to allow the HDR synthesizer to stabilize). This means the CCA of the MICS band is lengthened from 275 msec to 375 msec

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### TLMM\_M\_315 - NETWORK DATA - UPPER LAYER RESPONSE (MESSAGE LEVEL RESPONSE)

The network data request packet shall be transmitted until any one of the timers expires (the service duration timer or the LBT timer). When any of the timers expire a network complete indication will be sent to the host. See **Table 60 (NETWORK COMPLETE INDICATION (MASTER))**

**TABLE 60: NETWORK COMPLETE INDICATION (MASTER)**

FIELD	INFO FIELD	BYTES	DESCRIPTION	VALUES
Type	n/a	1	Type of indication	0xBA - Network complete indication
Sub-type	n/a	1	The indication sub-type	n/a
Size	n/a	2	The size of the info field	1
Info	status of the indication	1	The status of the indication	0x03 - timeout
CRC	CRC of all the above fields. Two bytes.	2	A two byte CRC of all above fields	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

[See **Fig. 70 (Network data (with message level acknowledgement) diagram)** for an example.

The upper layer sets “application reply requested” bit in the ULH byte to request upper layer (message level) response from the slave.

The antenna will be toggled each time a network packet is transmitted.]

### TLMM\_M\_316 - NETWORK DATA - DATA LINK LAYER RESPONSE (PACKET LEVEL RESPONSE)

The network data request packet shall be transmitted until any one of the timers expires (the service duration or the LBT timer). When any of the timers expire a network complete indication will be sent to the host. See **Table 60 (NETWORK COMPLETE INDICATION (MASTER))**.

[See **Fig. 71 (Network data (with data link acknowledgement) diagram)** for an example.

The upper layer sets the “Expect response” field in the network data service request and clears the “application reply requested” bit in the ULH byte to request data link layer (packet level) response from the slave.

The data link layer will set the “Expect response” bit in control bytes of the network data request packet accordingly.

The antenna will be toggled each time a network packet is transmitted.]

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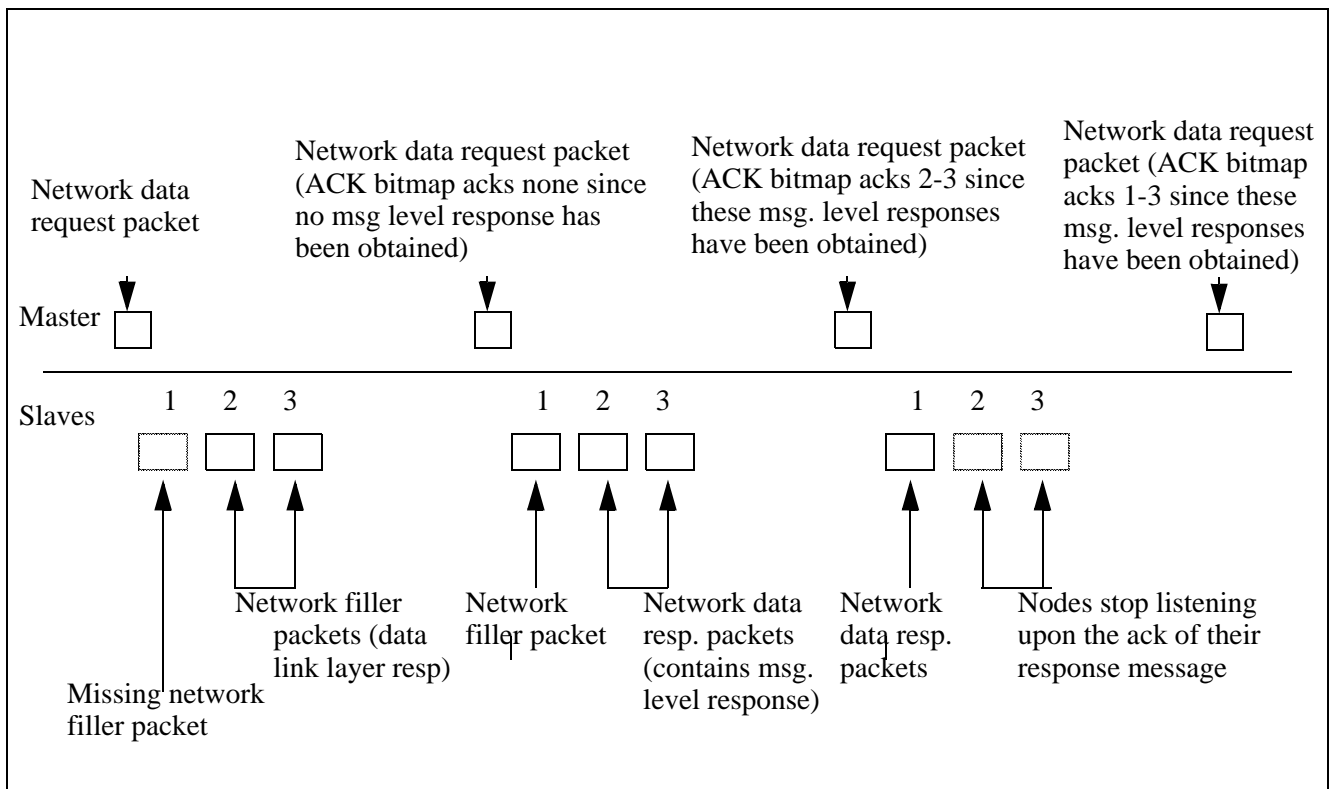
### TLMM\_M\_317 - NETWORK DATA - NO ACK

The network data request packet shall be transmitted until any one of the timer expires (the service duration or the LBT timer), if no response is required from the slave(s). When any of the timers expire a network complete indication will be sent to the host. See **Table 60 (NETWORK COMPLETE INDICATION (MASTER))**.

[The upper layer clears “Expect response” field in the network data service request and clears the “application reply requested” bit in the ULH byte to suppress any response from the slave(s).

The data link layer will clear the “Expect response” bit in the control bytes of the network data request packet accordingly.

The antenna will be toggled each time a network packet is transmitted.]



**Figure 80: Network data example (with data link & upper layer response)**

### TLMM\_M\_318 - NETWORK DATA - SUCCESSFUL RESPONSE TO UPPER LAYER

Upon receiving a valid network data service request, the data link layer shall send a successful network data service response to the upper layer. See **Table 61 (NETWORK DATA SERVICE RESPONSE (MaSter))**

[The data link layer checks CRC and the parameters of the service request.]

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**TLMM\_M\_319 - NETWORK DATA - UNSUCCESSFUL RESPONSE TO UPPER LAYER**

Upon receiving an invalid network data service request, the data link layer shall send an unsuccessful network data service response to the upper layer. **Table 61 (NETWORK DATA SERVICE RESPONSE (MaSter))**

[The data link layer checks CRC and the parameters of the service request.]

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**TABLE 61: NETWORK DATA SERVICE RESPONSE (MASTER)**

FIELD	INFO FIELD	BYTES	DESCRIPTION	VALUES
Type	n/a	1	Service type Network	0x8C - Master
Sub-type	n/a	1	Sub-type of the service.	0x04 - Network data response.
Size	n/a	2	Size of Info.	1
Info	Network Data Service Result	1	Status of the service request	0x01 - Request successful <sup>(1)</sup> 0x02 - Request invalid in current state (state is Comm) 0x03 - Request invalid in current state (state is Recovery; device scanning) <sup>(2)</sup> 0x04 - Request invalid in current state (state is Recovery; device not scanning) 0x05 - Request invalid in current state (state is Inactive) 0x07 - Request invalid in current state (listening for Medical Event) 0x08 - Request invalid in current state (state is disable, not reading EEPROM) 0x0A - Parameter value error <sup>(3)</sup> 0x0F - Request not serial (another service is in progress) 0x10 - Bad CRC on service request 0x12 - Invalid size (info size >506) <sup>(3)</sup> 0x19 - Invalid configuration (Tel M only) 0x20 - Master has not BAN key <sup>(4)</sup> 0x24 - Request invalid in current state (state is disable, reading EEPROM) 0x25 - Buffer/ service request mismatch <sup>(5)</sup>
CRC	n/a	2	CRC of all fields above.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

1. All master data packets transmitted and acknowledged successfully.
2. The slave is considered to be still scanning if (time now - time of last valid slave packet) is less than (slave recovery duration + slave polling duration).
3. If the request info size is greater than 506, 0x12 - Invalid size (info size >506) will be used; if the info size or subtype (if applicable) does not match the value in the request table, "Parameter out of range" will be used.
4. This status only occurs if the master has no BAN key and the "security for wakeup user data/ network packet" parameter is true (see the master parameters to host in the appendix).
5. This status can occur if the master host attempts to send a network service request using service request buffer 1 (instead of buffer 0).

**TLMM\_M\_320 - NETWORK DATA - INDICATION TO UPPER LAYER**

A network summary indication shall be sent to the upper layer if any one of the timers expires (the service duration and the LBT timer). See **Table 62 (NETWORK SUMMARY INDICATION (MASTER))**

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**TABLE 62: NETWORK SUMMARY INDICATION (MASTER)**

FIELD	INFO FIELD	BYTES	DESCRIPTION	VALUES
Type	n/a	1	Type of indication	0xAD - Network summary indication
Sub-type	n/a	1	The indication sub-type	n/a
Size	n/a	2	The size of the info field	92 bytes
Info	Coordinator status	1	The indication status of the coordinate	0 - unused 1 - successful, 2 - cancelled, 3 - timeout
	Coordinator data size	1	Coordinator's data size	0 - 19
	Coordinator network table CRC <sup>(1)</sup>	2	Coordinator's network table CRC	
	Coordinator data	19	The indication response message from the coordinator	Network response from coordinator. (i.e. if child #3 is the instigator then coordinator is the destination these bytes are the coordinator's response) otherwise all bytes are zero.
	Child #1 status	1	The indication status of child #1	0 - unused 1 - successful, 2 - cancelled, 3 - timeout
	Child #1 data size	1	Child #1 data size	0 - 19
	Child #1 network table CRC <sup>(1)</sup>	2	Child #1's network table CRC	
	Child #1 data	19	The indication response message from child #1	Network response from child #1. (i.e. if child #3 is the instigator then child #1 is the destination. These bytes are the response of child #1, otherwise all bytes are zero.
	...	...	...	...
	Child #3 status	1	The indication status of Child #3	0 - unused 1 - successful, 2 - cancelled, 3 - timeout
	Child #3 data size	1	Child #3's data size	0 - 19
	Child #3 network table CRC <sup>(1)</sup>	2	Child #3's network table CRC	
Child #3 data	19	The indication response message from child #3	Network response from child#3 (i.e. if child #1 is the instigator then child #3 is the destination. These bytes are the response of child #3, otherwise all bytes are zero.	
CRC	CRC of all the above fields. Two bytes.	2	A two byte CRC of all above fields	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

1. It is the host's responsibility to check the network table CRC on each responding node. A mismatched CRC indicates the node does not share the same network table as the master. A new network table should be sent to that node.

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### TLMM\_M\_321 - NETWORK DATA - RESPONSE COMPLETE AT MASTER

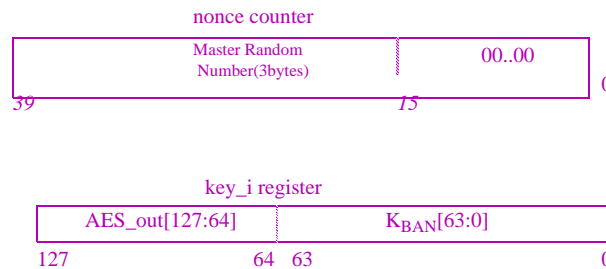
Upon receiving the response from all slaves a network summary indication will be sent to the host (see **Table 62 (NETWORK SUMMARY INDICATION (MASTER))**). The final acknowledgement shall be re-sent until any one of the timers expires (the service duration timer or the LBT timer).

[This is done for the case that a slave does not receive the final acknowledgement and it is still listening in the native mode. Note, the slaves will not respond to the master’s final acknowledgement either it receives it or it does not receive it.]

### TLMM\_M\_431 - NETWORK DATA - TRANSMIT SECURED NETWORK DATA PACKET

When the “security user data/network packet” bit is set in the local wake up packet, master should do the following before the transmission of every network data packet:

1. Start the block cipher for message integrity, privacy and freshness checking. The block cipher’s key input is set to AES\_out[127:64] concatenated with K<sub>BAN</sub>[63:0]. The block cipher’s nonce counter is initialized using master random number (CTR<sub>i</sub>) See **Fig. 81 (Wakeup security - block cipher initialization (to secure native mode packets))**.



**Figure 81: Wakeup security - block cipher initialization (to secure native mode packets)**

2. Enable the hardware’s security block (security register to on).

[For AES\_out[127:64] and master Random number (CTR<sub>i</sub>), see **Fig. 116 (Calculate AES\_out for wakeup security)**. In case there is no user data, a known pattern (0x00,0x00,0x00,0x00) will be used.]

[An idle immediate is performed before 1) and 2)]

[When the “security user data/network packet” bit is cleared, only idle immediate is performed]

#### 5.2.18.4.3 SLAVE

The slave shall go to the standby state after being woken up and completing the initialization service. It shall transfer to the acquire state after completing the polling service.

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**TLMM\_S\_434 - NETWORK DATA - PROCESSING POLLING REQUEST**

After enabled by a valid local wakeup, if a polling request (upon TEL M) is processed, slave shall start to poll, i.e., listen on the channel with the data rate provided by the local wakeup packet.

[Both the channel and transmit/receive data rate are from local wakeup packet.

“SlaveScansDuringPolling” bit does not apply in this case. There are no channel change in native mode and no async sniffing.

Slave will generate and save 3 bytes of random number. The 3bytes random number will be transmitted in the following Network Filler packets and also used to verify the Network Data Request packets]

**TLMM\_S\_322 - NETWORK DATA - NO ACK OF INVALID REQUEST PACKET**

No response packet shall be transmitted to the master if the invalid network data request packet is received.

[Then idle immediate is performed and the slave starts to listen in native mode again.]

**TLMM\_S\_323 - NETWORK DATA - NO ACK OF REQUEST PACKET**

No response packet shall be transmitted to the master if the received network data request packet has the “Expect response” bit set to zero in the control bytes.

[The master shall be the transmission-only device. The slave shall go to the disable state after processing the network data request packet.]

After slave starts to listen for network data packet, slave will do the following if the received network data request packet requires a data link response or message level response:

- If the received random numbers in the network data packet does not match to its own, transmit network filler packet (with “ACK bitmap” not set), else send Network data indication to slave host.
- if slave does not receive the network data service request from host, transmit network filler packet (with “ACK bitmap” set), else transmit network data packet to master.

**TLMM\_S\_324 - NETWORK DATA - ACK OF REQUEST PACKET**

Upon receiving a valid network data request packet with the “expect response” bit set in control bytes or with the “application response requested” bit set in ULH, a network filler packet shall be transmitted with its own random number. If the random number in the received network data request packet matches to its own random number, the master’s bit in the ack bit map of the network filler response packet shall be set accordingly.

[Note: A network data response packet will be sent in lieu of a network filler packet (if a network service request occurs before the slave has had a chance to transmit a network filler packet).]



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**TLMM\_S\_325 - NETWORK DATA - SERVICE INDICATION TO THE UPPER LAYER**

For Network Data Request packet “with no acknowledgement”, Network Data indication shall be sent to the upper layer upon receiving a valid network data request packet.

For Network Data Request packet “with message level acknowledgement” or “with data link acknowledgement”, upon receiving a valid network data request packet, slave shall also compare its own random number with the random number in the received Network Data Request packet. If they match, Network Data indication shall be sent to the upper layer.

[For Network Data Request packet “with no acknowledgement”, there is no random number comparison as slave does not transmit at all.

The content of the indication is defined **Table 63 (NETWORK Data INDICATION (SLAVE))**.

It is the host’s responsibility to check the network table CRC of the instigator with the network table CRC of its own. It is also host’s decision on what to do if the two network tables’ CRCs do not match. From a system's point of view it is probably best if the slave host ignores the network data from a therapy point of view. Additionally it is probably best if the slave attempts to respond to the instigator with some application failed status. The master can recognize the network table CRCs are mismatched and correct the slave table. If the slave host did not respond, the instigator wouldn't know if the tables were mismatched or if the instigator and slave were out of telemetry range.]

**TABLE 63: NETWORK DATA INDICATION (SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x2D - Network Data Indication
Sub-type	N/A	1	The service request sub-type	0x01 = Network Data Received with message level acknowledgement or with data link acknowledgement 0x02 = Network Data Received with no acknowledgement
Size	N/A	2	The size of the info field	9 to 18 (2bytes CRC+ 1 to 10bytes User Data+6bytes ID)
Info	Network Table CRC (received in the Network data packet)	2	the network table CRC of the instigator	two byte crc
	Data	N	Data received	The received transaction. Network data includes the Upper Layer Header (ULH) as the first byte.
	Source ID	6	The source node’s ID given at manufacturing	source ID (model, sub-model, serial number)

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**TABLE 63: NETWORK DATA INDICATION (SLAVE)**

CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.
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**TLMM\_S\_326 -NETWORK DATA- ENABLE SECURITY BLOCK**

1. Upon receipt of a poll service request or whenever network data response or network filler packet is transmitted, if the “security user data/network packet” bit is set in the local wakeup packet, the hardware’s security block will be enabled (security register to on).
2. At that time, the block cipher will be started for message integrity, privacy and freshness checking. The block cipher’s key input is set to AES\_out[127:64] concatenated with  $K_{BAN}[63:0]$ . The block cipher’s nonce counter is initialized using  $CTR_i$  (see **Fig. 81 (Wakeup security - block cipher initialization (to secure native mode packets))**)

[When the “security user data/network packet” bit is cleared, only idle immediate is performed]

**TLMM\_S\_327 - NETWORK DATA - NETWORK DATA RESPONSE**

Upon receiving a valid network data request from the upper layer, the data link layer shall transmit a network data response packet to the master. See **Table 64 (NETWORK DATA SERVICE REQUEST (SLAVE))**

The slave will retransmit the network data packet if it receives a network data packet with “this slave’s” ack bit not set.

[Note that a network data response packet will be sent in lieu of a network filler packet (if a network service request occurs before the slave has had a chance to transmit a network filler packet).]

**TABLE 64: NETWORK DATA SERVICE REQUEST (SLAVE)**

FIELD	INFO FIELD	BYTES	DESCRIPTION	VALUES
Type	n/a	1	The type of service network	0x0C - Slave Network Request
Sub-type	n/a	1	The sub-type of service.	0x04 - Network data request.
Size	n/a	2	Size of Info.	1 - 19
Info.	User Data	1 - 19	User data bytes to transmit	The data to be transmitted. This includes the upper layer header (ULH) as the first byte. See <b>5.2.11.3</b> for slave ULH byte.
CRC	n/a	2	CRC for all fields above.	This is given by the upper layer.

**TLMM\_S\_328 - NETWORK DATA - RESPONSE TIME SLOT**

The network data filler packets or the network data response packets shall be transmitted to the sender in the designated time slot. The slave’s designated time slot shall be obtained using the equation below:

$$\text{Slave Designated Time Slot \#} = \sum_{i=0}^{\text{Slave's network table index (this value ranges from 0 to 3)}} \text{bit value}[i] \text{ in the destination bitmap}$$

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$$\text{Total Response Time Slots} = \sum_{i=0}^3 \text{bit value}[i] \text{ in the destination bitmap}$$

Note: This number is used to determine the physical layer timing.

### TLMM\_S\_329 - NETWORK DATA - SEQUENCE NUMBER

The slave shall ignore a duplicate network data request packet.

[A master shall transmit the same network data request packet multiple times to all designated slaves if it does not receive expected the response from any one of the slaves. A master will always transmit the network data request packet with a sequence number of zero. The slave will ignore duplicate network data request. The slave will only process one network data packet and send one Network data indication to host after it receives a valid wakeup packet.]

### TLMM\_S\_330 - NETWORK DATA - INVALID RESPONSE TO INDICATION

The slave data link layer will send an immediate unsuccessful service response to the upper layer if the slave data link layer receives a network data service request when the master does not expect an application response (see Fig. 48 (Master's ULH byte) - application reply requested bit). See Table 65 (NETWORK DATA SERVICE RESPONSE (SLAVE)).

[Note that the slave host uses a network data service request to send an application response to the master host. This requirement describes the case where the master host does not want an application response, yet the slave host is trying to provide one.]

### TLMM\_S\_331 - NETWORK DATA - SERVICE SUCCESSFUL AT SLAVE

Once acknowledge is received from the master:

For packet level response slave will terminate polling,

For message lever response a successful service response will be sent to the upper layer and polling will be terminated. See Table 65 (NETWORK DATA SERVICE RESPONSE (SLAVE)).

[The slave shall stop native mode listening, cancel all timers and return to the standby state.]

### TLMM\_S\_332 - NETWORK DATA - SERVICE UNSUCCESSFUL AT SLAVE

When the polling timer expires while a network data service request has been received but the service response has not been generated, an unsuccessful network service response will be generated to the upper layer. See Table 65 (NETWORK DATA SERVICE RESPONSE (SLAVE)).

Slave will also generate polling timeout indication to the upper layer.

Slave will generate polling timeout indication to the upper layer when the polling duration timer expires. see TLMC\_S\_039 - POLLING INDICATION TO UPPER LAYER

[The slave shall stop native mode listening, cancel all timers and return to the standby state.]

**TABLE 65: NETWORK DATA SERVICE RESPONSE (SLAVE)**

FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	1	The type of service request	0x0C - Network Request

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**TABLE 65: NETWORK DATA SERVICE RESPONSE (SLAVE)**

Sub-type	1	The service request sub-type	0x04 - Network Data response
Size	2	The size of the info field	1
Info	1	Status of the service	0x01 - Request successful 0x10 - Bad CRC on service request; 0x12 - invalid (info) size; 0x13 - invalid request type (This code can occur if the service request is sent using an interrupt other than service request0 (there is a buffer/ service request mismatch). 0x14 - Invalid Request subtype 0x15 - invalid state <sup>(1)</sup> ; 0x19 - invalid configuration; 0x1A- polling timeout 0x24 - request invalid during EEPROM read
CRC	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

1. See **Table 7 (EXTERNAL SERVICES REQUEST VERIFICATION)** for the invalid states.

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5.2.19

**SECURITY**

The security feature provides for privacy, integrity, freshness, and authenticity.

1. Privacy - communicated messages are to be kept private (encrypted) such that an attacker cannot read the message. For example, an attacker cannot acquire information on the cardiac health of an ICD/IPG patient.
2. Integrity - the integrity of received messages is assured such that a legitimate recipient of a message is able to detect if a message has been manipulated. For example, an attacker cannot change a diabetes message from “deliver 1 unit bolus” to “deliver 100 units bolus”.
3. Freshness - the freshness of received messages is to be assured, such that the legitimate recipient of a message is able to detect if a message is a copy of the old message. For example, an attacker cannot replay a recorded message instructing the delivery of a neurological stim.
4. Authenticity - the authenticity of the message author is to be assured such that the legitimate users will not accept messages from illegitimate sources.

The security service provides a method to deliver (or accept) a body area network (BAN) key. Once the BAN key has been delivered, the security service provides a method to open a secure session (using a normal session key). The security service allows for a proximity exchange of the BAN key or ephemeral BAN key. In addition to a normal session, the BAN key can also be used to secure user data contained in a wakeup packet.

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5.2.19.1 SECURITY SERVICE — GENERAL REQUIREMENTS

The security service consists of several sub-services:

1. Create BAN key/ephemeral BAN key local
2. Assert BAN key/ephemeral BAN key local
3. Request BAN key/ephemeral BAN key local
4. Request BAN key/ephemeral BAN key via proximity switch
5. Authorize delivery of BAN key/ephemeral BAN key
6. Assert EBAN key duration
7. Update proximity status

**TLMM\_MS\_403 - SECURITY - UPPER LAYER PARAMETERS**

When invoking a Security service request, the Upper Layer will provide information as specified in **Table 66 (SECURITY SERVICE REQUEST (MASTER OR SLAVE))**. If the service type is correct but the sub-type is not equal to any of the values specified for the master and slave respectively, the status of “invalid security sub-type” will be returned in the service response.

[The service response is generated per **Table 67 (SECURITY SERVICE RESPONSE (MASTER))** and **Table 68 (SECURITY SERVICE RESPONSE (SLAVE))**.]

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**TABLE 66: SECURITY SERVICE REQUEST (MASTER OR SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	Security service request 0x0D - Slave 0x8D - Master
Sub-type	N/A	1	The service request sub-type	0x00 - Create BAN key/ephemeral BAN key local (Master/Slave) 0x01 - Assert BAN key/ephemeral BAN key local (Master/Slave) 0x02 - Request BAN key/ephemeral BAN key local (Master/Slave) 0x03 - Request BAN key/ephemeral BAN key via proximity switch (Master) 0x04 - Authorize delivery of BAN key/ephemeral BAN key (Slave) 0x05 - Assert EBAN duration (Slave) (Note master does not start an EBAN timer) 0x06 - Update proximity status (slave)
Size	N/A	2	The size of the info field	25
Info <sup>(1)</sup>	Slave ID	6	Station ID which is the destination of the request	Slave ID (Model ID, SubModel ID, and Serial# must all be specified). Model ID must match the model ID in the config file. Slave ID may not change from one open request to another (without an intervening close service request). Note: this field is only pertinent to subtype 0x03.
	BAN key type	1	The type of the BAN key: this service request or the data link layer's current BAN key	0 - BAN key 1 - ephemeral BAN key Note: Only the least significant bit of this byte is pertinent. All other bits are ignored. This parameter is NOT pertinent to Assert EBAN duration and Update proximity status service requests. Note: this field is pertinent to all subtypes except subtype 0x05 and 0x06.
	BAN key / ephemeral BAN key	16	The user supplied BAN key	This parameter is only pertinent to the assert BAN key/ephemeral BAN key local service (subtype 0x01). The BAN key type field determines whether this value represents the BAN key or ephemeral BAN key.
	EBAN key Duration	2	EBAN key duration	1 second resolution (valid for Assert EBAN key duration)
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

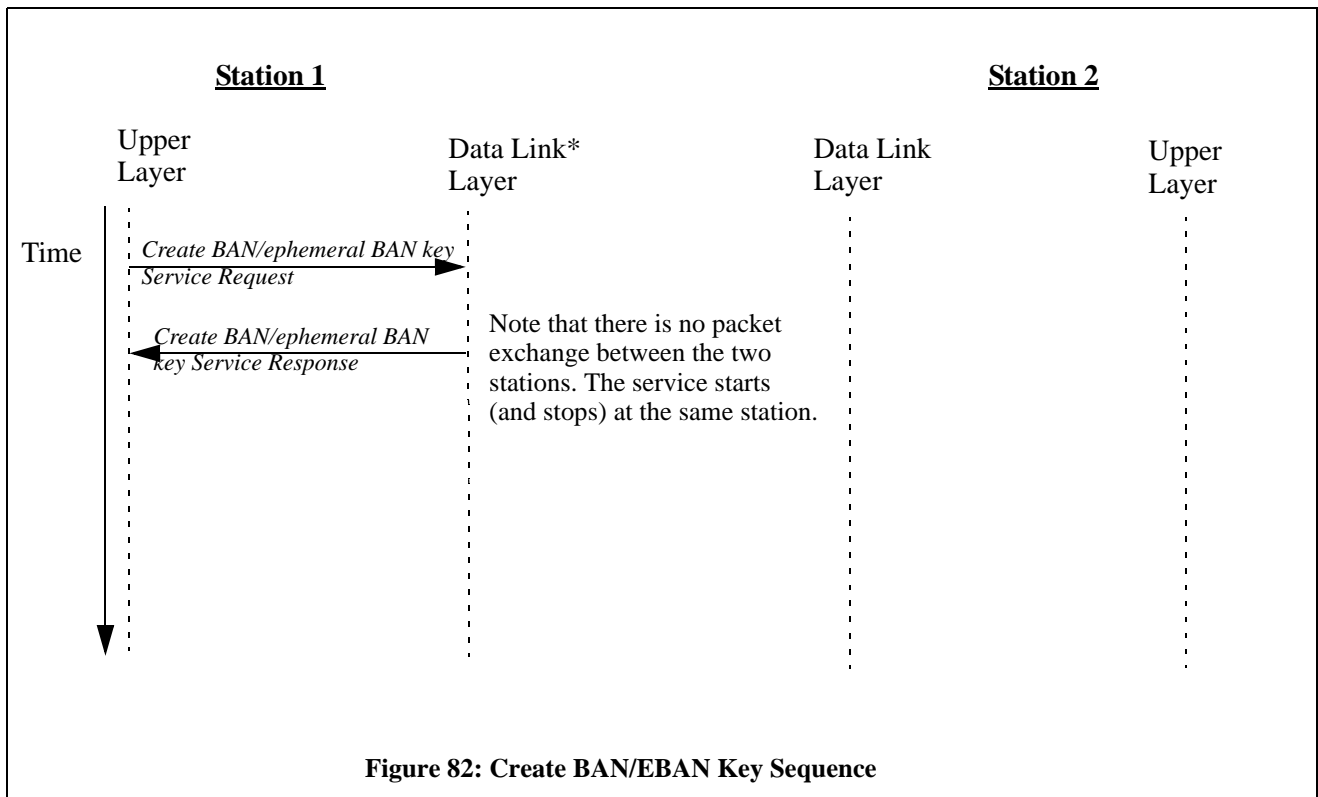
1. The security service has two additional parameter which control its behavior: security service & ephemeral K<sub>BAN</sub> timer duration. See **Table 123 (Master parameters from host)**.

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5.2.19.2 CREATE BAN KEY / EPHEMERAL BAN KEY LOCAL

A station's host can ask its data link layer to create a BAN or EBAN key. The following briefly summarize this service:

- A station's upper layer generates the create BAN key or ephemeral BAN key service request to its data link layer.
- The station's data link layer uses the AES block cipher to create a pseudo random number. This pseudo random number is the new BAN key or ephemeral BAN key.
- The station's data link layer returns a successful create BAN key or ephemeral BAN key service response to its upper layer. Note that the BAN key or ephemeral BAN key is not returned to the upper layer; the upper layer is just told that a new key has been successfully created.





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## TLMM\_MS\_334 - SECURITY - CREATE BAN KEY/EPHEMERAL BAN KEY LOCAL

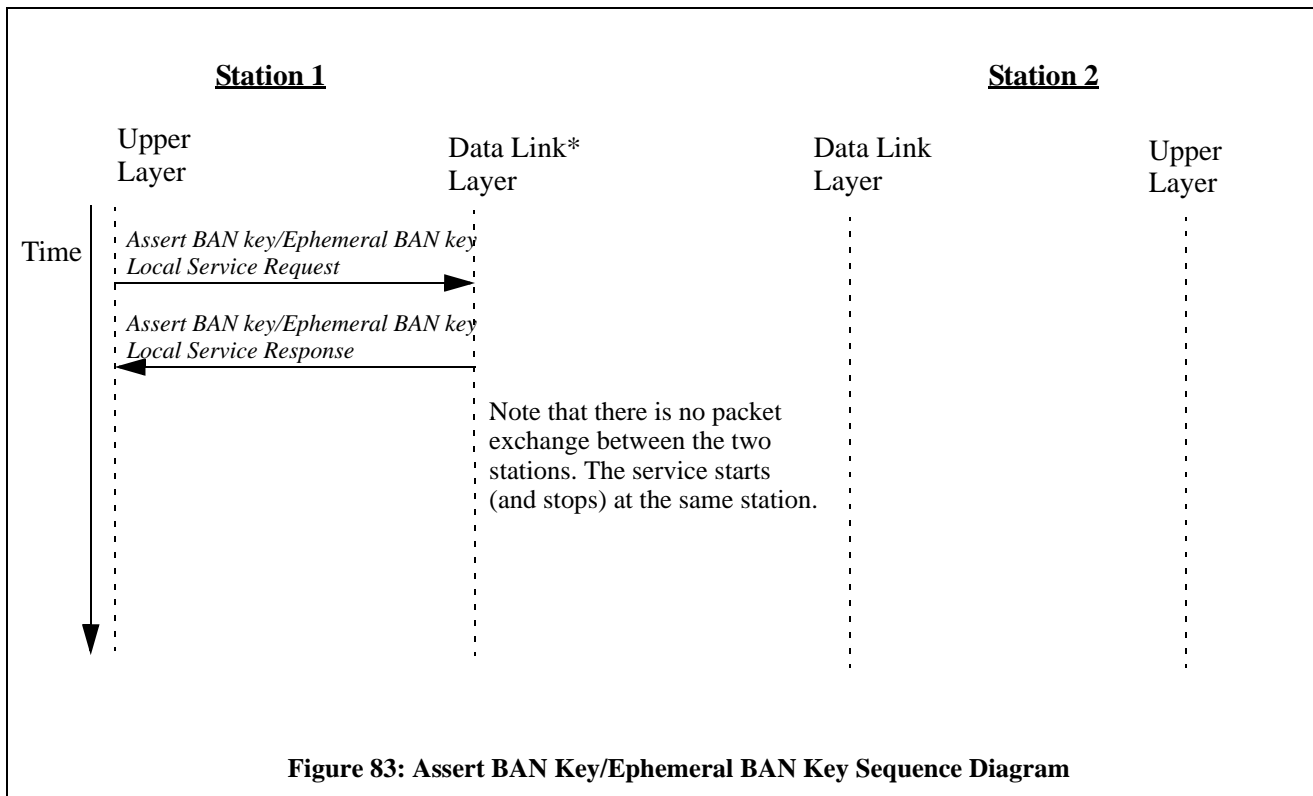
The master or slave will do the following upon the receipt of a create BAN key or ephemeral BAN key service request:

1. Create pseudo random number. See the appendix, section **7.3 Pseudo Random Number Generation**.
2. Save the pseudo random number as the new BAN key or ephemeral BAN key.
3. Send a successful create BAN key or ephemeral BAN key service response to the upper layer.
4. The EBAN key duration timer will also be started on the slave when an EBAN key is created on the slave due to this service request.

[The slave service response is generated per **Table 68 (SECURITY SERVICE RESPONSE (SLAVE))** and the master service response is generated per **Table 67 (SECURITY SERVICE RESPONSE (MASTER))**]

### 5.2.19.3 ASSERT BAN KEY/EPHEMERAL BAN KEY LOCAL

A station's host can assert a BAN key or ephemeral BAN key to its data link layer. Upon receiving the service request, the data link layer will save the BAN key or ephemeral BAN key and returns a successful service response to its upper layer.



**Figure 83: Assert BAN Key/Ephemeral BAN Key Sequence Diagram**

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## TLMM\_MS\_335 - SECURITY - ASSERT BAN KEY/EPHEMERAL BAN KEY LOCAL

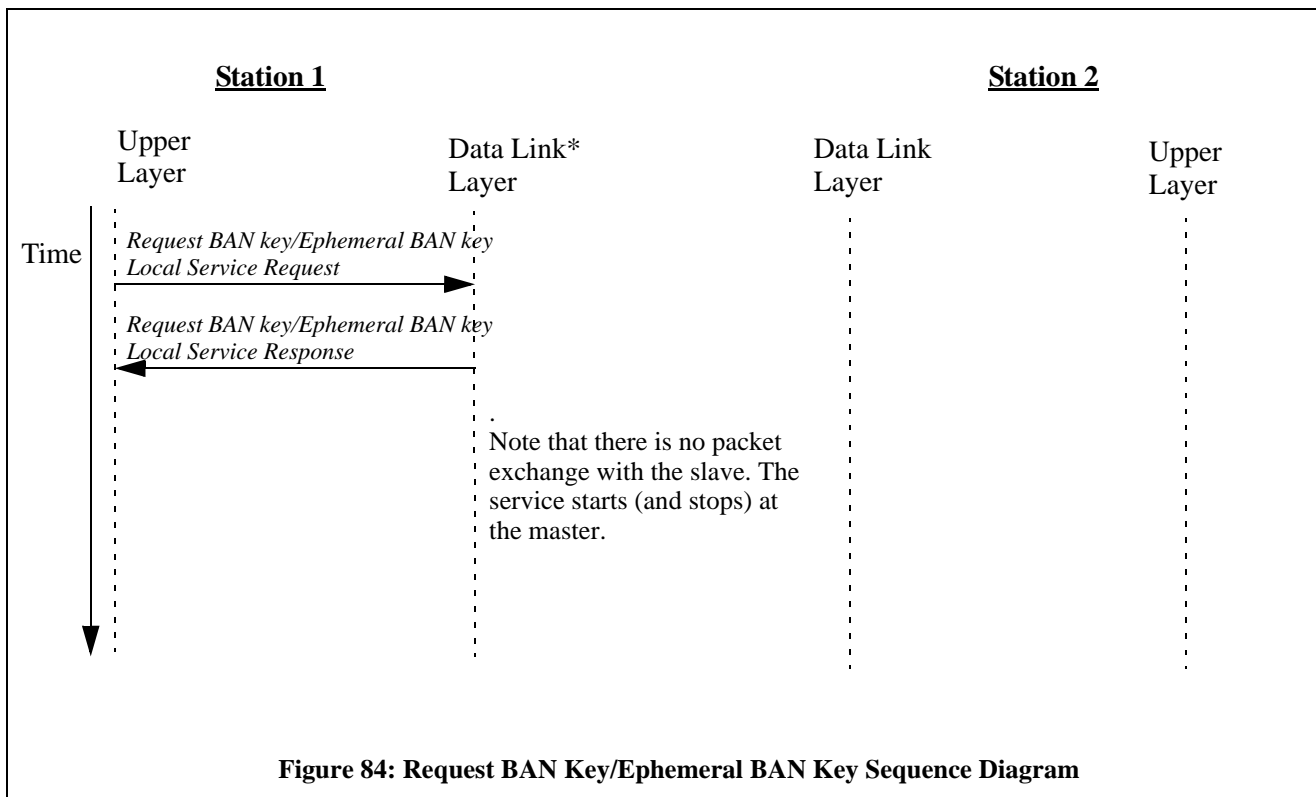
The master or slave will do the following upon the receipt of an Assert BAN key or ephemeral BAN key service request:

1. Save the BAN key or ephemeral BAN key contained in the service request as the new BAN key or ephemeral BAN key.
2. Send a successful assert BAN key or ephemeral BAN key service response to the upper layer.
3. The EBAN key duration timer will also be started on the slave when an EBAN key is asserted to the slave.

[The slave service response is generated per **Table 68 (SECURITY SERVICE RESPONSE (SLAVE))** and the master service response is generated per **Table 67 (SECURITY SERVICE RESPONSE (MASTER))**]

### 5.2.19.4 REQUEST BAN KEY/EPHEMERAL BAN KEY LOCAL

A station's host can request a BAN key /ephemeral BAN key be provided from its data link layer. Upon receiving the service request, the station's data link layer will read the BAN key/ephemeral BAN key from the memory and returns it to its upper layer via a service response.



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**TLMM\_MS\_336 - SECURITY - REQUEST BAN KEY OR EPHEMERAL BAN KEY LOCAL**

The master or slave will do the following upon the receipt of a Request BAN key service request:

1. Read the BAN key or ephemeral BAN key from the memory;
2. Return the BAN key or ephemeral BAN key to its upper layer via a service response.

[The service response is generated per **Table 67 (SECURITY SERVICE RESPONSE (MASTER))** and **Table 68 (SECURITY SERVICE RESPONSE (SLAVE))**]

**TLMM\_MS\_401 - SECURITY - MASTER/SLAVE REJECTS KEY REQUEST IF IT HAS NO BAN/EBAN KEY**

The slave/master will send an unsuccessful request BAN/EBAN key local response if the slave/master has no corresponding permanent BAN key or EBAN key as requested.

[This will occur if the host has never created or asserted a permanent BAN key or EBAN key since the last reset]

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**TABLE 67: SECURITY SERVICE RESPONSE (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	Security service response 0x8D - Master
Sub-type	N/A	1	The service response sub-type	0x00 - Create BAN key/ephemeral BAN key local 0x01 - Assert BAN key/ephemeral BAN key local 0x02 - Request BAN key/ephemeral BAN key local 0x03 - Request BAN key/ephemeral BAN key via proximity switch
Size	N/A	2	The size of the info field	17 <sup>(1)</sup>
Info	Security service status	1	Status of the service request	0x01 - Request successful 0x02 - Request invalid in current state (state is Comm) 0x03 - Request invalid in current state (state is Recovery; slave scanning) <sup>(2)</sup> 0x04 - Request invalid in current state (state is Recovery; slave not scanning) 0x05 - Request invalid in current state (state is Inactive) 0x07 - Request invalid in current state (listening for Medical Event) 0x08 - Request invalid in current state (state is disable, not reading EEPROM); 0x0A - Parameter value error <sup>(3)</sup> ; 0x0B - Service duration timeout <sup>(4)(5)</sup> ; 0x0C - Service cancelled (interrupted by emergency) <sup>(6)</sup> ; 0x0F - Request not serial (another service is in progress); 0x10 - Bad CRC on service request; 0x12 - invalid (info) size <sup>(7)</sup> 0x14 - invalid security sub-type; 0x19 - invalid configuration; 0x1D - Cancelled due to PLL lock error with trim fail <sup>(8)</sup> 0x1E - Slave has no permanent BAN key <sup>(9)</sup> ; 0x1F - Master has no EBAN key <sup>(10)</sup> ; 0x20 - Master has no permanent BAN key <sup>(11)</sup> ; 0x22 - Slave host never authorized the key delivery <sup>(12)</sup> 0x23 - Slave delivered key type mismatch <sup>(13)</sup> ; 0x24 - Request invalid in current state (state is disable, reading EEPROM) (not applicable to sub-type = 0x03 - Request BAN key/ephemeral BAN key via proximity switch) 0x25 - Buffer/ service request mismatch <sup>(14)</sup>
	BAN key / ephemeral BAN key	16	the value of the BAN key/ephemeral BAN key	This is only pertinent to the successful response (status = 0x01) to the request BAN key/ephemeral BAN key local service request;

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CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.
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1. This value only applies when the correct service request buffer is used.
2. The slave is considered to be still scanning if (time now - time of last valid slave packet) is less than (slave recovery duration + slave polling duration). Note that a service duration timeout will result in a Data Link response status of 3 or 4 (invalid state, state is Recovery).
3. This is only pertinent to remote key request service. This status will occur if the slave ID in the service request is incorrect.
4. The status service duration timeout occurs if the master received no telemetry packets from the slave during the remote key delivery service. Note that if telemetry packets were received and service duration expired the master host will receive a service status (0x22) slave host never authorized key delivery.
5. Note that these status values are pertinent only to the remote key request service. They are not pertinent to local create, local request, or local assert.
6. Note that these status values are pertinent only to the remote key request service. They are not pertinent to local create, local request, or local assert.
7. If the request info size is greater than 506 or does not match to the request info size, 0x12 will be used.
8. Note that these status values are pertinent only to the remote key request service. They are not pertinent to local create, local request, or local assert.
9. Note that these status values are pertinent only to the remote key request service. They are not pertinent to local create, local request, or local assert.
10. Note that this status value is only pertinent to the local request EBAN key service.
11. Note that this status value is only pertinent to the local request BAN key service
12. Note that these status values are pertinent only to the remote key request service. They are not pertinent to local create, local request, or local assert.
13. Note that these status values are pertinent only to the remote key request service. They are not pertinent to local create, local request, or local assert.
14. This status can occur if the master host attempts to send a security service request using service request buffer 1 (instead of buffer 0).

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**TABLE 68: SECURITY SERVICE RESPONSE (SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	Security service response 0x0D - Slave
Sub-type	N/A	1	The service response sub-type	0x00 - Create BAN key/ephemeral BAN key local 0x01 - Assert BAN key/ephemeral BAN key local 0x02 - Request BAN key/ephemeral BAN key local 0x04 - Authorize delivery of BAN key via proximity switch 0x05 - Assert EBAN key duration 0x06 - Update proximity status
Size	N/A	2	The size of the info field	17 (For all cases except Security service status =0x13) or 1 (when Security service status =0x13)
Info	Security service status	1	Status of the service request	0x01 - Request successful 0x10 - Bad CRC on service request; 0x12 - invalid (info) size <sup>(1)</sup> ; 0x13 - invalid request type (This code can occur if the service request is sent using an interrupt other than service request0 (there is a buffer/ service request mismatch). 0x14 - invalid security sub-type; 0x15 - invalid state <sup>(2)</sup> ; 0x18 - Slave has no EBAN key <sup>(3)</sup> ; 0x19 - invalid configuration; 0x1E - Slave has no permanent BAN key <sup>(4)</sup> ; 0x24 - request invalid during EEPROM read
	BAN key / ephemeral BAN key	16	the value of the BAN key/ephemeral BAN key	This is only pertinent to the successful response (status = 0x01) to the request BAN key/ephemeral BAN key local service request;
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

1. If the request info size is greater than 506 or does not match to the request info size, 0x12 will be used.
2. See **Table 7 (EXTERNAL SERVICES REQUEST VERIFICATION)** for the invalid states.
3. Note that this status value is only pertinent to the request EBAN key local service request;
4. Note that this status value is only pertinent to the request BAN key local service request;

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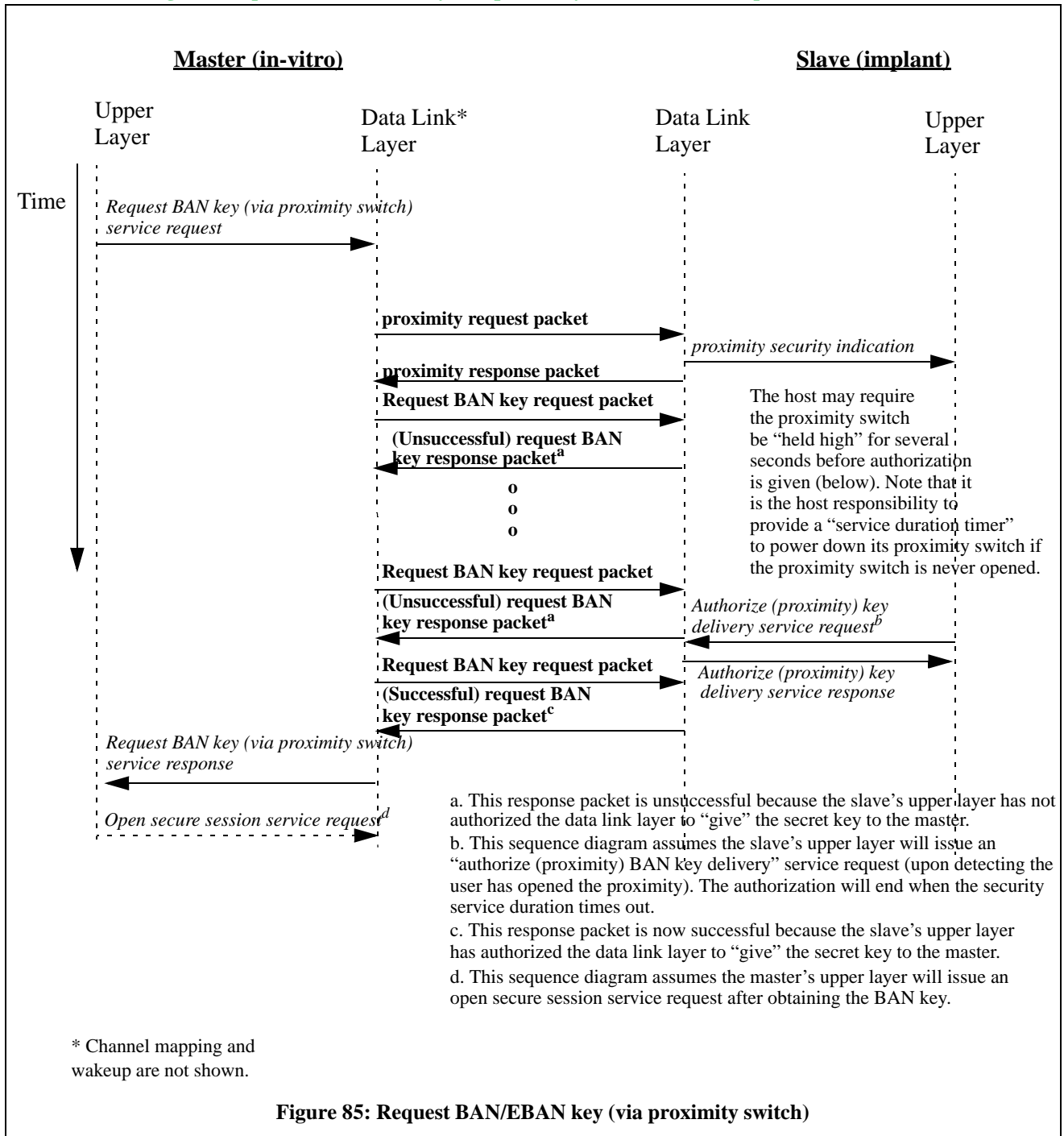
1 5.2.19.5 REQUEST BAN KEY/EBAN KEY VIA PROXIMITY SWITCH 1

2 Clinicians who lack appropriate authentication material may need to communication with an 2  
3 implanted device. A short-range “proximity switch” service is provided. 3  
4

5 The following bullets briefly summarize this service: 5  
6

- 7 • The master’s upper layer generates the request BAN/EBAN key (via proximity) service request 7  
8 to the data link layer. 8
- 9 • The master’s data link layer selects a channel and transmits proximity switch security requests. 9  
10 The station remains on the selected channel until a response is heard or a service duration 10  
11 timeout occurs. 11
- 12 • The slave’s data link layer sends a proximity switch security event indication to the slave’s 12  
13 upper layer (host). 13
- 14 • The master’s data link layer transmits the request BAN/EBAN key packet if the proximity 14  
15 switch security packet is acknowledged. 15
- 16 • The slave’s data link layer rejects the request BAN/EBAN key requests until the slave’s upper 16  
17 layer sends an authorize (proximity switch) key delivery service request. The slave’s upper 17  
18 layer will do this when the user has physically opened the proximity switch. The user may open 18  
19 the proximity switch by holding a magnet by the patient’s device for a finite amount of time. 19  
20 This could be detected with a reed switch. Note that the proximity switch is short range. The 20  
21 clinician needs to be within the patient’s personal space to open the proximity switch. This 21  
22 means the proximity switch cannot be opened anonymously. 22
- 23 • The master’s data link layer sends a (successful) request BAN/EBAN key service response to 23  
24 the master’s upper layer if it obtains the BAN/EBAN key from the slave. 24  
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An operational example of the request BAN/EBAN key (via proximity switch) service is shown in **Fig. 85 (Request BAN/EBAN key (via proximity switch) service request)**.



**TLMM\_M\_337 - SECURITY - PROXIMITY SECURITY REQUEST PACKET FORMAT**

The proximity security request packet has the format indicated in **Fig. 86 (Proximity Security Request Packet)**



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proximity Security Control 5.25 bytes	Source ID (master ID) 6 bytes	Destination ID (slave ID) 6 bytes	BAN/EBAN Key type 1 byte	Zero fill (17 bytes)	MAC <sup>a</sup> 3 bytes	Reed Solomon 9 bytes
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a. Message authentication code

**Figure 86: Proximity Security Request Packet**

**TLMM\_S\_338 - SECURITY - PROXIMITY RESPONSE PACKET FORMAT**

The proximity security response packet has the format indicated in Fig. 87 (Proximity Security Response Packet).

proximity Security Control 5.25 bytes	Destination ID (master ID) 6 bytes	Source ID (slave ID) 6 bytes	BAN/EBAN Key type 1 byte	Remaining polling duration 2 bytes	Zero fill (15 bytes)	MAC <sup>a</sup> 3 bytes	Reed Solomon 9 bytes
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a. Message authentication code

**Figure 87: Proximity Security Response Packet**

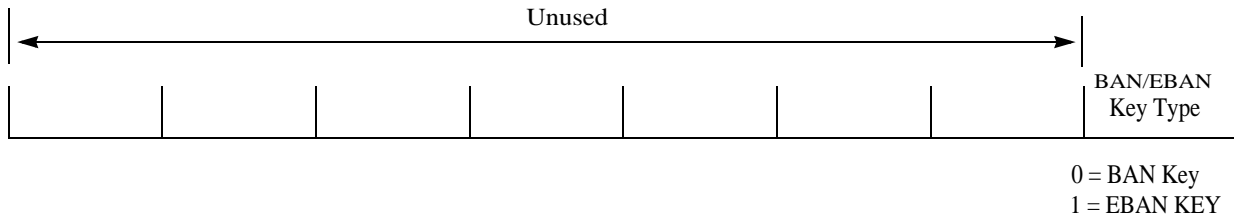
**TLMM\_M\_339 - SECURITY - REQUEST BAN/EBAN key VIA PROXIMITY SWITCH REQUEST PACKET FORMAT**

The request BAN/EBAN key via proximity switch request packet has the format indicated in Fig. 88 (Request BAN/EBAN key via proximity switch request packet).

request key Control 5.25 bytes	Source ID (master ID) 6 bytes	Destination ID (slave ID) 6 bytes	BAN/EBAN Key type 1 bytes	EBAN Key duration (2 bytes)	Zero fill 15 bytes	MAC <sup>a</sup> 3 bytes	Reed Solomon 9 bytes
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a. Message authentication code

**Figure 88: Request BAN/EBAN key via proximity switch request packet**



**Figure 89: BAN/EBAN key type byte**

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## TLMM\_S\_340 - SECURITY - REQUEST BAN/EBAN key VIA PROXIMITY SWITCH RESPONSE PACKET FORMAT

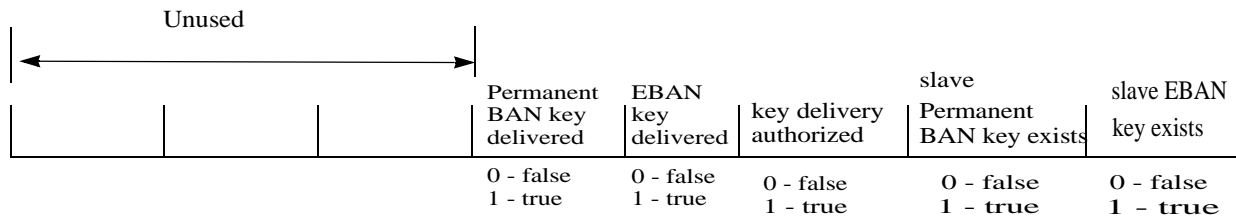
The request BAN/EBAN key via proximity switch response packet has the format indicated in **Fig. 90 (Request BAN/EBAN key via proximity switch response packet)**.

and **Fig. 91 (BAN/EBAN key status byte)**.

request key Control 5.25 bytes	Destination ID (master ID) 6 bytes	Source ID (slave ID) 6 bytes	BAN key status <sup>a</sup> 1 bytes	BAN key <sup>b</sup> 16 bytes	Remaining polling duration 1 byte	MAC <sup>c</sup> 3 bytes	Reed Solomon 9 bytes
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- a. The BAN key status can indicate the request is rejected if the proximity is not open.
- b. The BAN key will be all zero if the request is rejected.
- c. Message authentication code.

**Figure 90: Request BAN/EBAN key via proximity switch response packet**



**Figure 91: BAN/EBAN key status byte**

[Note that if the remaining polling duration is greater than 255 seconds, this field will be set to 255 seconds. Also note that the “slave EBAN key exists” bit is only set when the EBAN key duration timer is running.]

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5.2.19.5.1 MASTER

**TLMM\_M\_341 - SECURITY - TRANSMIT PROXIMITY SECURITY REQUEST PACKET**

Upon receiving a request BAN key via proximity switch service request, the master will start a service duration timer and transmit the proximity switch security request packet.

[Start the service duration timer; select the least interfered channel (takes approximately 275 +/- 50 msec<sup>(5)</sup>); start the Listen Before Talk (LBT) timer; perform instigator wireless wakeup, transmit the proximity switch security request packet, send a “first request packet sent” event indication to the Upper Layer (see **Table 23 (FIRST REQUEST PACKET SENT INDICATION (MASTER))**).

Note that instigator wireless wakeup is suppressed if the master knows the slave is scanning. Time now, time of last uplink, and remaining polling duration at the time of last uplink are used to determine this.

Also note that the master will perform clear channel assessment before and after transmitting wakeup (if the wakeup if not suppressed and the slave scans during polling). The master will restart the Listen Before Talk (LBT) timer after the second clear channel assessment. This minimizes the interaction between the time it takes the slave to scan all channels and the time before the master starts transmitting wakeup again.]

**TLMM\_M\_342 - SECURITY - NO RESPONSE TO PROXIMITY SECURITY REQUEST**

If no response is received, the master will resend the proximity switch security request until the Service Duration timer is expired.

[If no valid proximity switch security response packet is received, the master will re-transmit the proximity switch security request packet on the alternate antenna.

This process shall be continued until a valid proximity switch security response packet is received, a Service Duration Timeout occurs, or a Listen Before Talk timer expires.]

**TLMM\_M\_343 - SECURITY - VALID RESPONSE TO PROXIMITY SECURITY REQUEST**

If a valid proximity security response packet is received, the master will transmit a request BAN/EBAN key packet to the slave.

**TLMM\_M\_344 - SECURITY - NO RESPONSE OR REJECTION TO REQUEST BAN/EBAN KEY VIA PROXIMITY SWITCH**

If no response is received or if the BAN/EBAN key request is rejected (because the proximity switch is not yet open), the master will resend the request BAN/EBAN key packet until successful or until the Service Duration timer is expired.

[The master will re-transmit the request BAN/EBAN key packet on the alternate antenna if no valid BAN/EBAN key response packet is received. The master will re-transmit the request BAN/EBAN key packet on the same antenna if the BAN/EBAN key request is rejected (since the proximity switch is not yet open).

This process shall be continued until a valid BAN/EBAN key response packet is received, a Service Duration Timeout occurs, or a Listen Before Talk timer expires.]

5. CCA of the MICS band takes approximately 275 msec. CCA of the MEDS band takes approximately 550 msec. CCA of both bands takes approximately 825 msec. Note that if HDR mode is enabled, assessment of each channel, antenna pair is lengthened by 5 msec (to allow the HDR synthesizer to stabilize). This means the CCA of the MICS band is lengthened from 275 msec to 375 msec

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**TLMM\_M\_346 - SECURITY - REQUEST BAN/EBAN key VIA PROXIMITY SWITCH - RESPONSE TO UPPER LAYER**

A request BAN/EBAN key via proximity switch service response will be generated to the Upper Layer when the service is completed.

[The content of the response to the Upper Layer is specified in **Table 67 (SECURITY SERVICE RESPONSE (MASTER))**.]

**TLMM\_M\_347 - SECURITY - LBT TIMEOUT DURING REQUEST BAN/EBAN KEY EXCHANGE VIA PROXIMITY SWITCH SERVICE**

If the listen before talk (LBT) timer expires during a request BAN/EBAN key via proximity switch service, the master will do the following:

1. Re-select the least interfered channel for communication,
2. Start the Listen Before Talk timer when a good channel is found,
3. Toggle the antenna,
4. Transmit a wakeup packet,
5. Transmit a proximity security request.

[Note that “transmit wakeup packet” is suppressed if the master knows the slave is scanning. Time now, time of last uplink, and remaining polling duration at the time of last uplink are used to determine this.

Also note that the master will perform clear channel assessment before and after transmitting wakeup (if the wakeup is not suppressed and the slave scans during polling). The master will restart the Listen Before Talk (LBT) timer after the second clear channel assessment. This minimizes the interaction between the time it takes the slave to scan all channels and the time before the master starts transmitting wakeup again.]

**5.2.19.5.2 SLAVE**

**TLMM\_S\_348 - SECURITY - SLAVE RESPONSE TO A VALID PROXIMITY SWITCH SECURITY REQUEST PACKET**

The slave will send a proximity switch security response packet upon receiving a valid proximity switch security request packet. Additionally the slave will send a proximity security indication to the slave’s upper layer (host). The indication to the upper layer (host) will not be generated more than once a second. See **Table 69 (PROXIMITY SECURITY INDICATION (SLAVE))**

[Upon receipt of the proximity security indication, the slave’s upper layer should do the following:

1. Power up the proximity switch circuitry
2. Determine if the user has “opened the proximity switch”. This may be polling a reed switch, etc. The proximity switch is short range. This ensures that the proximity switch is not opened anonymously.
3. Send an authorize (proximity switch) BAN/EBAN key delivery to the data link layer
4. Power down the proximity switch circuitry]

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**TABLE 69: PROXIMITY SECURITY INDICATION (SLAVE)**

FIELD	FIELD INFO	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0x36 - proximity security
Sub-type	N/A	1	The indication sub-type	n/a
Size	N/A	2	The size of the info field	1
Info	Proximity Security indication status	1	Status of indication	0x00 - BAN key requested 0x01 - EBAN key requested
CRC	N/A	2	CRC of all the above field	This value is computed by data link layer and is used by upper layer to verify the integrity of the indication

**TLMM\_S\_349 - SECURITY - SLAVE REJECTS A VALID REQUEST BAN/EBAN KEY VIA PROXIMITY SWITCH REQUEST**

The slave will send an (unsuccessful) request BAN/EBAN key (via proximity switch) response packet under the following conditions:

1. The slave receives a request BAN/EBAN key (via proximity switch) request packet, and
2. The slave is not authorized to deliver the BAN/EBAN key to the master. Specifically, the security (authorize key delivery) service duration timer is not active.

**TLMM\_S\_350 - SECURITY - SLAVE ACCEPTS A VALID REQUEST BAN/EBAN key VIA PROXIMITY SWITCH REQUEST**

The slave will generate a EBAN key, for EBAN key requested, and will send a (successful) request BAN/EBAN key (via proximity switch) response packet under the following conditions:

1. Attenuate the transmit power according to the settings in slave configuration table. Once the transmitting process of response is finished original transmission power should be restored.
2. The slave receives a request BAN/EBAN key (via proximity switch) request packet, and
3. The slave is authorized to deliver the BAN/EBAN key to the master (it has “recently” received an authorize BAN/EBAN key delivery service request from the upper layer (host)).

When delivering the BAN/EBAN key the transmit power should be attenuated according to the settings in slave configuration **Table 124 (SLAVE PARAMETERS FROM HOST)**, once the transmitting process of response is finished original transmission power should be restored. BAN/EBAN key delivery is authorized upon receipt of the authorize BAN/EBAN key delivery (via proximity switch) service request. A service request timer is started upon receipt of the service request. BAN/EBAN key delivery is no longer authorized when the service duration timer expires.

[The EBAN key is generated when slave is entering the Acquire state and delivered when sending the request (EBAN) key response packet.]

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**TLMM\_S\_351 - SECURITY - AUTHORIZATION TO GIVE BAN/EBAN KEY SERVICE RESPONSE**

When authorize BAN/EBAN key delivery request is received then response will be generated See **Table 66 (SECURITY SERVICE REQUEST (MASTER OR SLAVE))**.

[The content of the response to the Upper Layer is specified in **Table 68 (SECURITY SERVICE RESPONSE (SLAVE))**.The security service duration will be started upon the receipt of a authorize key delivery service request. The security service duration timer will be re-started upon the receipt of an authorize key delivery service request if the security service duration timer is already running (from a previous update proximity status service request.) When the key delivery is authorized, the slave will set the “unidentified proximity transmitter near” bit and the “specific proximity transmitter near” bit. See **Fig. 35 (Proximity status type byte)** for the bit definition.

Also note that the EBAN key duration timer will be restarted on the slave upon the delivery of the EBAN Key to the master.]

**TLMM\_S\_352 - SECURITY - USAGE OF EPHEMERAL BAN KEY**

The use of ephemeral BAN key is limited by the ephemeral BAN key duration parameter. Once this timer expires a secure session may not be opened (via the ephemeral BAN key). If a secure session is opened before the timer expires, the timer is cancelled. The ephemeral BAN timer is restarted upon a close session or channel recovery timeout. If the timer expires, the ephemeral BAN key is no longer valid. Note that the timer is cancelled if a new session is successfully started using the ephemeral BAN key. The ephemeral BAN key timer also expires when the slave receives a Shut Down request from its host.

[The ephemeral BAN key timer value is received from Master as part of proximity switch request packet. The EBAN key duration timer can also be updated via assert EBAN duration service request]

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1 5.2.19.6 SECURITY - ASSERT EBAN KEY DURATION 1

2 This service provides an ability for slave host to change the EBAN key duration under various 2  
3 circumstances (i.e. longer implant times, etc.). 3

4 **TLMM\_S\_405 - SECURITY - ASSERT EBAN KEY DURATION** 4

5 The EBAN key duration will be updated upon the receipt of an assert EBAN key duration service 5  
6 request. If the EBAN key duration timer is running, the new value will take effect immediately. A 6  
7 service response will also be sent to the upper layer. 7

8 [Note: The EBAN key duration should be greater than the channel recovery duration by the host. 8  
9 When the existing EBAN key duration timer is running and new values is provided via assert EBAN 9  
10 key duration service request the new value will take effect immediately - the expiration of the 10  
11 running timer will be based on the new value. Also note that because the EBAN key duration timer 11  
12 has a resolution of one second, it may take up to one second for it to expire if the newly asserted 12  
13 EBAN key duration implies the timer should expire immediately. 13

14 The content of the response to the Upper Layer is specified in **Table 68 (SECURITY SERVICE 14  
15 RESPONSE (SLAVE)).** 15  
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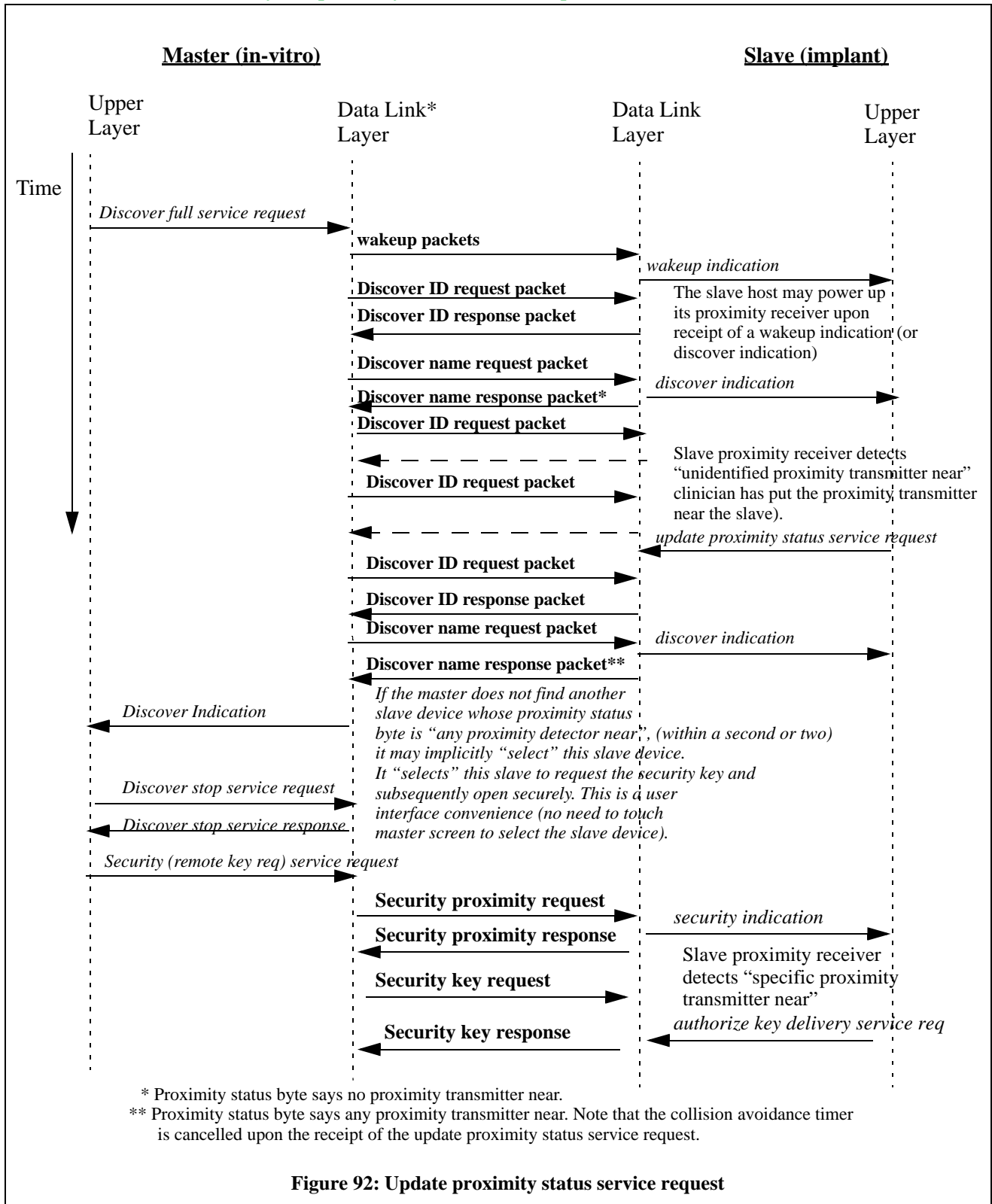
5.2.19.7 SECURITY - UPDATE PROXIMITY STATUS

A short-range proximity receiver is provided on some slave devices. This proximity receiver may be used during the security key delivery process. The proximity receiver (when enabled) can detect one of the following:

1. No proximity transmitters near.
2. Unidentified proximity transmitter near. Detection occurs when a signal is received by the proximity receiver whose amplitude exceeds a pre-defined threshold. Note that the transmitter must be fairly close to the receiver (approximately 6 inches). Also note that “nearness” may be detected very shortly after a proximity transmitter comes within range of the slave’s proximity receiver (~100 msec).
3. Specific proximity transmitter near. Detection occurs when the slave’s proximity receiver detects a specific data pattern. This may require that the proximity transmitter is held close to the proximity receiver for a significant amount of time (possibly many seconds). The specific data pattern is recommended to be the master station ID. This makes the subsequent task of security key delivery easier



An operational example of the update proximity status service is shown in **Fig. 85 (Request BAN/EBAN key (via proximity switch) service request)**.



**Figure 92: Update proximity status service request**

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**TLMM\_S\_419 - SECURITY - UPDATE PROXIMITY STATUS**

The slave will do the following upon receipt of an update proximity status service request:

1. Start the security service duration timer
2. Update the proximity status byte (set the “unidentified proximity transmitter near” bit). See **Fig. 35 (Proximity status type byte)**.
3. Send an update proximity service response to the upper layer

[The content of the response to the Upper Layer is specified in **Table 68 (SECURITY SERVICE RESPONSE (SLAVE))**].

Also note that the discover collision avoidance timer is cancelled upon the receipt of the update proximity status service request]

**TLMM\_S\_420 - SECURITY - SERVICE DURATION TIMEOUT**

The slave will do the following when the security service duration timer expires:

1. Clear the proximity status byte (clear the “unidentified proximity transmitter near” bit and the “specific proximity transmitter near” bit). See **Fig. 35 (Proximity status type byte)**.

[The content of the response to the Upper Layer is specified in **Table 68 (SECURITY SERVICE RESPONSE (SLAVE))**].

Also note that the security key delivery is no longer allowed once this timer expires.]

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## 5.2.20 POWER INHIBIT

Power inhibit is a unique feature which is an interaction between the host and telemetry module to better manage peak current constraints. Presently this feature is intended for the slave (implant) based on Neuro applications. This feature could be used by other application as well. A host applications may not be able to support simultaneous (high current) data collection and telemetry (due to peak current constraints). A host can assert power inhibit while its (host's) high current data is collected. It can then deassert power inhibit to transmit the collected data.

The power inhibit feature allows a host to pause telemetry M during its increase power consumption periods. A power inhibit bit is used by the host to assert and deassert the power inhibit condition by generating an interrupt to the telemetry M slave. When host asserts a power inhibit interrupt it causes telemetry functionality to pause, thus allowing host to support its own high current features. The key goal is to:

- Minimize the impact on the power consumption as demand increases for both the host and telemetry module (i.e. during battery voltage measurements, sounding of an alarm, or the use of electronic port finding).

An example of telemetry M feature(s) during which power consumption may be high are: EEPROM access, Telemetry session (transmit and receive), sniff periods (cpu off), and housekeeping periods. The host features may include EEPROM/Flash access, and Neuro's electronic port finding, alarm, or pump stroke.

Power inhibit functionality is supported by two separate algorithms:

- **Idle Immediate:** is a default option when the host asserts power inhibit CPU speed is reduced to 1.9MHz and when power inhibit is deasserted then channel recovery will be attempted to recover the link. The channel recovery is unconditionally entered each time power inhibit is asserted thus impacting the data throughput. Note that if (idle immediate) power inhibit is asserted before a session is established, the radio will be disabled. When power inhibit is deasserted the radio will be re-enabled (sniff or native mode listening).
- **Roll through:** in this option the RF analog is turned off (the telem M digital state machine and firmware is allowed to run at its programmed CPU speed). This roll through mode uses slightly more current, but can provide increased slave throughput (since channel recovery can be avoided). Channel recovery is avoided by dynamically lengthening the recovery thresholds (see **Table 71 (POWER INHIBIT MODES)** for details). Note that the lengthened recovery thresholds are retained until power inhibit roll through is disabled. Frequency agility will be compromised if the power inhibit is enabled and left enabled indefinitely. This means the user may experience longer than normal interruptions in their telemetry (because it takes longer to switch to a new channel).

If power inhibit is asserted during polling operation (when the parameter slave scans during polling is true), the slave will not change the channel but will keep the polling timer active. When the host deasserts power inhibit, the channel is scanned again. Note that the power inhibit deassertation duration must be greater than the channel listen duration or the slave will not change channels during polling. If short, assertion/ deassertion intervals are needed, the parameter slave scans during polling should be set to false. The table below quantifies the definition of "short" deassertion periods.

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**TABLE 70: RECOMMENDED POWER INHIBIT DEASSERTION DURATION**

NON-COMMUNICATION RATE	SUPER FRAME DURATION <sup>(1)</sup>	RECOMMENDED CHANNEL LISTEN TIME <sup>(2)</sup>	RECOMMENDED POWER INHIBIT DEASSERTION DURATION <sup>(3)</sup>
48 Kbps (1 DOWNLINK, 5 UPLINK)	57.7 msec	173.1 msec	173.1 msec or greater
97 Kbps (1 DOWNLINK, 5 UPLINK)	34.4 msec	103.2 msec	103.2 msec or greater
190 Kbps (1 DOWNLINK, 5 UPLINK)	16.2 msec	48.6 msec	48.6 msec or greater
380 Kbps (1 DOWNLINK, 5 UPLINK)	10.3 msec	30.9 msec	30.9 msec or greater
48 Kbps (1 DOWNLINK, 1 UPLINK)	26.7 msec	80.1 msec	80.1 msec or greater
97 Kbps (1 DOWNLINK, 1 UPLINK)	18.8 msec	56.4 msec	56.4 msec or greater
190 Kbps (1 DOWNLINK, 1 UPLINK)	8.2 msec	24.6 msec	24.6 msec or greater
380 Kbps (1 DOWNLINK, 1 UPLINK)	6.3 msec	18.9 msec	18.9 msec or greater

1. Open is sent using one downlink. The response uses a configurable number of uplink packets.
2. This allows two complete opportunities to hear an open downlink on each channel (one opportunity on each antenna). Note the first downlink may be missed if the slave changes channels in the middle of the downlink.
3. If the power inhibit deassertion duration is less than the channel listen time, the slave will never change channels (slave scans during polling). The same holds true for medical event. If the deassertion duration is too small, the slave will continue to uplink medical event on the same channel.

An analogous situation occurs for medical event. The power inhibit deassertion duration should be greater than the medical event channel transmit time.

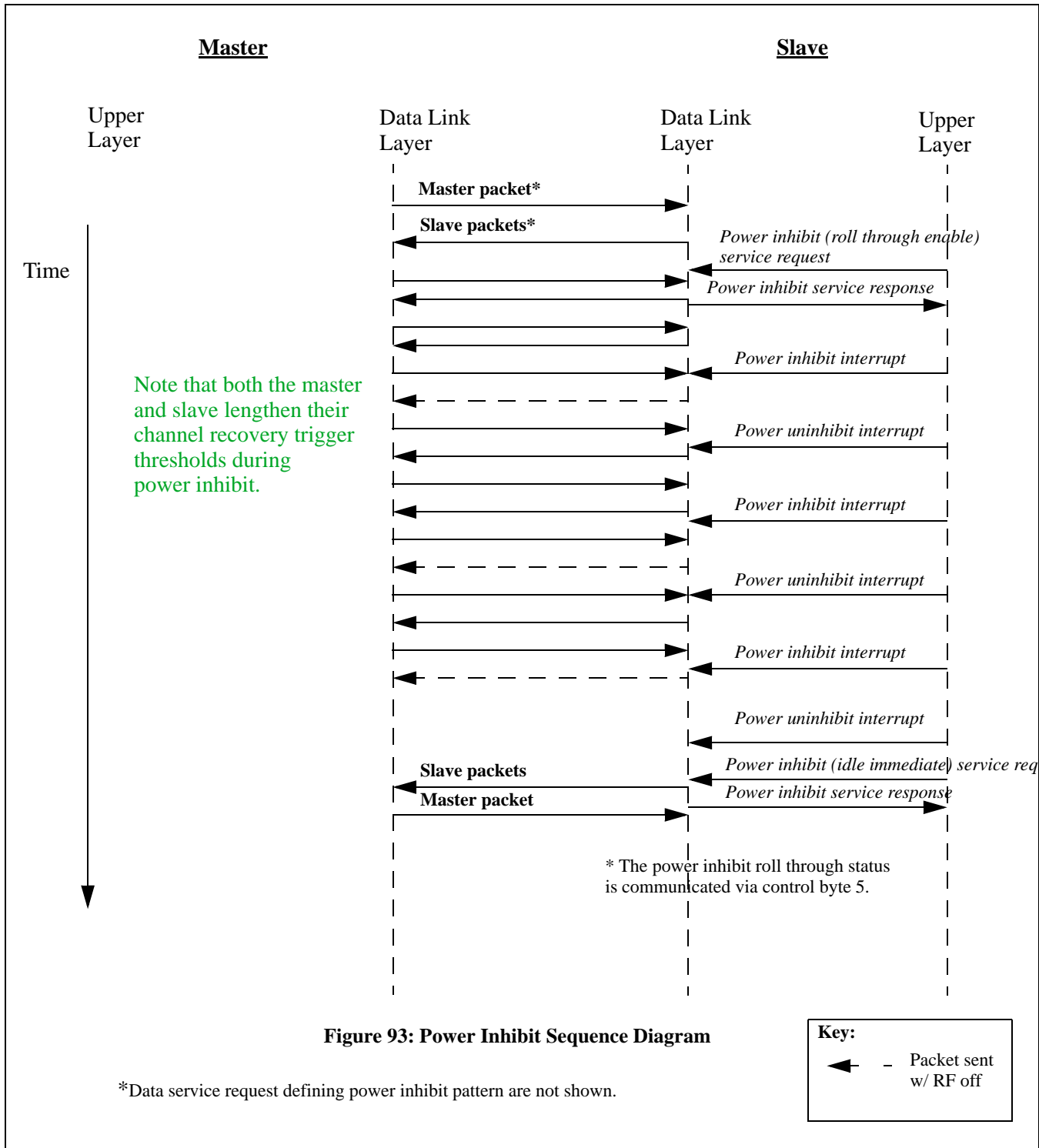
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The following describes the power inhibit roll through operation:

1. The master host sends one or more data service requests to the slave host to establish the power inhibit pattern.
2. The slave host sends a power inhibit roll through enable service request to the slave data link layer. This will be communicated to the master data link layer via telemetry.
3. Once enabled, the slave host may periodically assert a power inhibit interrupt to the slave data link layer (based on the pattern communication in step 1).
4. The slave host will send a power inhibit roll through disable service request to the slave data link layer when it wants roll through to be disabled (power inhibit idle immediate enabled). This will be communicated to the master data link layer via telemetry.



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**Figure 93** illustrates the Power Inhibit service operations.

**TABLE 71: POWER INHIBIT MODES**

POWER INHIBIT MODE	DESCRIPTION	RECOVERY THRESHOLD
0	Idle immediate/Original threshold	Recovery threshold 1 <sup>(1)</sup>
1	Roll through	Recovery threshold 1 <sup>(1)</sup>
2	Roll through	Recovery threshold 2 <sup>(1)</sup>
3	Roll through	Recovery threshold 3 <sup>(1)</sup>
4 <sup>(2)</sup>	New threshold	Recovery threshold 4 <sup>(3)</sup>

1. The recovery thresholds #1, #2, and #3 come originally from the master initialization request. They are communicated to the slave via an open packet.
2. Power inhibit mode 4 is pertinent only to the slave. This value cannot be communicated to the master since the power inhibit mode is only two bits (see **Fig. 17 (Packet Control Bytes)**).
3. The recovery threshold #4 come originally from the slave initialization request.

### 5.2.20.1 REQUIREMENTS

There are two notes which apply to master and slave requirements:

- A longer recovery threshold prevents channel recovery when the slave is inhibited (packet received at master as MAC error). For example if the slave host is allowing telemetry for 50 msec and inhibiting for 100 msec, the “number of frames without a valid packet” should be slightly longer than 100 msec.
- Also note that the recovery threshold 1, recovery threshold 2 and recovery threshold 3 are communicated to the slave via an open packet.

### 5.2.20.2 MASTER

#### **TLMM\_M\_422 - POWER INHIBIT - CHANNEL RECOVERY THRESHOLD**

The master data link layer will set its (the master’s) channel recovery threshold (number of consecutive frames without a valid packet) using the received power inhibit bits (control byte 5, bits 5 and 6 from the slave). See **Table 71 (POWER INHIBIT MODES)**

[Note that the original recovery thresholds come from the master initialization request. The power inhibit mode is just selecting threshold 1, threshold 2 or threshold 3.]

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5.2.20.3 SLAVE

**TLMM\_S\_264 - POWER INHIBIT - UPPER LAYER TO DATA LINK LAYER PARAMETERS**

When invoking the power inhibit service request, the Upper Layer will provide information as specified in **TABLE 72: POWER INHIBIT SERVICE REQUEST (SLAVE)**.

**TABLE 72: POWER INHIBIT SERVICE REQUEST (SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	0x0E - Slave power inhibit service request
Sub-type	N/A	1	The service request sub-type	See <b>Table 71 (POWER INHIBIT MODES)</b>
Size	N/A	2	The size of the info field	0
Info	N/A	0	The info field	N/A
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

**TLMM\_S\_421 - POWER INHIBIT - TRANSMIT PACKET**

The slave data link layer will do the following upon the receipt of a power inhibit service request:

1. Communicate the power inhibit sub-type to the master by setting the power inhibit bits on every transmit packet (see control byte 5)

[The slave transmit packet's control byte 5, bits 5 and 6 shall mirror the power inhibit service request sub-type.]

**TLMM\_S\_427 - POWER INHIBIT SERVICE RESPONSE TO UPPER LAYER**

A power inhibit service response will be generated to the Upper Layer after the power inhibit service request is complete.

[The content of the response to the Upper Layer is specified in **Table 73 (POWER INHIBIT SERVICE RESPONSE (SLAVE))**].

**TABLE 73: POWER INHIBIT SERVICE RESPONSE (SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service response	0x0E - Slave power inhibit service response
Sub-type	N/A	1	The service response sub-type	See <b>Table 71 (POWER INHIBIT MODES)</b>
Size	N/A	2	The size of the info field	1



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**TABLE 73: POWER INHIBIT SERVICE RESPONSE (SLAVE)**

Info	Power inhibit service status	1	Status of the service request	0x01 - Request successful 0x10 - Invalid CRC 0x13 - Invalid request type (This code can occur if the service request is sent using an interrupt other than service request0 (there is a buffer/ service request mismatch)). 0x14 - Invalid subtype (subtype >= 5 for Tel M, subtype other than (0 and 4) for TelC) 0x24 - Request invalid during EEPROM read
CRC	N/A	2	CRC of all above fields.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

**TLMM\_S\_423 - POWER INHIBIT IDLE IMMEDIATE - ASSERTED**

If the power inhibit interrupt is asserted (while power inhibit mode is idle immediate),

1. While slave is in communication state, Slave will start same channel recovery immediately. (see **TLMC\_S\_130 - CH RECOVERY - START SAME CHANNEL RECOVERY**).
2. While slave is not in communication state. Slave will stop sniffing if sniffing is enabled or perform idle immediate if transmission or receiving is progress.

[For #1, note that the only difference from **TLMC\_S\_130 - CH RECOVERY - START SAME CHANNEL RECOVERY** is slave will not restart sync mode.]

**TLMM\_S\_424 - POWER INHIBIT IDLE IMMEDIATE - DEASSERTED**

If the power inhibit is deasserted (while power inhibit mode is Idle immediate),

1. While the same channel recovery time is active, slave will attempt to recover the communication session on the same channel.
2. While the unspecified channel recovery time is active, slave will attempt to recover the communication session following the unspecified channel recovery algorithm (see **5.3.3 Channel Recovery**).
3. While the polling duration is active, slave will restart to listen in native mode or sniffing. (see **5.2.8 Polling**).
4. While the disable ON timer is active, slave will restart the sync sniffing.
5. While the medical service duration is active, slave will restart to uplink medical event packet.(see **5.2.16 Medical Event**)

[For #1, the slave will restart sync mode when power inhibit is deasserted.]

**TLMM\_S\_425 - POWER INHIBIT - RESPONSE**

The slave data link layer will set its (the slave's) channel recovery threshold (number of consecutive frames without a valid packet) using the last power inhibit service request from the slave host. Additionally it will mirror the power inhibit mode on all its subsequent transmit packets.

[The radio will be disabled when power inhibit is asserted. This will cause the slave to receive packets with MAC error. In order to avoid channel recovery, the slave host will use power inhibit roll through (mode 1, 2, or 3). The recovery threshold (paired with the roll through mode) should be chosen to be slightly longer than the power inhibit duration. Once power inhibit is deasserted, the slave should receive packets without MAC error.]

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**TLMM\_S\_442 - POWER INHIBIT - WAKEUP COMPLETE INDICATION DURING SYNC SNIFF**

If power inhibit interrupt is asserted while slave is synchronously sniffing and waiting for the “last packet last block” wakeup packet (after the “first packet last block” wakeup packet has already been received), a wakeup indication “Wakeup Complete”, containing the wakeup packet contents, shall be sent to the upper layer. (see **Table 93 (WAKEUP INDICATION (SLAVE))**).

[After the “first packet last block” wakeup packet has already been received, Mozart hardware will turn the radio off and start a timer. When the timer expires, Mozart hardware will generate the “last packet last block” wakeup packet interrupt. If power inhibit is asserted, the timer will be turned off and no “last packet last block” wakeup packet interrupt will be generated by the hardware. Instead of waiting for the next synchronous sniffing window after power inhibit is deasserted, a wakeup indication “Wakeup Complete” is sent to the upper layer when the power inhibit is asserted.]

**TLMM\_S\_447 - POWER INHIBIT - WAKEUP COMPLETE INDICATION DURING ASYNC SNIFF**

If power inhibit interrupt is asserted while slave is asynchronously sniffing and waiting for the “last packet last block” wakeup packet (after the “first packet last block” wakeup packet has already been received), a wakeup indication “Wakeup Complete”, containing the wakeup packet contents, shall be sent to the upper layer. (see **Table 93 (WAKEUP INDICATION (SLAVE))**).

[Slave will perform asynchronously sniffing during polling and unspecified channel recovery if Slave scans during polling = 0x00 (see **Table 123 (Master parameters from host)**).]

**TLMM\_S\_448 - POWER INHIBIT - CHANNEL LISTEN TIMER FOR SCAN DURING POLLING**

While slave is configured to do scan during polling, if power inhibit interrupt is asserted while slave is listening on one channel during polling or unspecified channel recovery, slave will stop the channel listen timer. Then when power inhibit interrupt is deasserted, slave will restart the channel listen timer and listen on the same channel.

[Slave will change the scan channel during polling or unspecified channel recovery only if the “channel listen timer” times out while power inhibit status is low (i.e., power inhibit has been deasserted or power inhibit has never been asserted.)]

**TLMM\_S\_449 - POWER INHIBIT - MEDICAL EVENT TRANSMIT TIME**

If power inhibit interrupt is asserted before the “medical event transmit time” timesout (while slave is uplinking medical event on one channel), slave will stop the medical event transmit timer. Then when power inhibit interrupt is deasserted, slave will uplink medical event on the same channel and restart “the medical event transmit time” .

[Slave will change the channel during uplinking medical event only if the “medical event transmit time” times out while power inhibit status is low (i.e., power inhibit has been deasserted or power inhibit has never been asserted.)]

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**TLMM\_S\_450 - POWER INHIBIT - OPEN RESPONSE PACKETS**

If power inhibit interrupt is asserted while slave is uplinking open response packets,

- when slave is configured to do scan during polling - slave will perform idle immediate and stop the channel listen time. Then when power inhibit interrupt is deasserted, slave will listen on the same channel and restart the channel listen time;
- when slave is configured to do asynchronously sniffing/scan during polling - slave will perform idle immediate. Then when power inhibit interrupt is deasserted, slave will listen on the same channel.

[Note the native mode timer is not stopped and this is because native mode timer is much longer than power inhibited duration.]

- when slave is running the medical event service duration timer,slave will perform idle immediate and stop the medical event transmit time. Then when power inhibit interrupt is deasserted, slave will uplink medical event on the same channel and restart “the medical event transmit time”

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## 5.2.21 CHARGING NOISE

An implantable cardiovascular defibrillator (ICD) delivers high voltage shock pulses to the heart to defibrillate or cardiovert the heart. One or more capacitors in the ICD are charged to a desired voltage to generate the shock pulses. Capacitor charging can cause noise interference on the downlink that compromises telemetry communication between the ICD and another device, such as an external programmer or home monitor or another implanted device. Note that charging has no impact to the uplink packets. Telemetry communication is important during capacitor charging since a clinician may be trying to deliver a command to the ICD to abort the shock pulse delivery. Telemetry communication during capacitor charging also allows a clinician to observe real time information uplinked from the ICD relating to sensed and detected cardiac events.

To reduce the impact of the charging noise interference to telemetry, the following charging noise algorithm can be used so that even if received downlink packets are corrupted slave will stay in communication session and continue to transmit waveforms and supplemental markers, and slave can respond to any downlink packet within certain amount of time.

Note that this design has no impact to master. This algorithm can also be used when there is a need for slave to change channel recovery threshold during communication session without any impact or changes on the master.

Based on the transmit data rate, the transfer mode and system requirement about how quickly slave should respond to a downlink, the following four thresholds are needed:

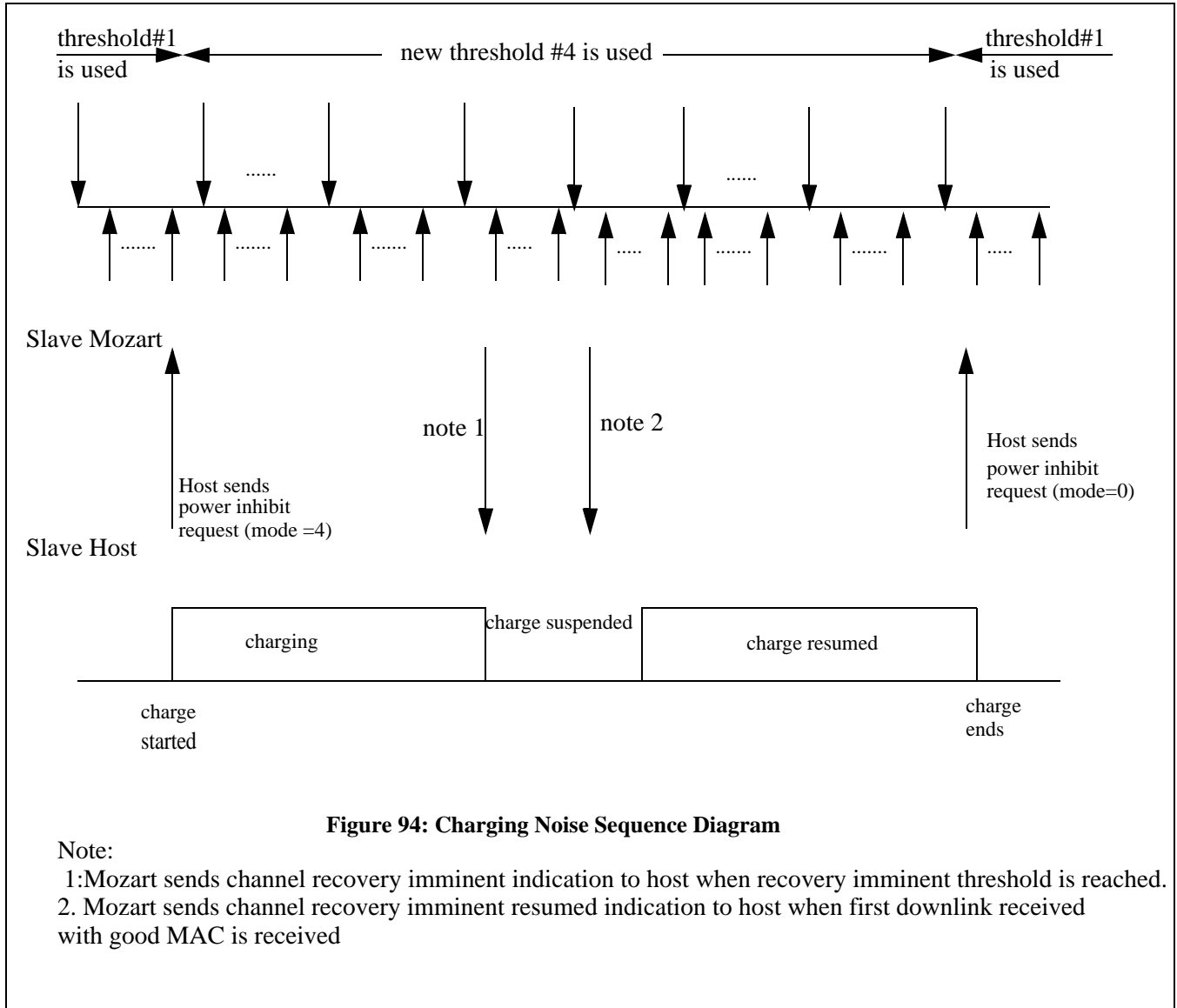
- New Channel Recovery Trigger Threshold For Nominal mode - Channel Recovery Trigger Threshold while slave mozart is in nominal transfer mode. This number should be selected to be greater than the original recovery threshold (i.e., Recovery Threshold 1) so that slave won't trigger channel recovery when the original recovery threshold is reached.

- New Channel Recovery Trigger Threshold For Max. Transmit Mode - Channel Recovery Trigger Threshold while slave mozart is in Max. Transmit transfer mode. As much more packets will be uplinked in the Max. Transmit transfer mode, New Channel Recovery Trigger Threshold For Max. Transmit Mode shall be set less than New Channel Recovery Trigger Threshold For Nominal mode.

- New Channel Recovery Imminent Threshold For Nominal mode - This will be used to indicate host that channel recovery is going to occur while in slave is in Nominal Mode. The value should be less than "New Channel Recovery Trigger Threshold For Nominal mode".

- New Channel Recovery Imminent Threshold For Max. Transmit Mode - This will be used to indicate host that channel recovery is going to occur while in slave is in Max. Transmit Mode. The value should be less than "New Channel Recovery Trigger Threshold For Max. Transmit Mode".

**Fig. 94 (Charging Noise Sequence Diagram)** explains the algorithm sequence using charging as an example.



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When charge starts or when slave Host wants slave mozart to use the new channel recovery threshold (threshold #4), slave host sends the Power Inhibit Service Request with sub-type = 0x04 (see **Table 72 (POWER INHIBIT SERVICE REQUEST (SLAVE))**). Then slave mozart will use threshold #4 (“New Channel Recovery Trigger Threshold For Nominal mode” and “New Channel Recovery Trigger Threshold For Max. Transmit Mode” from **Table 124 (SLAVE PARAMETERS FROM HOST)**) to trigger the channel recovery.

When charge ends, aborts or when slave host wants slave mozart to use the original channel recovery threshold (threshold #1), slave host sends the Power Inhibit Service Request with sub-type = 0x00 (see **Table 72 (POWER INHIBIT SERVICE REQUEST (SLAVE))**). Then slave mozart will use the “Recovery Threshold 1” to trigger channel recovery.

In addition, slave host can configure slave mozart to indicate when channel recovery is going to occur. If configured (i.e., Send Channel Recovery Imminent Indication to host = 1, see Parameter “Power Inhibit” in **Table 124 (SLAVE PARAMETERS FROM HOST)**), then slave mozart sends Same Channel Recovery Imminent Indication to slave host when “New Channel Recovery Imminent Threshold For Nominal mode” or “New Channel Recovery Imminent Threshold For Max. Transmit Mode” is reached. Based on the indication, slave host can stop charging so that slave mozart will receive downlink packets with good MAC. When slave mozart receives the first downlink packet with good MAC, slave mozart will send Same Channel Recovery Imminent Resume Indication to slave host if configured by slave host (i.e., Send Channel Recovery Imminent Resume Indication to host = 1, see Parameter “Power Inhibit” in **Table 124 (SLAVE PARAMETERS FROM HOST)**).

**TLMM\_S\_451- CHARGE NOISE - USE NEW CHANNEL RECOVERY THRESHOLD**

When slave host sends the Power Inhibit Service Request with sub-type = 0x04 (see **Table 72 (POWER INHIBIT SERVICE REQUEST (SLAVE))**), then slave mozart will use the “New Channel Recovery Trigger Threshold For Nominal mode” and “New Channel Recovery Trigger Threshold For Max. Transmit Mode” from **Table 124 (SLAVE PARAMETERS FROM HOST)** to trigger the channel recovery.

[The slave transmit packet’s control byte 5, bits 5 and 6 shall NOT mirror the power inhibit service request sub-type when the sub-type = 0x04. Bits 5 and 6 will contain the last power inhibit mode uplinked prior to mode 4.]

When slave host sends the Power Inhibit Service Request with sub-type = 0x00 (see **Table 72 (POWER INHIBIT SERVICE REQUEST (SLAVE))**), then slave mozart will use the original channel recovery threshold, i.e., Recovery Threshold #1 in **Table 72 (POWER INHIBIT SERVICE REQUEST (SLAVE))** to trigger the channel recovery. This is the recommended usage of the charging noise algorithm. However if slave sends the Power Inhibit Service Request with sub-type = 1,2, or 3 (see **Table 72 (POWER INHIBIT SERVICE REQUEST (SLAVE))**), then slave mozart will change to the corresponding channel recovery thresholds.

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**TLMM\_S\_453- CHARGE NOISE - SAME CHANNEL RECOVERY IMMINENT**

If the power inhibit mode is 4 and configured (i.e., Send Channel Recovery Imminent Indication to host = 1, see Parameter “Power Inhibit” in **Table 124 (SLAVE PARAMETERS FROM HOST)**), then slave mozart shall send Same Channel Recovery Imminent Indication (**Table 74 (SAME CHANNEL RECOVERY IMMINENT INDICATION (SLAVE))**) to slave host when “New Channel Recovery Imminent Threshold For Nominal mode” or “New Channel Recovery Imminent Threshold For Max. Transmit Mode” in **Table 124 (SLAVE PARAMETERS FROM HOST)** is reached.

**TABLE 74: SAME CHANNEL RECOVERY IMMINENT INDICATION (SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0x27 = Slave Channel recovery indication
Sub-type	N/A	1	The indication sub-type	0x01 = same
Size	N/A	2	The size of the info field	1
Info	Channel recovery indication status	1	status of the indication	0x13 = Imminent
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

**TLMM\_S\_454- CHARGE NOISE - SAME CHANNEL RECOVERY IMMINENT RESUMED**

If the power inhibit mode is 4 and configured (i.e., Send Channel Recovery Imminent Resumed Indication to host = 1, see Parameter “Power Inhibit” in **Table 124 (SLAVE PARAMETERS FROM HOST)**), and when the first packet is received with good MAC after Same Channel Recovery Imminent Indication has been sent, then slave mozart shall send Same Channel Recovery Imminent Resumed Indication (**Table 75 (SAME CHANNEL RECOVERY IMMINENT RESUMED INDICATION (SLAVE))**) to slave host.

**TABLE 75: SAME CHANNEL RECOVERY IMMINENT RESUMED INDICATION (SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0x27 = Slave Channel recovery indication
Sub-type	N/A	1	The indication sub-type	0x01 = same
Size	N/A	2	The size of the info field	1
Info	Channel recovery indication status	1	status of the indication	0x14 = Imminent resumed

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**TABLE 75: SAME CHANNEL RECOVERY IMMINENT RESUMED INDICATION (SLAVE)**

CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.
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Slave Mozart will use the corresponding threshold based on the power inhibit mode in the last received power inhibit request.

If power inhibit is asserted when the power inhibit mode is 4, the slave will treat this like power inhibit roll through using recovery threshold 4. However it is not recommended to mix the usage of the charging noise algorithm with usage of the power inhibit. This is because the nature and impact of power inhibit and charging noise are different.

Power inhibit is used to stop slave mozart from using the power supply so that host can maximize its usage of the power supply. Power inhibit blocks both downlink and uplink on slave. Both master and slave should use the same channel recovery thresholds so that they will trigger recovery at about the same time. Slave mozart has a way to communicate the power inhibit mode (0 to 3) to master mozart.

Charging noise algorithm is to extend slave mozart to stay in communication session even if charging noise blocks the downlinks from received by slave mozart. Slave mozart does not communicate the power inhibit mode 4 to master mozart.

Host shall measure the battery before charge starts. If the battery is too low and host still want to charge, instead of extending the recovery threshold (using the charging noise algorithm), host may want to send power inhibit request with mode 0 and then assert power inhibit to totally stop Mozart from using the battery and therefore prevent host from a reset.

## 5.2.22 SHUTDOWN

This is a local service which is used between the host and the telemetry module. This service provides a mechanism to the host to gracefully power down the telemetry module. When this service is invoked all data link layer operation will cease, thus allowing to save energy and prevent unnecessary RF transmissions see **Fig. 95 (Shutdown Sequence Diagram)**

**Note:** If host fails to invoke this service for powering down the module - module could be left in a non-receptor mode, it is host's responsibility to insure that module is in the intended state.

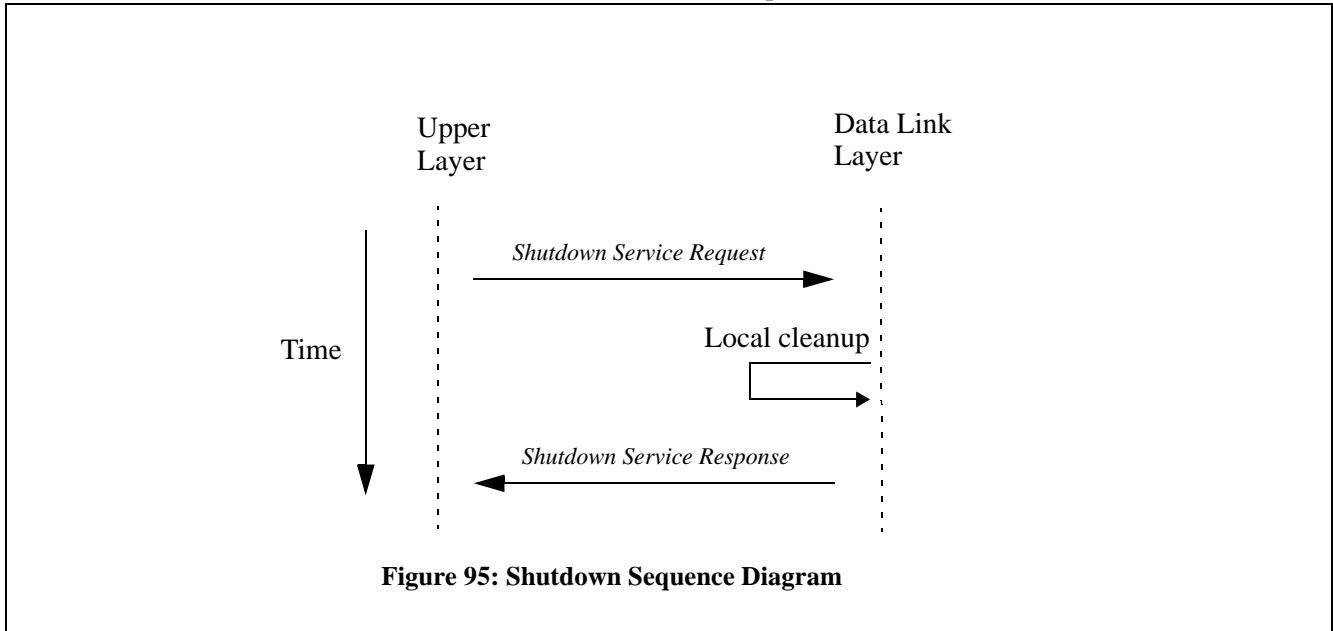
When shutdown service is invoked summary of data link layer will be as follows:

- Terminate any transmit/receive operations
- Cancel all the timers
- Transition to a disable state and configure the module as a receptor



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- Start a disable timer and send a shutdown response to the host.



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5.2.22.1 REQUIREMENTS

**TLMM\_MS\_353 - SHUTDOWN - SERVICE REQUEST PARAMETERS**

When invoking a shutdown service request, upper layer will information as specified in **Table 76 (SHUTDOWN SERVICE REQUEST)**.

**TABLE 76: SHUTDOWN SERVICE REQUEST**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	Shutdown service request 0x0F - Slave 0x8F - Master
Sub-type	N/A	1	The service request sub-type	N/A
Size	N/A	2	The size of the info field	0
Info	N/A	0	N/A	N/A
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the upper layer. It is used by the data link layer verify the integrity of the service request.

**TLMM\_MS\_354 - SHUTDOWN - RESPONSE TO UPPER LAYER**

Upon the receipt of the shutdown service request, data link will perform the following actions:

1. Terminate any data transmission and/or receive operations,
2. Start a disable timer and send a shutdown response to host

[Cancel all the timers, Transition to a disable state, configure the module to be in a receptor mode (per initialization parameters). Terminate physical layer communication, transition to disable state, send a successful response. Note that before turning off the 2 volt supply, the slave will return to synchronous receptor wakeup operation. If the wakeup disable bit is set to 1 in the initialization request firmware does not set the wakeup enable bit bp\_wakeup\_en bit in REG\_BP\_WU\_CTRL0 register. See requirement **TLMM\_S\_402 - WIRELESS WAKEUP - DISABLE WAKEUP**]

**TABLE 77: SHUTDOWN SERVICE RESPONSE**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of service request	Shutdown service response 0x0F - Slave 0x8F - Master

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**TABLE 77: SHUTDOWN SERVICE RESPONSE**

Sub-type	N/A	1	The service response sub-type	N/A
Size	N/A	2	The size of the info field	1
Info	Close service status	1	Status of the service request	0x01 - request successful <sup>(1)</sup> 0x0A - Parameter value error <sup>(2)</sup> 0x10 - Invalid CRC 0x12 - Invalid size (info size >506) <sup>(2)</sup> 0x13 - Invalid request type <sup>(3)</sup> 0x24 - Request invalid during EEPROM read 0x25 - Buffer/ service request mismatch (master only) <sup>(4)</sup>
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

1. Note that request successful is returned regardless of data link layer state.
2. If the request info size is greater than 506, 0x12 - Invalid size (info size >506) will be used; if the info size or subtype (if applicable) does not match the value in the request table, "Parameter out of range" will be used. Note "0x0A - Parameter value error" is only applicable to the master.
3. This value applies to the slave only. This code can occur if the service request is sent using an interrupt other than service request0 (there is a buffer/ service request mismatch)
4. This status can occur if the master host attempts to send a shutdown service request using service request buffer 1 (instead of buffer 0).

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## 5.3 INTERNAL SERVICES

### 5.3.1 PACKET RETRANSMISSION (ARQ)

The packet retransmission algorithms allow the master and slave to retransmit individual Memory Data packets during data transmission. Telemetry M uses two types of ARQ algorithms for the Data packet retransmission:

- Stop and Wait - ARQ algorithm is used for master data packet retransmission.
- Selective Repeat - ARQ algorithm is used for slave Memory Data retransmission (acronym is SR-ARQ).

These ARQ algorithms are used only during the Nominal Mode and Max Slave Throughput Mode.

The retransmission of waveform packets are based on the Go-Back-N ARQ algorithm.

Supplemental marker packets are not retransmitted.

#### 5.3.1.1 REQUIREMENTS

The following is an overview of the Go-Back-N, Stop and Wait and SR-ARQ and algorithms:

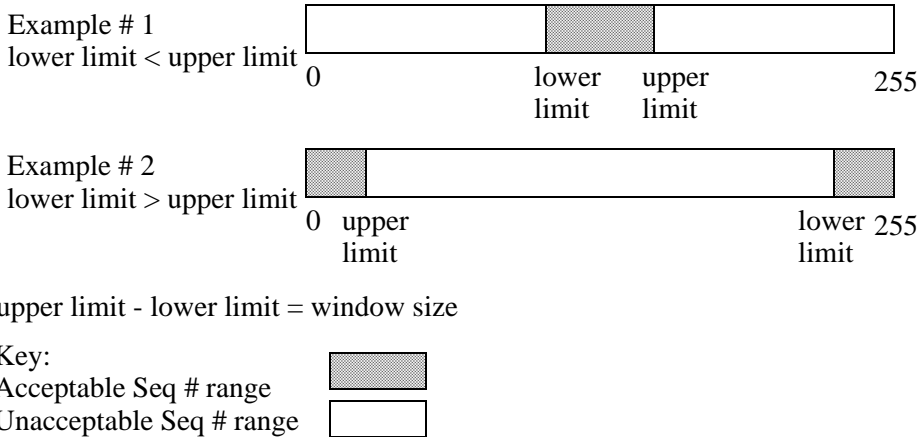
- The **Go-Back-N** - This ARQ algorithm is used to support the retransmission of the waveform packet(s). The slave builds and transmits the waveform packets. The master validates and processes each waveform packet received in the slave frame and transmits a master packet with the expected waveform sequence number. Then slave shall retransmit the waveform packets starting from the expected waveform sequence number based on whether there is any new waveform request or not.
- The **Stop and Wait** - This ARQ algorithm is used for master data packets. In this algorithm the slave acknowledges each data packet received with a valid message authentication code (MAC) by setting an acknowledge bit in the response packet(s). If the master does not receive an acknowledgment for the transmitted packet, it retransmits the packet in the next frame.
- The **Selective Repeat** - This ARQ algorithm (SR-ARQ) is used only for slave Memory Data packet(s). The slave builds and transmits the slave packets. The master validates and processes each slave packet received in the slave frame and transmits a master packet with acknowledgment information back to the slave. This acknowledgment information indicates the message authentication code (MAC) state of the applicable packet(s) received by the master. The slave uses the acknowledgment information to determine which packets to retransmit. The SR-ARQ algorithm uniquely identifies any slave packets requiring retransmission via ARQ information (general sequence number and bitmap). A sliding window mechanism is used to determine the range of the packet's (or packets') general sequence numbers that can be transmitted or retransmitted. The size of the sliding window is determined by the difference between the lower and upper limits. The computation formula for the sliding window size is shown in the formulas below:

$$\text{Window size} = (\text{MaxSeqNumber} + 1) / 4$$

$$\text{TelemetryCWindow size} = (255 + 1) / 4 = 64$$

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The lower and upper limits of the sliding window are advanced when the general sequence number of the received Memory Data packet is equal to the lower limit. Memory Data packets outside the sliding window are considered invalid and are ignored. The use of the sliding window mechanism is illustrated via two examples in **Fig. 96 (Sliding Window example)**. The first example illustrates the normal usage. The second example illustrates boundary conditions where the general sequence numbers are allowed to wrap.



**Figure 96: Sliding Window example**

The ARQ packet is assembled by the master and is transmitted to the slave. The content of the ARQ packet information consists of two elements:

- First Outstanding Packet (FOP) sequence number.
- Bitmap indication of the received and outstanding packets.

5.3.1.2 MASTER

The Stop and Wait algorithm is used for master packet transmission. After transmitting a packet, the master checks the ACK bit in the slave packet(s). A set ACK bit in the slave packet(s) is an indication of a master packet received by the slave with a valid message authentication code (MAC). If the ACK bit is not set in the slave packet(s) or no valid slave packet(s) are received by the master, then the previous master packet is retransmitted.

**TLMC\_M\_100 - ARQ - STOP AND WAIT MASTER ACKNOWLEDGMENT**

After transmitting the Memory Data master packet, check for the ACK bit in the slave packet(s) and perform as follows:

1. If the ACK bit is set in at least one valid slave packet, then transmit the next Memory Data master packet (if the previous packet was not the final packet).
2. If the ACK bit is not set in any of the received slave packet(s) or no valid slave packets are received, then retransmit the previous master packet in the next frame.

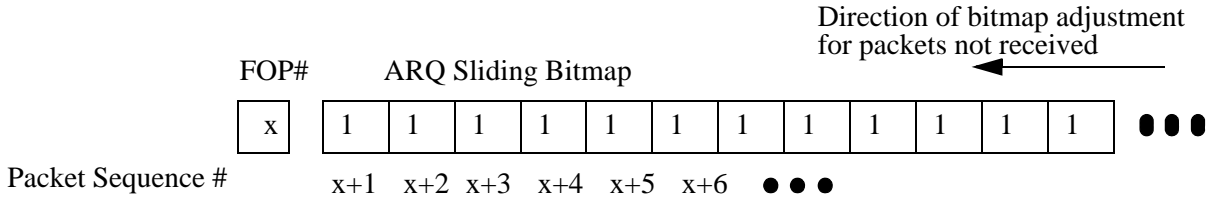
The SR-ARQ algorithm is used for slave Memory Data retransmission. The master is responsible for:

- Managing its sequence number window
- Tracking the ARQ information for each packet, received or not received
- Building and sending ACK/ARQ information back to the slave

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The FOP sequence number and the ARQ bitmap provides a received or not received indication of the Memory Data slave sequence numbers. The width of the bitmap is proportional to the sequence number window size for slave Memory Data packets.

The bitmap entries are initialized as not received until the corresponding packet is correctly received. When the FOP is correctly received, then the bitmap content is accordingly updated and the FOP sequence number is adjusted to reflect the next outstanding packet. The first example (Fig. 97 (Ex. 1 - FOP and Bitmap Initialization)) illustrates the state of the FOP and bitmap contents when this information is initialized or when there are no outstanding packets requiring retransmission. The FOP value represents the next packet expected by the master. The bitmap contents represent the default state of future packets, i.e. packets are assumed not received until correctly received.



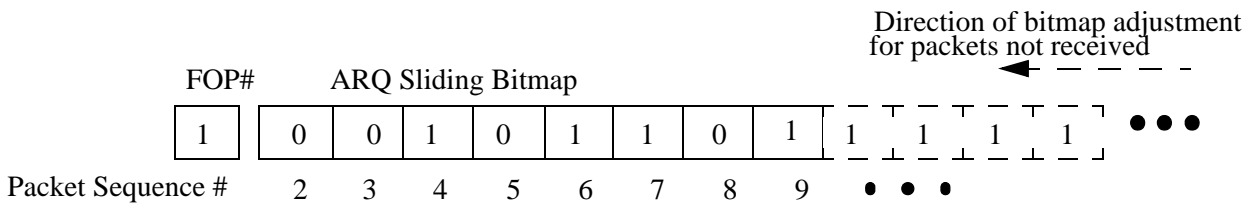
Key: 0 - Packets received  
 1 - Packets not received  
 FOP - First Outstanding Packet

**Figure 97: Ex. 1 - FOP and Bitmap Initialization**

The second example (Fig. 98 (Ex. 2 - Snapshot of ARQ Information)) illustrates a specific snapshot of ARQ information on the master after the slave has transmitted packets 1 through 9.

- Successfully received packet#: 2, 3, 5, 8
- Not received packet#: 1 (FOP), 4, 6, 7, 9....

The master transmits the ARQ FOP and bitmap information back to the slave. The slave uses the ARQ information to determine which Memory Data packets require retransmission. In this example the slave retransmits Memory Data packets number 1, 4, 6, 7, and 9. Additional new packets may also be transmitted, resources permitting.



Key: 0 - Packets received  
 1 - Packets not received  
 FOP - First Outstanding Packet

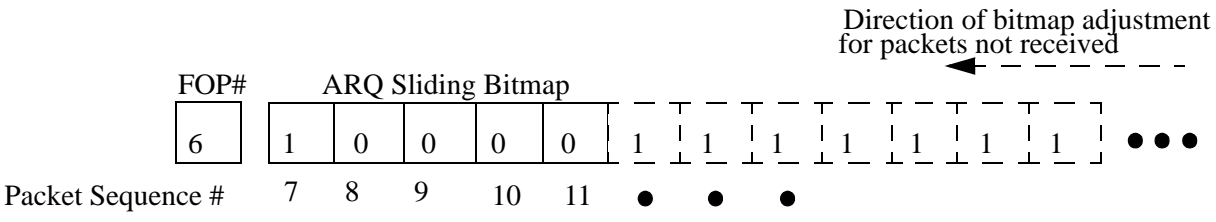
**Figure 98: Ex. 2 - Snapshot of ARQ Information**

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The third example (**Fig. 99 (Ex. 3 - Next ARQ Snapshot)**) illustrates the next snapshot of the ARQ information after the slave has transmitted (or retransmitted) packet numbers 1, 4, 6, 7, 9, 10, 11:

- Sequence numbers of the packets successfully received: 1, 4, 9, 10, 11.
- Sequence numbers of the packets not received: 6 (FOP), and 7.

Several of the retransmitted packets were correctly received and several new packets were also correctly received. However, packets #6 and #7 were not correctly received. The updated ARQ information is transmitted to the slave for another retransmission attempt. The exchange of packets and ARQ information continues until all outstanding packets are correctly received or the link is reset.

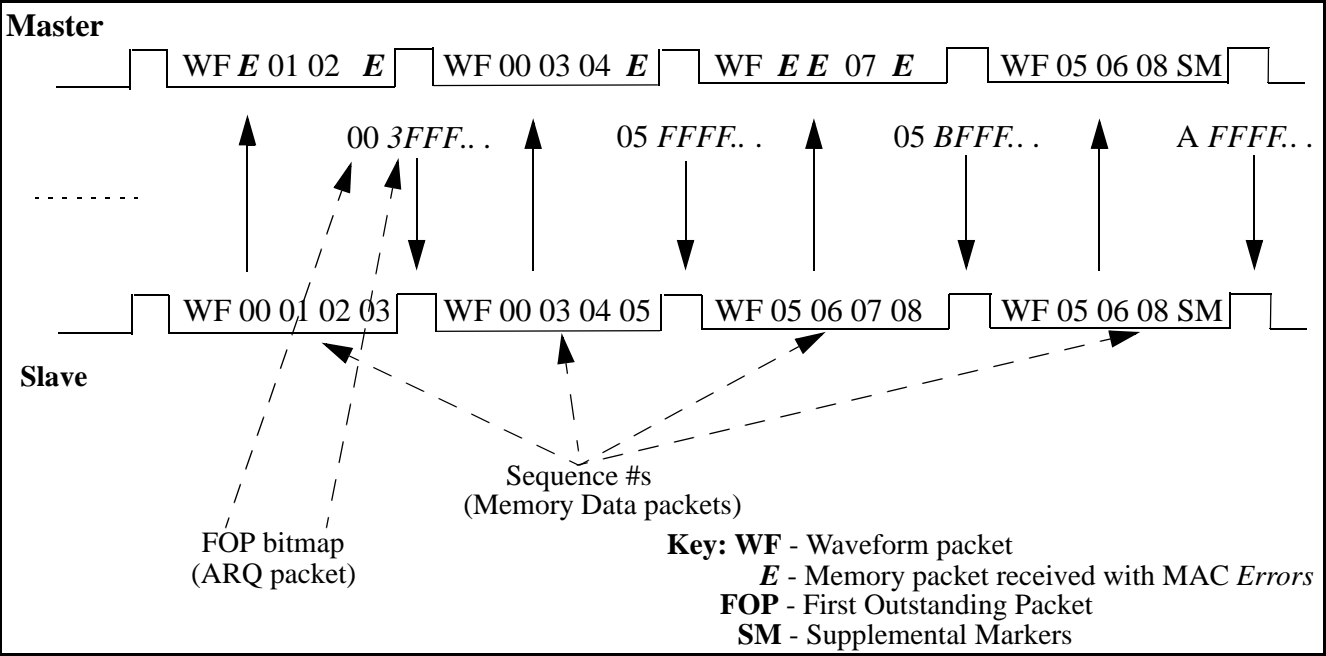


Key: 0 - Packets received  
 1 - Packets not received  
 FOP - First Outstanding Packet

**Figure 99: Ex. 3 - Next ARQ Snapshot**

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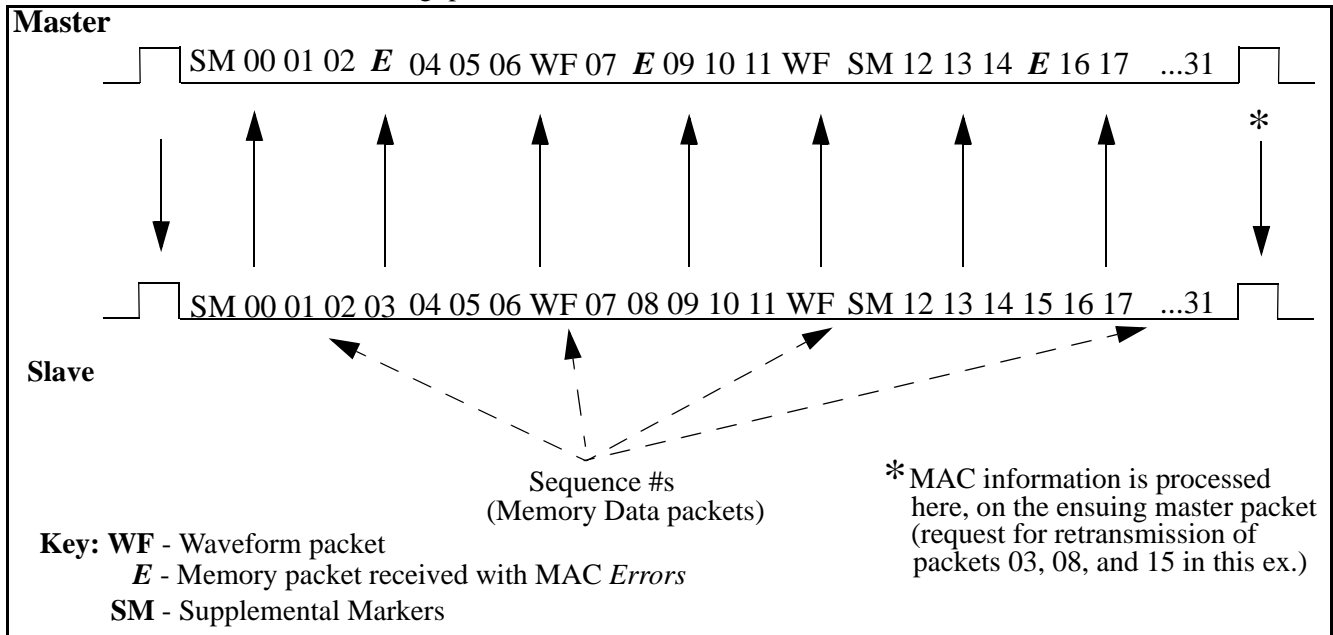
The example in **Fig. 100 (SR-ARQ Example During Nominal Transfer Mode)** illustrates the SR-ARQ mechanism for slave Memory Data packets in a nominal transfer mode. The solid up arrow lines represents the slave direction, and the solid down arrow represents the master direction of the data. In this example an slave message consists of nine Memory Data packets as represented by their sequence numbers (01, 02, 03...). In the slave frames, Memory Data packets and waveform packets are interleaved. The ARQ packet information is updated and transmitted back to the slave in the master frames.



**Figure 100: SR-ARQ Example During Nominal Transfer Mode**



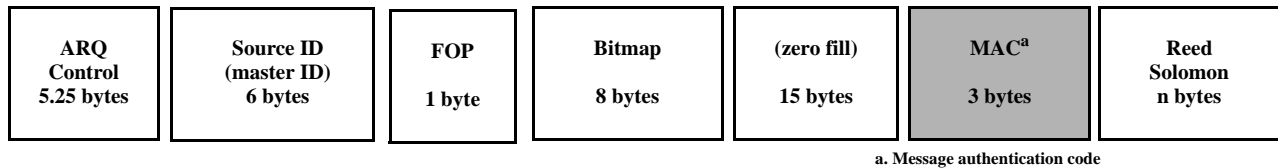
The example in **Fig. 101 (SR-ARQ Example During Maximum Slave Throughput Mode)** illustrates the max slave throughput mode.



**Figure 101: SR-ARQ Example During Maximum Slave Throughput Mode**

### TLMC\_MS\_101 - ARQ - MASTER ARQ PACKET FORMAT

A master ARQ Request packet has the format indicated in **Fig. 102 (Master ARQ Request Packet)**.



**Figure 102: Master ARQ Request Packet**

### TLMC\_M\_102 - ARQ - UPDATING OF ARQ INFORMATION

The master will update the ARQ information if it receives a memory packet (if the master packet was not Discover, Open, Network, or Security).

[The state is Comm when the master packet is not Discover, Open, Network nor Security.]

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### TLMC\_M\_103 - ARQ - SLAVE MEMORY DATA PACKET ACKNOWLEDGMENT

For each slave Memory Data packet that is received:

1. Verify the sequence number of the received packet to ensure it is within the sliding window limits. A received packet with a sequence number outside the sliding window limits will be ignored.
2. Adjust the SR-ARQ information based on the received packet. Update the FOP field with the sequence number of the First Outstanding Packet required to be retransmitted. In the bitmap, clear the bit for the packet received.
3. Transmit the ARQ packet to the slave in the next master frame.

[Note that the last bit of the bitmap is never used (always 1).]

### TLMC\_M\_104 - ARQ - SLAVE ACK NOT RECEIVED

When no Memory Data packet is received in the slave frame then perform the following:

1. If the previous master packet was an ARQ packet and it is not acknowledged (ACK bit not set) in the slave frame, then re-transmit the ARQ packet in the next master frame.
2. The ARQ packet will stop when ARQ packet is acknowledged via ACK bit set in at least one slave packet.

In general, the waveform packets are retransmitted using Go-Back-N ARQ algorithm. That is, all the transmitted packets starting with the expected waveform sequence number will be retransmitted. Below is the detailed waveform retransmission algorithm description.

Once a waveform request is received, the slave shall transmit the waveform packets and shall save all the transmitted waveform packets in the transmit frame.

The master provides the expected waveform sequence number in the master transmit packet. The expected waveform sequence number is initialized as zero whenever a session is opened or recovered.

The master can be configured to request retries (go back N) for the most recently received waveform transaction or the second most recently received waveform transaction. In the first case an incomplete waveform transaction is discarded when a fragment (packet) of any new waveform transaction is received (new transaction number not equal the old transaction number). In the second case an incomplete waveform transaction is discarded when a fragment (packet) is received with a transaction number of any value other than  $(N+1)\%8$  (where N is the transaction number of the older waveform transaction). For example, the master will continue to request retries from waveform transaction number 1 until it receives a packet from waveform transaction 3. The following rules apply:

- If the master has received all the fragments (packets) from the transaction, the expected waveform sequence number will be the transaction's last waveform sequence number+1.
- If the master has not received all the fragments (packets) from the transaction, the expected waveform sequence number will be the waveform sequence number of the first missing fragment (packet).

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The slave shall retransmit the saved waveform packets of the N<sup>th</sup> waveform request based on the following rules:

- If there is no (N+2)th waveform request, then slave shall retransmit the saved waveform packets starting with the expected waveform sequence number.
- If there is (N+2)th waveform request, and if the “delay sending new waveform” is true (See “**Table 124 (SLAVE PARAMETERS FROM HOST)**”) then slave shall retransmit the saved waveform packets starting with the expected waveform sequence number.
- Else if the “delay sending new waveform” is false, then slave stops all the retransmission and transmission of the N<sup>th</sup> waveform request and (N+1)<sup>th</sup> waveform request packets, slave shall transmit the (N+2)th waveform request packets.

**TLMM\_M\_355 - ARQ - UPDATING THE EXPECTED WAVEFORM SEQUENCE NUMBER 1**

When “delay new waveform detection” is false, the transaction number of the most recently received waveform packet will be used to set the expected waveform sequence number:

- If all the fragments (packets) from the transaction has been received, the expected waveform sequence number will be the received transaction’s (last waveform sequence number+1) modulus 256.
- If any of the fragments (packets) from the transaction have not been received, the expected waveform sequence number will be the waveform sequence number of the first missing fragment (packet).

[The “delay new waveform detection” parameter is contained in the master initialization table (see **Table 123 (Master parameters from host)**).

The master communicates the “expected waveform sequence number” using control byte 4. See **Fig. 17 (Packet Control Bytes)**.]

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## TLMM\_M\_429 - ARQ - UPDATING THE EXPECTED WAVEFORM SEQUENCE NUMBER 2

When “delay new waveform detection” is true, the expected waveform sequence number will set according to the table below:

**TABLE 78: EXPECTED WAVEFORM SEQUENCE NUMBER**

MISSING FRAGMENT IN 2ND MOST RECENTLY RECEIVED WAVEFORM TRANSACTION <sup>(1)</sup>	MISSING FRAGMENT IN MOST RECENTLY RECEIVED WAVEFORM TRANSACTION	EXPECTED WAVEFORM SEQUENCE NUMBER
True	-	The waveform sequence number of the first missing fragment of the second most recently received waveform transaction
False	True	The waveform sequence number of the first missing fragment of the most recently received waveform transaction
False	False	(last received waveform sequence number+1) modulus 256

1. By definition there is no 2nd most recently received waveform if there are two or more intervening incomplete waveforms between the most recent waveform and the last complete waveform transaction. For example if the last complete waveform transaction number is 4 and there are missing fragment(s) in both transaction 5 and 6 and a fragment is received with transaction number 7, the most recent waveform transaction becomes 7 and the 2nd most recent transaction becomes none.

Note that the second most recently received waveform transaction is discarded when the new waveform transaction number is any value other than  $(N+1) \% 8$ , where N is the transaction number of the second most recently received waveform transaction.

[For example, the master will continue to request retries from waveform transaction 1 until it receives a packet from waveform transaction 3 (actually any transaction other than transaction 2).

The “delay new waveform detection” parameter is contained in the master initialization table (see **Table 123 (Master parameters from host)**).

The master communicates the “expected waveform sequence number” using control byte 4. See **Fig. 17 (Packet Control Bytes)**.]

In order to support different business needs for waveform transmission and to save power during low energy mode, bit “frequent waveform expected” (see **Table 123 (Master parameters from host)**) is used.

Note that if configured to run telemetry C, bit “frequent waveform expected” should be set if waveform packet(s) is expected in every uplink frame which will cause slave to retransmit the waveform packet(s) sent in the last uplink frame. (this is also backward compatible to Concerto).

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### 5.3.1.3 SLAVE

The Stop and Wait algorithm is used for master Memory Data packets. Each master packet received with a valid message authentication code (MAC) is acknowledged via the ACK bit in the slave packet(s) of the next slave frame. An ACK bit will not be set in the slave packet(s) if the received master packet contains an invalid MAC.

#### **TLMC\_S\_106 - ARQ - STOP AND WAIT MASTER PACKETS**

A master packet received with a valid message authentication code (MAC) will be acknowledged by setting an ACK bit in all the slave packets of the next slave frame; otherwise, the ACK bit will not be set in any slave packet(s) of the slave frame.

[The slave frame may include the retransmitted packets.]

#### **TLMC\_S\_107 - ARQ - RECEIPT OF AN ARQ PACKET**

Upon the receipt of an ARQ packet the slave will perform as follows:

1. Retransmit the unacknowledged Memory Data packets using the FOP and bitmap as follows:
  - FOP indicates the sequence number of the packet not received or may need to be retransmitted, followed by a bitmap status of the remaining packets.
  - A set bit “1” in the bitmap indicates the packet(s) is not received or may need to be retransmitted.
  - A cleared bit “0” in the bitmap indicates a packet was successfully received, therefore should not be retransmitted.
2. Adjust the lower and upper limits of the sliding windows based on the ARQ information.

#### **TLMC\_S\_108 - ARQ - MASTER ARQ PACKET NOT RECEIVED**

If the ARQ packet is not received then re-transmit the unacknowledged Memory Data packet(s) from the previous frame(s).

[If packet space is available in the slave frame.]

When slave Memory Data transactions are complete, in the next master frame if a data service packet is received instead of an ARQ, this implies that all the previously transmitted packets are acknowledged thus allowing the sliding window to advance.

#### **TLMC\_S\_109 - ARQ - IMPLICIT ACK OF VALID SLAVE MEMORY DATA**

Once a slave packet is transmitted with a last fragment bit set, and the Memory Data request is received in the following master frame then the slave will perform as follows:

1. Memory data packets already transferred will be considered acknowledged.
2. The sliding window limits will be advanced accordingly. (New sequence #)

#### **TLMC\_S\_110 - ARQ - MEMORY DATA ACKNOWLEDGEMENT NOT RECEIVED**

If the slave does not receive acknowledgment for the transmitted Memory Data packets from the previous frame then the slave will retransmit the Memory Data packets from the previous frame if packet space is available and if the following apply:

1. No waveform packets to transmit.
2. No supplemental marker packets to transmit.

[For precedence rules, see 5.2.11 and 5.2.11.5 SLAVE DATA.]

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**TLMM\_S\_356 - ARQ - RETRANSMIT WAVEFORM PACKET**

The N<sup>th</sup> transmitted waveform request packets shall be retransmitted as follows:

- If there is no (N+2)<sup>th</sup> waveform request, then slave shall retransmit the saved waveform packets starting with the expected waveform sequence number.
- If there is (N+2)<sup>th</sup> waveform request, and if the “Delay sending new waveform” is true (See **TABLE 124: SLAVE PARAMETERS FROM HOST**) then slave shall retransmit the saved waveform packets starting with the expected waveform sequence number.
- Else if the “Delay sending new waveform” is false, then slave stops all the retransmission and transmission of the N<sup>th</sup> waveform request and (N+1)<sup>th</sup> waveform request packets, slave shall transmit the (N+2)<sup>th</sup> waveform request packets.

[The master communicates the “expected waveform sequence number” using control byte 4. See **Fig. 17 (Packet Control Bytes).**]

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### 5.3.2 CHANNEL MANAGEMENT

An master and an slave can select any of ten MICS channels for communication (there are also ten lower MEDs channels and ten upper MEDs channels). The frequency range for these ten MICS channels is between 402 to 405 MHz. The frequency range for the lower MEDs channels is between 401 and 402 MHz. The frequency range for the upper MEDs channels is between 405 and 406 MHz. A communication channel is managed in distinct ways depending whether or not communication is established. Prior to establishing communication, each master and slave is responsible for its own channel management operations. The two primary channel management operations are:

- Channel Mapping
- Channel Recovery

A brief overview of channel management operations is as follows:

The master performs **Channel Mapping** operations. The slave obtains its initial channel via the wakeup packet. The slave does not transmit until it receives a valid packet from an master.

**Note:** According to FCC regulations, a channel may not be selected for communications if Channel Mapping operations have not been performed within the last five seconds.

**Channel Recovery:** is invoked when the loss of synchronous communications is detected either by the master or by the slave. Once synchronous communication loss is detected, a finite time is allowed to reestablish synchronous communication, during which Channel Mapping operations may be invoked by Channel Recovery. (For details, see **5.3.3 Channel Recovery.**)

#### 5.3.2.1 CHANNEL MAPPING

Channel mapping is performed by the master's physical layer to select a channel for communication.

Channel mapping should select a channel that does not contain adverse interference, and does not interfere with other users of the channel. This is accomplished by listening to each channel and selecting the quietest channel. The quietest channel is determined using RSSI (Received Signal Strength Indication).

Use of a particular channel must occur within 5 seconds of Listen Before Talk (mapping). This is an FCC requirement. Telemetry M satisfies this requirement by doing Channel Mapping "on demand". Channel mapping will immediately precede the wakeup packet for the discover service, open service, and network service. Channel mapping also precedes the unspecified channel recovery internal service.

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### 5.3.2.2 MAPPING SYSTEM PARTITIONING

Mapping is performed by the Data Link Layer in combination with the physical layer. The Data Link Layer interacts with the physical layer as follows:

1. Set the wakeup imminent duration (to allow channel mapping to complete shortly before the wakeup transmission begins)
2. Enable the wakeup imminent interrupt
3. Wait for the wakeup imminent interrupt
4. Set the channel frequency
5. Request single channel clear channel assessment (CCA) which returns an RSSI value for the channel
6. Retrieve the RSSI value upon the CCA interrupt
7. Repeat steps 4-6 until all channels are assessed or a channel's RSSI value is less than the stop-on-threshold value
8. The quietest channel is selected (the channel with the lowest RSSI)

Note that steps (1) - (3) are only performed if synchronous wakeup is to be used. These steps are skipped if asynchronous wakeup is to be used.

Also note that it takes two clear channel assessments (CCAs) to characterize a channel. One assessment for each antenna is needed.

#### **TLMM\_M\_357 - CH MAPPING - SELECT CHANNEL**

Upon initiation of the channel mapping internal service, the master will perform the clear channel assessment on each channel/antenna pair (10 msec/pair) until all channels are assessed or a channel's RSSI is below the stop-on-threshold value. The quietest channel is selected (the channel with the lowest RSSI).

Note that the listen before talk timer (LBT) is restarted each time a clear channel assessment is performed.

[Note that a channel's RSSI value is set to the larger value of the RSSI on each antenna.]

[If ten channels are assessed it will take approximately 275 +/- 50 msec<sup>(1)</sup> (10 msec per channel/antenna pair).]

### 5.3.2.3 DIAGNOSTIC MAPPING

#### **TLMM\_M\_358 - CH MAPPING - DIAGNOSTIC COLLECTION**

The master will collect twenty milliseconds of data during diagnostic mapping. The RSSI value of each channel assessed will be returned in the external service response.

1. CCA of the MICS band takes approximately 275 msec. CCA of the MEDS band takes approximately 550 msec. CCA of both bands takes approximately 825 msec. Note that if HDR mode is enabled, assessment of each channel, antenna pair is lengthened by 5 msec (to allow the HDR synthesizer to stabilize). This means the CCA of the MICS band is lengthened from 275 msec to 375 msec



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### 5.3.3 CHANNEL RECOVERY

Channel recovery is an internal service to the Data Link Layer. It is used to reestablish communication when a loss of synchronous communication is detected between the master and the slave. Loss of synchronous communication is typically caused by various types of environmental noise. The environmental noise may be transient or persistent.

The master and the slave will perform Channel Recovery operations in two distinct ways:

- Reestablish communication on the **same channel** - The channel on which the communication session was most recently established, or
- Reestablish communication on an **unspecified channel** - New channel selected by the Channel Mapping algorithm.

Following is a brief description of the two operations which are performed by the master and the slave for Channel Recovery:

**Same channel recovery operation:** The first approach is to recover the communication session on the same channel, with the recovery period defined by the “same channel recovery” timer. For the duration of the same channel recovery timer the master transmits Open request packets while the slave listens for an Open request packet. When a valid Open master packet is received, the slave transmits N open response packets (“N” = open uplink packet count in **Table 129 (PARAMETERS FROM EEPROM)**). The communication session is considered reestablished when the master receives a valid Open response packet, and the same channel recovery timer is cancelled.

**Unspecified channel recovery operation:** The second approach is to recover the communication session on an unspecified channel, with the recovery period defined by the “unspecified channel recovery” timer. The master invokes the Channel Mapping algorithm to select a unspecified channel; meanwhile, the slave initiates asynchronous receptor wakeup. This allows the slave to listen to each channel (defined in the sniff list). Once a channel is selected, the master starts transmitting wakeup packets followed by native mode open request packets. If the slave hears a wakeup packet it will begin listening for an open packet. When a valid Open request packet is received, the slave transmits N open response packets (“N” = open uplink packet count in **Table 129 (PARAMETERS FROM EEPROM)**). The communication session is considered reestablished when the master receives a valid Open response packet, and the unspecified channel recovery timer is cancelled.

#### 5.3.3.1 REQUIREMENTS

The Channel Recovery algorithm is triggered when

- no valid preamble and packets are received for consecutive frames, or
- the master ID in the first master Data fragment packet, master ARQ packet, or master Diagnostic packet does not match the master ID in the last received Open request packet, or
- the slave ID in the first slave Data fragment packet or slave Diagnostic packet does not match the slave ID in the last received Open response packet, or
- the master receives a Data, Emergency, Open, or Remote Diagnostic service request when in the Inactive State.

This algorithm can be independently triggered by the master or the slave.

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When the Channel Recovery algorithm is triggered, any External Service in progress is aborted and the associated un-transmitted data packets are discarded. The operations associated with the Channel Recovery algorithm are performed by using nominal data transfer mode in the Channel Recovery State.

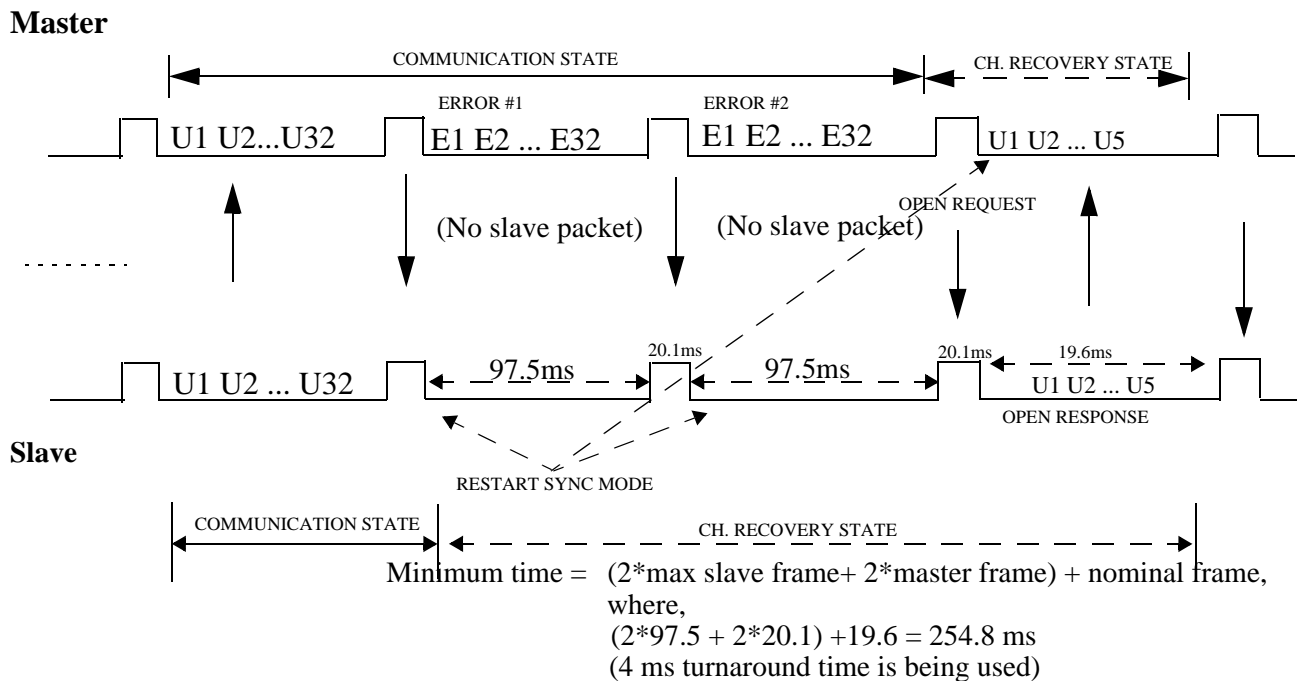
The Channel Recovery algorithm uses two local timers for its recovery operations. The names and default values of these timers are defined in **TABLE 79: CHANNEL RECOVERY TIMERS**.

**TABLE 79: CHANNEL RECOVERY TIMERS**

CHANNEL RECOVERY TIMERS	VALUE (MASTER)	VALUE (SLAVE)
Same Channel Recovery (SCR) timer <sup>(1)</sup>	440ms <sup>(2)</sup>	440ms
Unspecified Channel Recovery (UCR) timer	3 - 65535 sec <sup>(3)</sup>	3 - 65535 sec

1. This allows the master's and slave's Same Channel Recovery timers to overlap; see **Fig. 103 (Minimum Channel Recovery Time during Max Slave Throughput Transfer Mode)**.
2. This value comes from **Table 124 (SLAVE PARAMETERS FROM HOST)**.
3. This value comes from **TABLE 129: PARAMETERS FROM EEPROM**.

The example in **Fig. 103 (Minimum Channel Recovery Time during Max Slave Throughput Transfer Mode)** illustrates the Minimum Channel Recovery time during maximum slave throughput transfer mode.



*This figure assumes master and slave baud rates of 14.8 and 100 Kbps respectively*

**Figure 103: Minimum Channel Recovery Time during Max Slave Throughput Transfer Mode**

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### 5.3.3.2 MASTER

When the Channel Recovery algorithm is triggered, the master first attempts to reestablish communication on the same channel. If this fails, then the master attempts to reestablish communication on an unspecified channel. In either case, the master transmits an Open request packet to reestablish synchronous communication. During unspecified channel recovery an open packet is preceded by two or more wakeup packets.

The master triggers its Channel Recovery algorithm if no valid preamble and slave packets are received for at least two consecutive slave frames. When Channel Recovery is triggered, the master terminates any External Service in progress, switches the data transfer mode to a nominal mode, changes the telemetry state to the Channel Recovery State, and starts a SCR timer.

#### **TLMC\_M\_120 - CH RECOVERY - TRIGGER CHANNEL RECOVERY**

The Channel Recovery algorithm is triggered when any of the following conditions is true:

1. No valid slave packet is received for N consecutive frames, where N is determined using the parameter “number of consecutive frames without a valid receive packet threshold 1, 2 or 3” and the power inhibit mode. See **Table 123 (Master parameters from host)** and **Table 71 (POWER INHIBIT MODES)** respectively.
2. An Open service request is unsuccessful.
3. A Data, Emergency, Open, or Remote Diagnostic service request is received in the Inactive State (in which case, unspecified channel recovery is initiated).
4. The slave ID in the first data transaction packet or diagnostic transaction packet does not match the slave ID in the last received open packet.
5. A slave packet’s ACK bit is true but its reset ACK bit is false when both are expected to be true. This can occur when noise is received with a good message authentication code (MAC).
6. When the master/slave bit is set to “1”, it means “this” master has just received a native mode packet from another master. “This” master was expecting a packet from a slave.

[Here, ‘data transaction’ is used generically for Memory Data, WF Data, and Unrequested Data. The ID appears in the first fragment of the transaction.]

#### **TLMC\_M\_121 - CH RECOVERY - START SAME CHANNEL RECOVERY**

When the Channel Recovery algorithm is triggered (when the session began with an Open service request), then disable the security hardware; terminate the processing of any external service in progress; change to a nominal data transfer mode; inform the upper layer with a channel recovery started indication (see **Table 80 (SAME CHANNEL RECOVERY STARTED INDICATION (MASTER OR SLAVE))**); and start channel recovery by transmitting Open requests. Open (unsecure) packets are transmitted if the original open service was open unsecure; otherwise open secure packets are transmitted. Note that if open secure packets are transmitted, a new random number ( $R_m$ ) must be generated (see **Fig. 40 (Open Secure/Unsecure Request Packet)**). The same random number ( $R_m$ ) can be used for the duration of same channel recovery. The algorithm for generating a random number is described in the appendix (see section **7.3 Pseudo Random Number Generation**).

[Note, it is not required to have a new random number generated when entering the Channel Recovery during an unsecured session. However, for implementation simplicity, it is acceptable if a new random number is generated as well when the Channel Recovery starts during an unsecured session.]

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**TABLE 80: SAME CHANNEL RECOVERY STARTED INDICATION (MASTER OR SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0xA7 = Master Channel recovery indication 0x27 = Slave Channel recovery indication
Sub-type	N/A	1	The indication sub-type	0x01 = same
Size	N/A	2	The size of the info field	4
Info	Channel recovery indication status	1	status of the indication	0x04 = started
	Slave channel recovery reason	2	The reason slave same channel recovery was started.	See <b>Table 108 (Channel Recovery Reason)</b> <sup>(1)</sup>
	Master channel recovery reason	1	The reason master same channel recovery was started.	See <b>Table 105 (Master channel recovery reason)</b> <sup>(2)</sup>
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

1. This field is impertinent if the module is initialized as a master.
2. This field is impertinent if the module is initialized as a slave.

[Change to Channel Recovery State and start SCR timer, Inform the Upper Layer if an external service is aborted, inform the Upper Layer that Channel Recovery is started, Same channel recovery can't be greater than 5 seconds.]

An SCR timer is used while reestablishing communication on the same channel. While the SCR timer is active, the master restarts the sync mode, transmits a valid Open request and waits for an slave response. If no valid response is received, then this cycle is repeated till the SCR timer expires.

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### TLMC\_M\_122 - CH RECOVERY - SAME CHANNEL RECOVERY OPEN MASTER PACKET

While in same channel recovery transmit an open request packet and wait for an open response. Repeat this process if a valid open response is not received. Open (unsecure) packets are transmitted if the original open service was open unsecure; otherwise open secure packets are transmitted. Note that if open secure packets are transmitted, a new random number ( $R_m$ ) must be generated (see **Fig. 40 (Open Secure/Unsecure Request Packet)**). The same random number ( $R_m$ ) can be used for the duration of same channel recovery. The algorithm for generating a random number is described in the appendix (see section **7.3 Pseudo Random Number Generation**).

[During same channel recovery while SCR timer is active - Transmit an Open request, starting on an antenna and alternating on each retry, Restart the sync mode, Wait for an Open slave packet response. Repeat the above steps if a valid Open slave response is not received. **Note:** Open service is invoked locally. The actions performed for this Open service are the same as those described in **5.2 External Services**. The only exception is that upper layer is not notified of an Open request and the Open response.]

[Note, it is not required to have a new random number generated when entering the Channel Recovery during an unsecured session. However, for implementation simplicity, it is acceptable if a new random number is generated as well when the Channel Recovery starts during an unsecured session.]

Synchronous communication is reestablished if an Open session response is received from a slave while the SCR timer is active. The SCR timer is cancelled and synchronous communication is resumed by transition to the Comm State.

### TLMC\_M\_123 - CH RECOVERY - SAME CHANNEL RECOVERY SUCCESSFUL

If a valid slave Open packet is received while the SCR timer is active then transition to Comm State on successful response and send a channel recovery successful indication to the upper layer (see **Table 81 (CHANNEL RECOVERY SUCCESSFUL INDICATION (MASTER OR SLAVE))**). Additionally initialize the block cipher. See **Fig. 45 (Open - block cipher initialization)** for a secure/unsecure session initialization.

[Cancel the SCR timer; inform the Upper Layer that Channel Recovery is successful; initialize various parameters as done when Open service is processed prior to transitioning to the Comm State.]

**TABLE 81: CHANNEL RECOVERY SUCCESSFUL INDICATION (MASTER OR SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0xA7 = Master Channel recovery indication 0x27 = Slave Channel recovery indication

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**TABLE 81: CHANNEL RECOVERY SUCCESSFUL INDICATION (MASTER OR SLAVE)**

Sub-type	N/A	1	The indication sub-type	0x01 = same 0x02 = unspecified
Size	N/A	2	The size of the info field	1
Info	Channel recovery indication status	1	status of the indication	0x01 = successful
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

If the SCR timer expires and a valid slave Open response is not received, then start Unspecified Channel Recovery. An Unspecified Channel Recovery (UCR) timer is used for reestablishing communication on a channel selected by the Channel Mapping internal service.

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## TLMC\_M\_124 - CH RECOVERY - SAME CHANNEL RECOVERY UNSUCCESSFUL

If a valid slave Open response is NOT received within the same channel recovery time then:

1. Start a UCR timer.
2. Select a unspecified channel via Channel Mapping internal service.
3. Start the Listen Before Talk timer.
4. Transmit wakeup packet(s) per requirement **TLMM\_M\_359 - CH RECOVERY - WAKEUP TRANSMISSION**.
5. Transmit Open request (on the left antenna)
6. Send an unspecified channel recovery started indication to the Upper Layer. See **Table 82 (UNSPECIFIED CHANNEL RECOVERY STARTED INDICATION (MASTER OR SLAVE))**.

**TABLE 82: UNSPECIFIED CHANNEL RECOVERY STARTED INDICATION (MASTER OR SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0xA7 = Master Channel recovery indication 0x27 = Slave Channel recovery indication
Sub-type	N/A	1	The indication sub-type	0x02 = unspecified
Size	N/A	2	The size of the info field	1
Info	Channel recovery indication status	1	status of the indication	0x04=started
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

Open (unsecure) packets are transmitted if the original open service was open unsecure; otherwise open secure packets are transmitted. Note that if open secure packets are transmitted, a new random number ( $R_m$ ) must be generated (see **Fig. 40 (Open Secure/Unsecure Request Packet)**). The same random number ( $R_m$ ) can be used for the duration of unspecified channel recovery. The algorithm for generating a random number is described in the appendix (see section **7.3 Pseudo Random Number Generation**).

[Note that the same channel duration cannot be greater than 5 seconds, otherwise the Channel Mapping algorithm will have to be initiated to reselect a channel (per the FCC).]

[Note, it is not required to have a new random number generated when entering the Unspecified Channel Recovery during an unsecured session. However, for implementation simplicity, it is acceptable if a new random number is generated as well when the Unspecified Channel Recovery starts during an unsecured session.]

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**TLMM\_M\_359 - CH RECOVERY - WAKEUP TRANSMISSION**

The master will send wakeup packets as follows:

1. Transmit no wakeup packets in the polling (scanning on) case if the slave is still polling:  
( $time_{now} < time_{last\ native\ packet\ from\ slave} + slave\ recovery\ duration + remaining\ polling\ duration$ )
2. Transmit two wakeup packets in the polling (scanning off) case and the slave is still polling:  
( $time_{now} < time_{last\ native\ packet\ from\ slave} + slave\ recovery\ duration + remaining\ polling\ duration$ )
3. Transmit N wakeup packets otherwise; where N is chosen to be slightly longer than the slave's wakeup period. "N" is the parameter transmit wakeup burst length async.

[transmit wakeup burst length async is received from master parameters from host - see **Table 123 (Master parameters from host)**. Note that the antenna is toggled before the start of each wakeup burst.

Also note that the master will perform clear channel assessment before and after transmitting wakeup (if the wakeup transmission is not suppressed and the slave scans during polling). The master will restart the Listen Before Talk (LBT) timer after the second clear channel assessment. This minimizes the interaction between the time it takes the slave to scan all channels and the time before the master starts transmitting wakeup again.]

While the UCR timer is active the master restarts the sync mode, transmits an Open request packet, and waits for an open response. If no response is received, then this cycle is repeated until the UCR timer expires.



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## TLMC\_M\_261 - CH RECOVERY - TOO MANY SAME CHANNEL RECOVERIES

If too many same channel recoveries are initiated in too short of a time, then unspecified channel recovery will be initiated. More specifically, if N same channel recoveries are initiated within T seconds then:

1. Start a UCR timer.
2. Disable the security hardware.
3. Select an unspecified channel via Channel Mapping internal service.
4. Start the listen before talk timer.
5. Transmit wakeup packet(s) per requirement **TLMM\_M\_359 - CH RECOVERY - WAKEUP TRANSMISSION**
6. Transmit open request (on the left antenna).
7. Send an unspecified channel recovery started indication to the Upper Layer. See **Table 82 (UNSPECIFIED CHANNEL RECOVERY STARTED INDICATION (MASTER OR SLAVE))**.

Open (unsecure) packets are transmitted if the original open service was open unsecure; otherwise open secure packets are transmitted. Note that if open secure packets are transmitted, a new random number ( $R_m$ ) must be generated (see **Fig. 40 (Open Secure/Unsecure Request Packet)**). The same random number ( $R_m$ ) can be used for the duration of unspecified channel recovery. The algorithm for generating a random number is described in the appendix (see section **7.3 Pseudo Random Number Generation**).

[The values of “N” and of “T” (above) come from **Table 129 (PARAMETERS FROM EEPROM)**. They are called “too many recoveries threshold” and “too many recoveries duration” respectively.]

[Note, it is not required to have a new random number generated when entering the Unspecified Channel Recovery during an unsecured session. However, for implementation simplicity, it is acceptable if a new random number is generated as well when the Unspecified Channel Recovery starts during an unsecured session.]

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### **TLMC\_M\_125 - CH RECOVERY - START UNSPECIFIED CHANNEL RECOVERY**

While the UCR timer is active, then:

1. Transmit an Open request packet, starting on one of the two antennas, and alternating the antenna on each retry.
2. Wait for a valid Open response packet.

Open (unsecure) packets are transmitted if the original open service was open unsecure; otherwise open secure packets are transmitted. Note that if open secure packets are transmitted, a new random number ( $R_m$ ) must be generated (see **Fig. 40 (Open Secure/Unsecure Request Packet)**). The same random number ( $R_m$ ) can be used for the duration of unspecified channel recovery. The algorithm for generating a random number is described in the appendix (see section **7.3 Pseudo Random Number Generation**).

[Before Wait..., restart the sync mode.]

If there is no Open response, transmit Open on the other antenna. Continue until success, Listen Before Talk timeout, or UCR timeout.

[Note: Open service is invoked locally. The actions performed for this Open service are the same as those described in **5.2 External Services**. There are two exceptions. The first exception is that the upper layer is not notified of an Open request packet and the Open response packet. The second exception is that a “slave polling” timer is started (to interleave wakeup bursts with native mode open packets if the timer expires).]

[Note, it is not required to have a new random number generated when entering the Unspecified Channel Recovery during an unsecured session. However, for implementation simplicity, it is acceptable if a new random number is generated as well when the Unspecified Channel Recovery starts during an unsecured session.]

### **TLMC\_M\_126 - REMAP CHANNEL - UNSPECIFIED CHANNEL RECOVERY TIMER EXPIRATION**

If no Open response at expiration of Listen Before Talk timeout:

1. Reselect best channel.
2. Restart Listen Before Talk timeout.
3. Transmit wakeup packet(s) per requirement **TLMM\_M\_359 - CH RECOVERY - WAKEUP TRANSMISSION**
4. Transmit an open request packet.
5. Wait for a valid Open response packet.

Open (unsecure) packets are transmitted if the original open service was open unsecure; otherwise open secure packets are transmitted.

Synchronous communication is reestablished on a different channel if an Open session response is received from a slave prior to the expiration of the UCR timer. The UCR timer is canceled and synchronous communication is resumed by transition to the Comm State.

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### TLMC\_M\_127 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY SUCCESSFUL

If a valid Open response packet is received while the UCR timer is active then transition to Comm State and send a channel recovery successful indication to the upper layer (see **Table 81 (CHANNEL RECOVERY SUCCESSFUL INDICATION (MASTER OR SLAVE))**). See **Fig. 45 (Open - block cipher initialization)** for a secure/unsecure session initialization.

[Cancel the UCR timer; inform the Upper Layer that Channel Recovery is successful; initialize various parameters as when Open service is processed prior to transitioning to the Comm State. Note: Open service is invoked locally. The actions performed for this Open service are the same as described in **5.2 External Services**. The only exception is that the upper layer is not notified of an Open request packet and the Open response packet.]

If an Open response packet is not received prior to the expiration of the UCR timer, then pass an unsuccessful Channel Recovery indication to the upper layer, and transition to the Standby State.

### TLMM\_M\_360 - CH RECOVERY - NATIVE TIMEOUT

The master will continue to send open packets for the native mode timeout duration see **Table 129 (PARAMETERS FROM EEPROM)**. If this timer expires it will send wakeup packets per requirement **TLMM\_M\_359 - CH RECOVERY - WAKEUP TRANSMISSION**.

[Note that the native mode timer is not used if the slave scans during polling. In this case a transition back to wakeup occurs upon an LBT timeout.]

### TLMC\_M\_128 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY UNSUCCESSFUL

A channel recovery failure indication will be sent to the upper layer if:

- a. No open response packet is received prior to the expiration of the UCR timer, or
- b. An open response packet with a status of “no BAN key” is received.

See **Table 83 (CHANNEL RECOVERY FAILED INDICATION (MASTER))**

[Transition to Inactive State, inform the Upper Layer of Channel Recovery failure, Note: Transition to Inactive State means that physical layer will be transferred to an idle state.]

**TABLE 83: CHANNEL RECOVERY FAILED INDICATION (MASTER)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0xA7 - Master Channel recovery indication
Sub-type	N/A	1	The indication sub-type	0x02 - unspecified
Size	N/A	2	The size of the info field	1
Info	Channel recovery indication status	1	status of the indication	0x03 - timeout 0x09 - no BAN key

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**TABLE 83: CHANNEL RECOVERY FAILED INDICATION (MASTER)**

CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.
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**TABLE 84: CHANNEL RECOVERY FAILED INDICATION (SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0x27 - Slave Channel recovery indication
Sub-type	N/A	1	The indication sub-type	0x02 - unspecified
Size	N/A	2	The size of the info field	2
Info	Channel recovery indication status	2	status of the indication	1st byte: 0x03 - timeout 2nd byte: 0x01 - without poll, or 2nd byte: 0x02 - with poll
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

### 5.3.3.3 SLAVE

The slave triggers its Channel Recovery algorithm if no valid preamble and master packets are received from the master for at least two frames. When Channel Recovery is triggered, the slave shall terminate any External Service in progress; switch the data transfer mode to a nominal mode; change the telemetry state to Channel Recovery State; start same channel recovery (SCR) timer; and inform the upper layer that Channel Recovery is triggered.

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## **TLMC\_S\_129 - CH RECOVERY - TRIGGER CHANNEL RECOVERY**

The Channel Recovery algorithm is triggered when

1. No valid master packet is received for N consecutive frames, where N is determined using the parameter “number of consecutive frames without a valid receive packet threshold 1, 2 or 3” and the power inhibit mode. See **Table 123 (Master parameters from host)** and **Table 71 (POWER INHIBIT MODES)** respectively.

[The following bit in **Table 108 (Channel Recovery Reason)** will be set:

0x0F0A : Bit3 - Received Master Packet Error Exceeded.]

2. The master ID in the master data transaction, master ARQ packet, or master Diagnostic packet does not match the master ID in the last received Open request packet; or

[The following bit in **Table 108 (Channel Recovery Reason)** will be set:

0x0F0A : Bit4 - Received Master Type is ARQ and Master ID Mismatched,

0x0F0A: Bit5 - Received Master Type is Diagnostic and Master ID Mismatched, or

0x0F0A: Bit6 - Received Master Type is Memory Data and Master ID Mismatched.

Also Note that the master ID appears in data transaction’s first fragment.]

3. No valid packet is received from the master after a secured open.

[The following bit in **Table 108 (Channel Recovery Reason)** will be set:

0x0F0A : Bit0 - First Received packet is Invalid Secured packet after open session, or

0x0F0B: Bit0 - No packet is received after open session.]

4. The master/slave bit is set to “0” it means “this” slave has just received a native mode packet from another slave. “This” slave was expecting a packet from a master.

[The following bit in **Table 108 (Channel Recovery Reason)** will be set:

0x0F0B : Bit5 - Received Slave Packet while in Communication State.]

5. Power inhibit is asserted and the power inhibit mode is idle immediate. Note that for this case the slave will not begin listening in native mode until power inhibit is deasserted.

[The following bit in **Table 108 (Channel Recovery Reason)** will be set:

0x0F0A : Bit7 -Power Inhibit triggered channel recovery.]

Once Channel recovery is triggered, the security hardware will be disabled.

The model ID and serial number information of the instrument with which the communication was successfully opened will be maintained until a different channel recovery fails.

## **TLMC\_S\_130 - CH RECOVERY - START SAME CHANNEL RECOVERY**

When the Channel Recovery algorithm is triggered, transition to Channel Recovery State, start the SCR timer and send a channel recovery started indication to the upper layer. (see **Table 80 (SAME CHANNEL RECOVERY STARTED INDICATION (MASTER OR SLAVE))**).

Note that the channel recovery started indication will be sent to the upper layer only if bit “Send channel recovery indication to host” is set to “1”. (See **Table 124 (SLAVE PARAMETERS FROM HOST)** for bit “Send channel recovery indication to host” )

[Terminate the processing of any external service in progress, stop slave transmission, and restart sync mode; change to nominal data transfer mode; inform the upper layer that Channel Recovery is started.]

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Session will be reestablished with the master with which the session was opened. An SCR timer is used while reestablishing communication on the same channel. While the SCR timer is active, the slave listens for an Open request packet during the first cycle of the sync mode. If an Open request is not received then this cycle is repeated until the SCR timer expires.

**TLMC\_S\_131 - CH RECOVERY - SAME CHANNEL RECOVERY INVOKE SCAN**

While the SCR timer is active listen for a valid Open request packet from the master with which the session was opened.

[If any packet other than Open is received, then restart the sync mode and no slave response is transmitted.]

Synchronous communication is reestablished if an Open request packet is received from a master prior to the expiration of the SCR timer. The slave transmits N open response packets (“N” = open uplink packet count in **Table 129 (PARAMETERS FROM EEPROM)**), cancels the SCR timer, and transitions to the Comm State.

**TLMC\_S\_132 - CH RECOVERY - SAME CHANNEL RECOVERY SUCCESSFUL**

While in Channel Recovery State, if the SCR timer is active and a valid Open request packet is received, then:

Transmit N open response packets (“N” = open uplink packet count in **Table 129 (PARAMETERS FROM EEPROM)**). Note that a new random number ( $R_s$ ) for the open response packet (see **Fig. 42 (Open Secure/Unsecure Response Packet)**) is generated when entering the same channel recovery and will be used for the entire (same and unspecified) channel recovery process. This is allowed because this random number ( $R_s$ ) will not be used in transmitting valid information during channel recovery. The algorithm for generating a random number is described in the appendix (see section **7.3 Pseudo Random Number Generation**).

1. Initialize the block cipher. See **Fig. 45 (Open - block cipher initialization)** for a secure/unsecure session initialization.
2. Transition to the Comm State.
3. Send a channel recovery successful indication to the upper layer. See **Table 81 (CHANNEL RECOVERY SUCCESSFUL INDICATION (MASTER OR SLAVE))**). Note that the channel recovery successful indication will be sent to the upper layer only if bit “Send channel recovery indication to host” is set to “1”. (See **Table 124 (SLAVE PARAMETERS FROM HOST)** for bit “Send channel recovery indication to host” )

[When a valid open request packet is received followed by a diagnostic or data packet, cancel the SCR timer; inform the upper layer of successful Channel Recovery status; initialize various parameters as done when Open service is processed.]

[Note, it is not required to have a new random number generated when entering the Channel Recovery during an unsecured session. However, for implementation simplicity, it is acceptable if a new random number is generated as well when the Channel Recovery starts during an unsecured session.]

If the same channel recovery timer expires and an Open request is not received, then start the Channel Recovery on a unspecified channel. A UCR timer is started, the sync mode is restarted, and the slave begins scanning.

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**TLMC\_S\_133 - CH RECOVERY - SAME CHANNEL RECOVERY UNSUCCESSFUL**

While in Channel Recovery State, if the SCR timer expires and a valid Open request packet is NOT received, then start UCR timer and send an unspecified channel recovery started indication to the upper layer (see **Table 82 (UNSPECIFIED CHANNEL RECOVERY STARTED INDICATION (MASTER OR SLAVE))**)).

Note that the unspecified channel recovery started indication will be sent to the upper layer only if bit “Send channel recovery indication to host” is set to “1”. (See **Table 124 (SLAVE PARAMETERS FROM HOST)** for bit “Send channel recovery indication to host” )

[Restart sync mode; report the Channel Recovery status to the application layer.]

When Open request packet is not received initiate asynchronous receptor wakeup.

**TLMC\_S\_134 - CH RECOVERY - START UNSPECIFIED CHANNEL RECOVERY**

While performing channel recovery, if the SCR timer expires and a valid open request packet is not received start the UCR timer. Additionally the slave will do the following:

1. Scanning off case
  - a. Phase 1: listen for wakeup. The slave will continuously restart asynchronous receptor wakeup if it receives no valid wakeup
  - b. Phase 2: listen for native mode open. The slave will listen for a native mode open packet if a valid wakeup is heard (and start a native mode timer). It will listen for an open packet until a valid open is received or a native mode timeout occurs (~200 msec). If a native mode timeout occurs, the slave will transition to phase 1.
2. Scanning on case
  - a. Phase 1 - random channel listening - the slave will randomly select a channel and will restart the channel listening time and listen for a valid packet from the master. If no valid open packet has been received and the service duration timer is still active, the slave will switch to the phase 2 approach.
  - b. Phase 2 - sequential channel listening - the slave will sequentially select the next channel and will restart the channel listening time and listen for a valid packet from the master. When every channel has been selected once the slave will switch to the Phase 1 approach.

During Channel Recovery operations, while scanning, the slave will not respond to any master packet other than an Open request packet from the master with which it was in communication.

**TLMC\_S\_135 - CH RECOVERY - UCR TIMER ACTIVE NON OPEN MASTER PACKET**

While UCR timer is active, if a master packet other than Open is received, the slave will not transmit a slave response.

Synchronous communication is reestablished if an Open session request is received from a master prior to the expiration of the UCR timer. The slave transmits N open response packets (“N” = open uplink packet count in **Table 129 (PARAMETERS FROM EEPROM)**), cancels the UCR timer, and transitions to the Comm State.

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## **TLMC\_S\_136 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY SUCCESSFUL**

While the UCR timer is active and a valid Open request packet from the same master is received, then:

Transmit N open response packets (“N” = open uplink packet count in **Table 129 (PARAMETERS FROM EEPROM)**). Note that the random number ( $R_s$ ) used in the open response packet (see **Fig. 43 (Open status byte (Response))**) was generated when entering the (same) channel recovery. This is allowed because this random number ( $R_s$ ) has not been used in transmitting valid information.

1. Initialize various parameters as when an Open service is processed.
2. Initialize the block cipher. See **Fig. 45 (Open - block cipher initialization)** for a secure/unsecure session initialization.
3. Transition to the Comm State.
4. Send a channel recovery successful indication to the upper layer (see **Table 81 (CHANNEL RECOVERY SUCCESSFUL INDICATION (MASTER OR SLAVE))**). Note that the channel recovery successful indication will be sent to the upper layer only if bit “Send channel recovery indication to host” is set to “1”. (See **Table 124 (SLAVE PARAMETERS FROM HOST)** for bit “Send channel recovery indication to host” )

[When a valid open request packet is received followed by a diagnostic or data master packet, cancel the UCR timers; inform the upper layer of successful Channel Recovery status; various parameters like seq number are initialized prior to transitioning to the communication state.]

[Note, it is not required to have a new random number generated when entering the Channel Recovery during an unsecured session. However, for implementation simplicity, it is acceptable if a new random number is generated as well when the Channel Recovery starts during an unsecured session.]

If an Open response is not received prior to the expiration of the unspecified Channel Recovery timer then transition to the Standby State.

## **TLMM\_S\_361 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY UNSUCCESSFUL**

While in Channel Recovery State if the UCR timer expires then transition to the Standby State and send a channel recovery failed indication to the upper layer. See **Table 84 (CHANNEL RECOVERY FAILED INDICATION (SLAVE))**.

Note that the channel recovery failed indication will be sent to the upper layer whether the bit “Send channel recovery indication to host” is set to “1” or not. (See **Table 124 (SLAVE PARAMETERS FROM HOST)** for bit “Send channel recovery indication to host” )

[Cancel the Scan listen timer; report the unsuccessful Channel Recovery status to the upper layer.]

[The indication to the Upper Layer will consist of Polling ON or Polling OFF based on the value of the Total Polling Duration Time in the open request packet (i.e., Zero meaning Polling OFF, otherwise Polling ON.)]



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### 5.3.4 DATA TRANSFER MODES

The purpose of the data transfer mode algorithm is to:

- Maximize the slave Memory Data throughput when higher Memory Data throughput is required, e.g., during interrogation
- Reduce the slave’s battery consumption when Memory Data packets are not required.

The data transfer mode algorithm negotiates and allocates master and slave packet counts between the master and the slave. The use of this algorithm provides different master and slave data throughputs.

The transfer mode change request is initiated by the master only, in the Comm State. In order to change to a new transfer mode, the master puts the new transfer mode in the master packet. The slave compares the transfer mode in the master packet with its current transfer mode and if it is different then the slave changes to the new transfer mode and transmits the transfer mode information as part of its response packets.

The Data Link Layer provides three transfer modes:

- Nominal data transfer mode.
- Maximum slave throughput data transfer mode.
- Low Energy data transfer mode.

For definition of the three transfer mode, see **Table 85 (Data Transfer Mode)** .

**TABLE 85: DATA TRANSFER MODE**

TRANSFER MODE	VALUES
Low Energy	0
Nominal	1
Maximum Slave Throughput	2

**Nominal data transfer mode:** is used when the master packet type is not ARQ. During this mode, the master packet count is set to one, and the slave packet count is set to “N1” see parameter ‘packet count for nominal mode’ in **Table 123 (Master parameters from host)**, so each master frame contains one packet and every slave frame contains “N1” see parameter ‘packet count for nominal mode’ in **Table 123 (Master parameters from host)** packets.

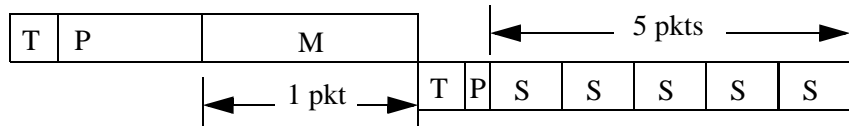
**Maximum slave throughput data transfer mode:** is used when the master packet type is ARQ (the slave is transmitting Memory Data). During this mode, the master packet count is set to one, and the slave packet count is set to “N2” see parameter ‘packet count for max throughput mode’ in **Table 123 (Master parameters from host)**, so each master frame contains one packet and every slave frame contains “N2” see parameter ‘packet count for max throughput mode’ in **Table 123 (Master parameters from host)** packets.

**Low Energy data transfer mode:** is used only when the master packet type is filler. In this mode, the slave transmits only unrequested (waveform and/or unrequested) data packets. This mode is designed to save the slave’s energy by limiting the transmitter and receiver’s “ON” time. While in this mode the master uses positive/negative preamble correlation methods to manage the slave receiver ON times to conserve slave’s battery energy, as shown in **Fig. 104 (Data Transfer Mode Examples)**.

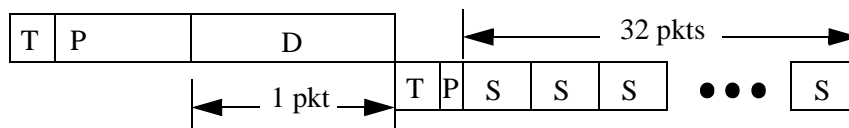
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Refer to **7.0 Appendices** for the data throughput information in each of these modes.

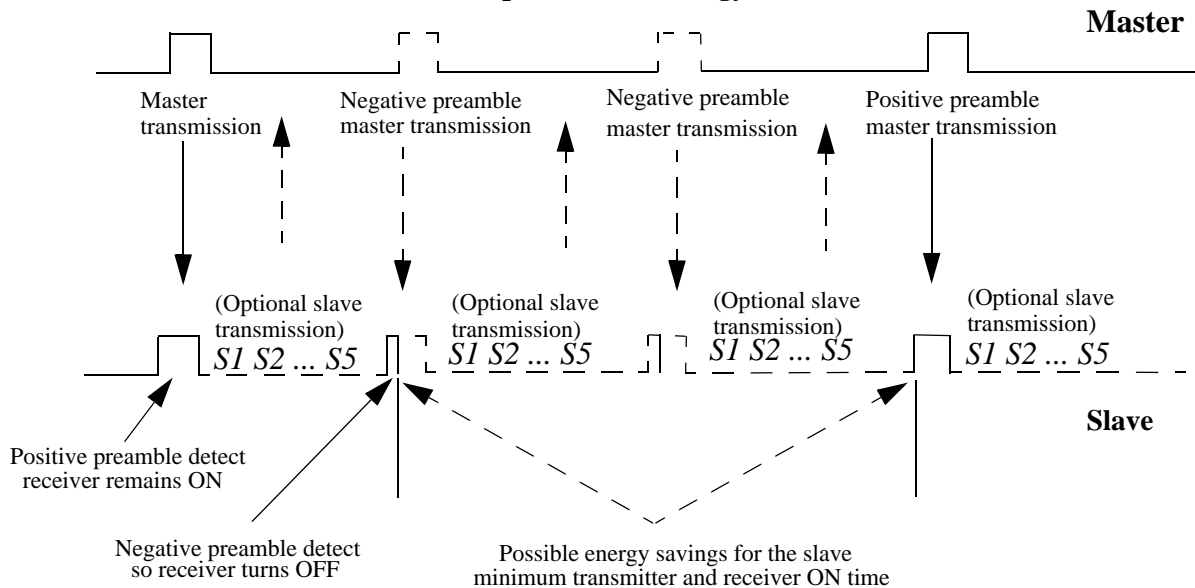
**Example #1: Nominal Data Transfer Mode**



**Example #2: Maximum Slave Throughput Data Transfer Mode**



**Example #3: Low Energy Data Transfer Mode**



Key: T = Turnaround  
 P = Preamble  
 S = Slave Packet  
 M = Master Packet

**Figure 104: Data Transfer Mode Examples**

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### 5.3.4.1 REQUIREMENTS

A transition between data transfer modes is always initiated by the master. The change to the desired data transfer mode is transmitted by the master as part of the master packet.

### 5.3.4.2 MASTER

The change to the desired transfer mode is transmitted to the slave in the master packet.

#### **TLMC\_M\_139 - DATA TRANSFER MODE - MODE TRANSITIONS**

The data transfer mode will be selected according to **Table 86 (DATA TRANSFER MODE TRANSITIONS)**.

**TABLE 86: DATA TRANSFER MODE TRANSITIONS**

MASTER PACKET	CONDITION	DATA TRANSFER MODE
Diagnostic (filler)	N or more consecutive filler packets and reply timer inactive <sup>(1)</sup>	Low Energy
Diagnostic (filler)	N-1 or fewer consecutive filler packets or reply timer active	Nominal
Diagnostic (request)	—	Nominal
Data	Single-fragment master data transaction. (See footnote 1 below)	Max slave <sup>(2)</sup> throughput
Data	Multi-fragment master data transaction (not last fragment)	Nominal
Data	Multi-fragment master data transaction (last fragment) (See footnote 1 below)	Max slave throughput
ARQ	First fragment of final slave transaction not received yet (See footnote 1 below)	Max slave throughput
ARQ	First fragment of final slave transaction has been received	Nominal
Other (not listed above)	—	Nominal

1. Delay the entry into low energy mode if the reply timer is active, otherwise the slave data link layer will ignore a data service request from the slave host and memory read and write will fail.
2. Note: The data transfer mode is nominal if the max data throughput mode is not enabled (see figure 53 master ULH byte)

[The value of “N” above comes from **Table 129 (PARAMETERS FROM EEPROM)**. It is called “low energy threshold (consecutive filler master packets)”.]

#### **TLMC\_M\_140 - DATA TRANSFER MODE - NOMINAL TO LOW ENERGY MODE TRANSITIONS.**

When low energy mode is enabled and if the consecutive filler packet count is greater than or equal to the low energy threshold value, then data transfer mode transition is made from nominal to low energy.

[See **Table 129 (PARAMETERS FROM EEPROM)**.]

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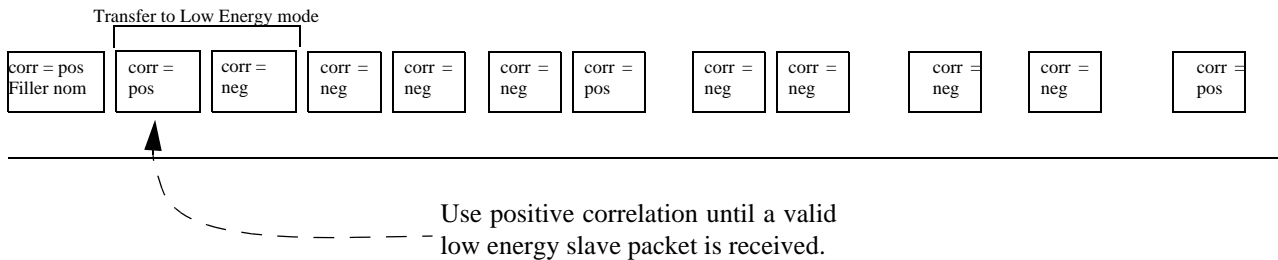
## TLMC\_M\_141 - DATA TRANSFER MODE - NEGATIVE PREAMBLE RATIO IN LOW ENERGY MODE

The master will use a negative correlation preamble on N - 1 of N packets when the master and the slave are both in the low energy mode unless noted below. The Nth master packet will use a positive correlation .

Exception to the N-1 of N downlinks include the following:

- The parameter "frequent waveform expected" is true, or
- There is a new downlink sequence number for the go back N waveform acknowledgement and the parameter "frequent waveform expected" is false, or
- The ack bit is set to false in any uplink packet received with a good MAC and the parameter "frequent waveform expected" is false, or
- The uplink frame contains no packets with good MAC and the parameter "frequent waveform expected" is false

[Note: The "N" Correlate Negative Ratio value is defined in Table 129 (PARAMETERS FROM EEPROM).]



**Figure 105: Example (N = Correlate\_Negative\_Ratio = 5)**

## TLMC\_M\_142 - DATA TRANSFER MODE - LOW ENERGY TO NOMINAL TRANSITION

A transition from low energy to nominal mode will be made if the present master packet is a non-filler packet and the previous master packet was a filler packet in a low energy mode.

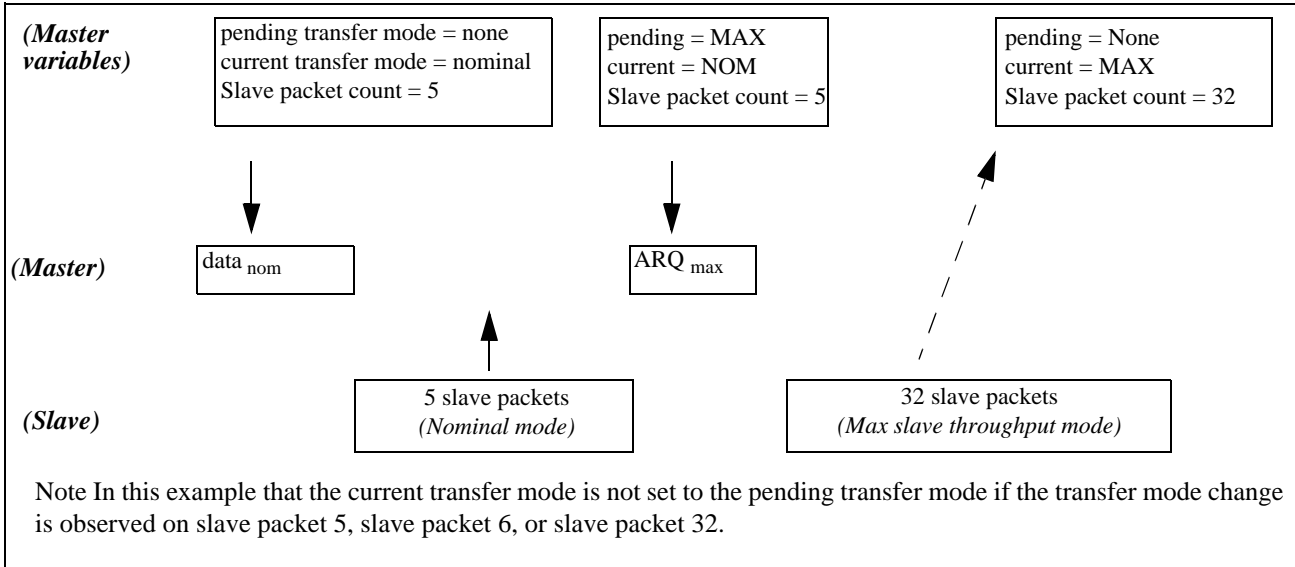
## TLMC\_M\_143 - DATA TRANSFER MODE - TRANSITION TO NEW MODE ON MASTER PACKET

If the new data transfer mode packet is successfully received by the slave, then the master transitions to the new data transfer mode. Note the master will transition immediately when the nominal packet count is one packet.

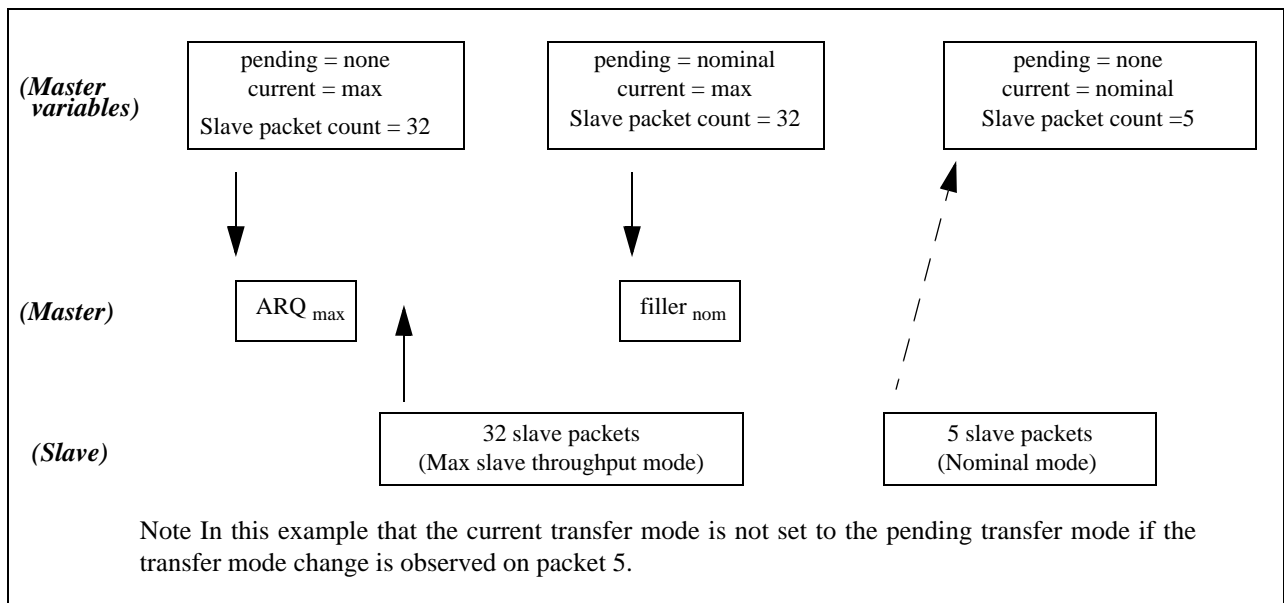
[Note that channel recovery will be triggered if the first N1-1 slave packets are corrupted upon nominal to max slave throughput or max slave throughput to nominal transitions. This occurs since one station has its slave packet count set to N1 (see parameter 'packet count for nominal mode' in Table 123 (Master parameters from host)) and the other has its packet count set to N2 (see parameter 'packet count for max throughput mode' in Table 123 (Master parameters from host)). Physical layer timing cannot be maintained in this scenario.]

[The current transfer mode is set to the pending transfer mode when the slave packet indicates the slave has changed.]

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**Figure 106: Nominal to Max Slave Throughput Mode Transition**



**Figure 107: Max Slave Throughput to Nominal Mode Transition**

### 5.3.4.3 SLAVE

The slave compares the transfer mode in the master packet with its current data transfer mode. If the current data transfer mode does not match the data transfer mode in the master packet then the slave will transition to the data transfer mode specified in the master packet. The slave's data transfer mode is transmitted as part of the slave packets.

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**TLMC\_S\_144 - DATA TRANSFER MODE - VALIDATE TRANSFER MODE AND RESPONSE**

Upon receipt of a valid master packet, the slave will check the telemetry data transfer mode, and will perform as follows:

1. If the current data transfer mode matches the transfer mode in the master packet then the slave data transfer mode will not change.
2. If the current data transfer mode does not match the transfer mode of the master packet then the slave will transition to the data transfer mode as specified in the master packet.
3. The slave packet will contain the slave's data transfer mode indication.
4. When in low energy mode slave will always uplink a filler packet when there is no data to be transmitted.

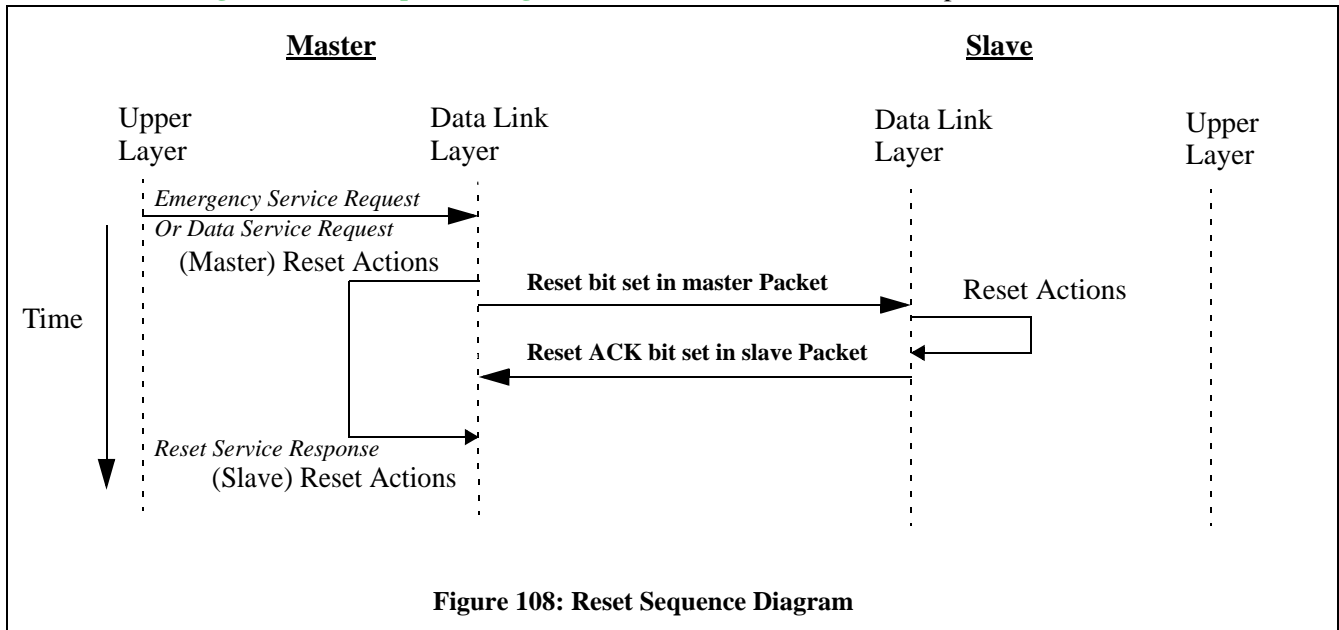
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### 5.3.5 RESET

A master uses this service to reset Telemetry M communications to a known state. The following bullets briefly summarize this service:

- On the master side, the data link layer initiates the setting.
  - Data service - set if previous data service failed; false otherwise
  - Emergency service - unconditionally reset
- On the master, the Data Link Layer sets the Reset bit in the next master packet to the slave.
- On the slave, the Data Link Layer discards unacknowledged data packets and resets the Data Link Layer status counters and timers.
- On the slave, the Data Link Layer sets the Reset ACK bit in the next slave packet to the master.
- On the master, the Data Link Layer detects the Reset ACK in the slave packet, discards any unacknowledged data packets, and resets the Data Link Layer status counters and timers.

**Fig. 108 (Reset Sequence Diagram)** illustrates the Reset Service operations.



#### 5.3.5.1 REQUIREMENTS

The following actions are performed for the Reset internal service:

- Reset local station parameters
- Reset applicable communication parameters.

#### **TLMM\_M\_362 - RESET SERVICE - INVOKE SERVICE 1**

The master will invoke the reset internal service upon receipt of an emergency service request.

#### **TLMM\_M\_363 - RESET SERVICE - INVOKE SERVICE 2**

The master will invoke the reset internal service upon receipt of a data service request when the most recent data or emergency service request failed.

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### **TLMC\_M\_145 - RESET SERVICE - MASTER PACKET WITH RESET BIT**

The master will do the following when the reset internal service is invoked:

1. Discard pending master data packet
2. Reset the master data packet sequence number
3. Set the reset bit to 1 in the master upper layer header byte. See **5.2.11.2**.
4. Set the Reset bit to 1 in the control byte of the next master packet.

The master then will wait for an slave packet with Reset ACK bit set in the Control Byte.

[An emergency service may result in discarded data packets. (Emergency interrupts a data service in progress. A data service will not result in discarded data packets since a data service cannot interrupt an “in-progress” service.)]

### **TLMC\_M\_146 - RESET SERVICE - MASTER RESET REQUEST RETRANSMISSION**

If no valid slave packet with Reset ACK bit set is received from the remote station in the next slave frame, the Data Link Layer shall continue to retransmit the packet with the Reset bit set. The master shall continue this until a valid slave packet with Reset ACK bit set is received or the reply duration timeout occurs.

### **TLMC\_S\_147 - RESET SERVICE - RESET REQUEST VALIDATION**

Upon receiving a valid master packet with the Reset bit set, the slave shall do the following:

1. Discard pending slave data packets.
2. Reset parameters for the ARQ algorithm, including the master data packet sequence number, the slave Memory Data sequence number, transaction number, fragment number; and the ARQ sliding window.
3. Set the Reset ACK bit in the slave packets.

Any data packets pending transmission or retransmission shall be discarded.

### **TLMC\_M\_148 - RESET SERVICE - OPERATION SUCCESSFUL**

Upon receiving a valid slave packet with the Reset ACK bit set, the master shall do the following:

1. Discard pending data slave packets.
2. Reset parameters for the ARQ algorithm, including the slave Memory Data sequence number, transaction number, fragment number, and the ARQ sliding window.

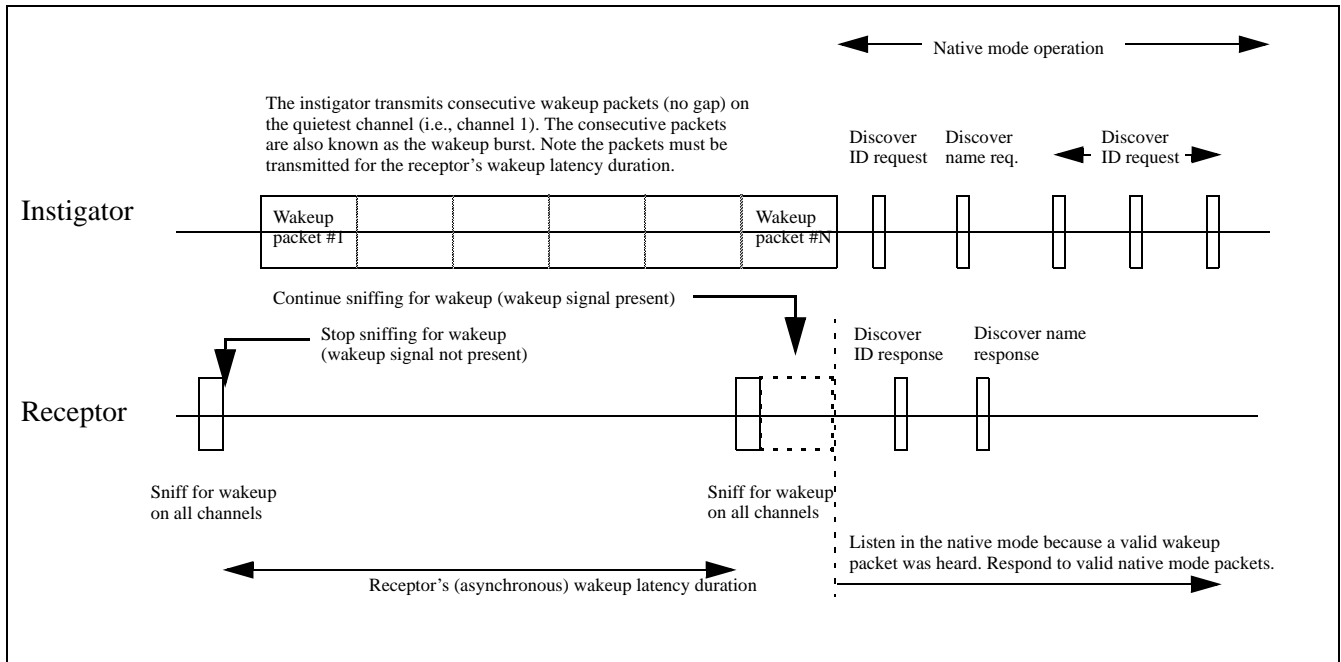
Any data packets pending transmission or retransmission shall be discarded.



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### 5.3.6 WIRELESS WAKEUP

Any node should be able to wake up any other node in the system. To achieve this, all nodes listen periodically for a wakeup transmission. The listening nodes are called receptors. A node wishing to communicate is called an instigator. The instigator is usually the master, but could be the slave. Once the instigator's wakeup burst is complete, the instigator begins transmitting native mode packets (e.g., discover, open, etc.). Once the receptor hears a valid wakeup, it begins listening and replies in native mode. See **Fig. 109 (Example of asynchronous wakeup (followed by native mode discover))**.



**Figure 109: Example of asynchronous wakeup (followed by native mode discover)**

It is desirable to have two types of wakeup mechanisms: synchronous and asynchronous.

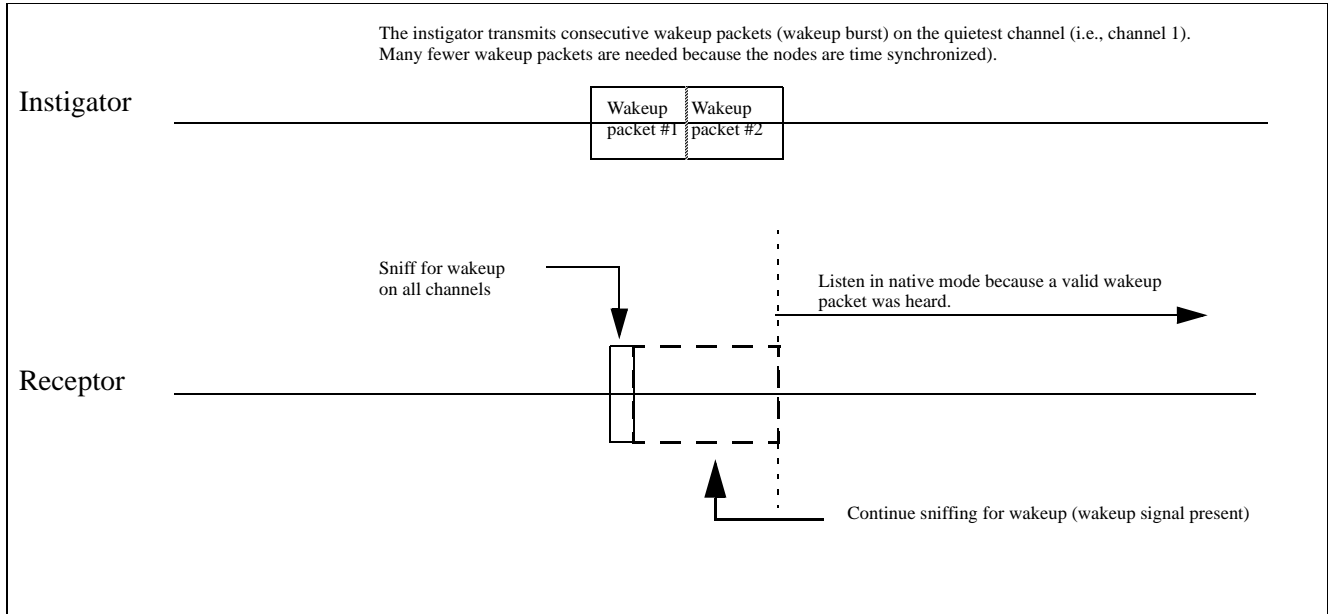
- Asynchronous wakeup - used when an instigator node wants to wakeup one or more receptors. The instigator assumes he has no knowledge of the receptor's wakeup timing. The instigator's wakeup burst must be greater than the receptor's wakeup latency.
- Synchronous wakeup - used when an instigator node wants to wakeup a specific receptor(s). The instigator assumes he has knowledge of the receptor's timing. This allows the instigator to use a shorter wakeup burst.

Synchronous wakeup can save energy by utilizing a shorter wakeup burst<sup>(2)</sup>. Synchronous wakeup should only be used when nodes stay in continuous close proximity and they exchange data frequently. Asynchronous wakeup should be used otherwise.

The instigator's asynchronous wakeup burst must be greater than or equal to the receptor's wakeup latency duration. This guarantees that the instigator can wake up the receptor (provided the instigator and receptor are within range of one another). The receptor's (asynchronous) wakeup latency duration is optimized to reduce the receptor's current drain, yet provide acceptable user responsiveness (see **Figure 109**).

2. Wakeup burst is defined as N consecutive wakeup packets.

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**Figure 110: Synchronous wireless wakeup**

In the synchronous wakeup mode, the instigator and receptor are synchronized. They each wake up at the same time. The wakeup packet tells the receptor which channel to use for native mode. This method saves (instigator) energy since its wakeup burst can be much shorter (see **Fig. 110 (Synchronous wireless wakeup)**).

A node acting as an instigator may wakeup one or more nodes. There are four types of wakeup commands:

- **Global broadcast wakeup** - typically used to wakeup all nodes within range. The instigator sends wakeup packet(s) with the wakeup type (in the header byte) to set to global. Additionally, it sets the station ID to the user supplied receptor ID and its instigator's ID (see **Figure 112**). All nodes of a certain model will wakeup if the user supplied receptor ID is (specified, wild card) for model and sub model respectively. Each receptor that receives a valid wakeup packet will "wakeup" (begin listening in the native mode).
- **Non-local broadcast wakeup** - used to wakeup all nodes not in any network. The instigator sends wakeup packet(s) with the wakeup type (in the header byte) set to non-local broadcast. Additionally, it sets the station ID to its own ID (see **Figure 112**). Each receptor that receives this packet with a good CRC will "wakeup" (begin listening in the native mode) if they are not in any network - it is for future use.
- **Local broadcast wakeup** - used to wakeup all nodes in a local network. The instigator sends the wakeup packet(s) with the wakeup type (in the header byte) set to local broadcast. Additionally, it sets the station ID to the network ID (see **Figure 112**). Each receptor in the network will compare his network table ID to the receptor bitmap. If the corresponding bit is set, the receptor will "wakeup" (begin listening in the native mode).
- **Unicast wakeup** - used to wakeup a specific receptor node. The instigator sends the wakeup packet(s) with the wakeup type (in the header byte) set to unicast. Additionally it sets the station ID to the receptor's ID (see **Figure 112**). Each receptor that receives this packet with a good CRC will compare the wakeup station ID with its own ID. If they match, the receptor will "wakeup" (begin listening in the native mode).

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### 5.3.6.1 MASTER (INSTIGATOR) SERVICE REQUEST

Wireless wakeup is an internal service utilized by the following external services: discover, open, polling, medical event, and network. Wireless wakeup is also utilized by the channel recovery internal service when the master knows the slave is no longer polling. During channel recovery, the master interleaves wireless wakeup with native mode open packets.

**TABLE 87: INSTIGATOR WAKEUP VS. SERVICE**

	GLOBAL	LOCAL	NON-LOCAL	UNICAST
Discover full external service (see <a href="#">5.2.9.2</a> ) <sup>(1)</sup>	X		X <sup>(2)</sup>	
Open external service ( <a href="#">5.2.10</a> ) <sup>(3)</sup>				X
Security external service (see <a href="#">5.2.19.1</a> ) <sup>(4)</sup>				X
Network external service - data (see <a href="#">5.2.18.4</a> ) <sup>(5)</sup>		X		
Channel recovery internal service (see <a href="#">5.3.3</a> ) <sup>(6)</sup>				X

- The discover wakeup packets will be transmitted asynchronously. The number of wakeup packets defined by “Transmit wakeup burst length async” in [Table 123 \(Master parameters from host\)](#) will be transmitted. If “Discover wakeup type” = 0, (see [Table 123 \(Master parameters from host\)](#)), the instigator will transmit Global wakeup packets. If “Discover wakeup type” = 1, The instigator will transmit Non-local wakeup packets. The discover full external service finds all nodes within range (of “this” master). The receptor only wakes up if the model (or model/sub-model) is wildcard OR if these values match its ID.
- Shall be used to find all the nodes that have not been included in a network. For example: to initialize the network (build the network).
- If “wakeup sync type” bit0 - “Open” (see [Table 129 \(PARAMETERS FROM EEPROM\)](#)) is set to “1”, the open wakeup packets will be transmitted synchronously. The number of wakeup packets defined by “txWakeUpBurstNumberSync” (See [A44088, Telemetry M RF Module EEPROM Specification](#)) is used. If “wakeup sync type” bit0 - “Open” is cleared “0”, the open wakeup packets will be transmitted asynchronously. The number of wakeup packets defined by “Transmit wakeup burst length async” in [Table 123 \(Master parameters from host\)](#) will be transmitted.
- The security wakeup packets will be transmitted asynchronously. The number of wakeup packets defined by “Transmit wakeup burst length async” in [Table 123 \(Master parameters from host\)](#) will be transmitted.
- If “wakeup sync type” bit1 - “Network” (see [Table 129 \(PARAMETERS FROM EEPROM\)](#)) is set to “1”, network wakeup packets will be transmitted synchronously. The number of wakeup packets defined by “txWakeUpBurstNumberSync” (See [A44088, Telemetry M RF Module EEPROM Specification](#)) is used. If “wakeup sync type” bit1 - “Network” is cleared “0”, network wakeup packets will be transmitted asynchronously. The number of wakeup packets defined by “Transmit wakeup burst length async” in [Table 123 \(Master parameters from host\)](#) will be transmitted.
- During unspecified channel recovery, only two wakeup packets will be transmitted and will be transmitted asynchronously.

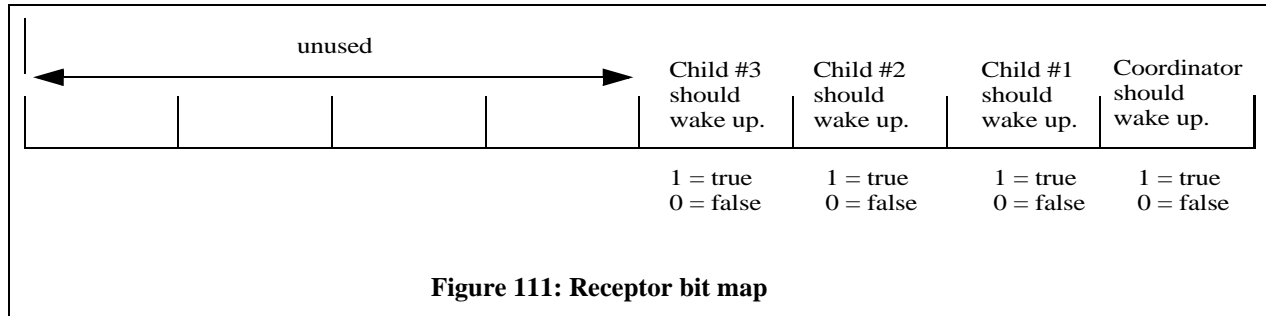
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**TABLE 88: INSTIGATOR WAKEUP INTERNAL SERVICE FIELD SOURCE**

FIELD	SOURCE	SIZE	DESCRIPTION	VALUE
Wakeup type	Service request from host	1 byte	The wakeup type. Used to wakeup a specific receptor node, or a group of receptor nodes.	Global, non-local, local, or unicast.
Receptor ID	Service request from host	6 bytes	The station ID of the receptor node.	This parameter is only pertinent to the unicast wakeup type. It is not pertinent to the following wakeup types: global, non-local, and local.
Receptor bit map	Service request from host	1 byte	A bitmap telling each local node if it should respond.	See <b>Fig. 111 (Receptor bit map)</b> pertinent to local broadcast only
Channel	CCA	1 byte	The channel number within the specific band (for native mode operation).	1-10 MICS 11-30 MEDS
Transmit modulation for native mode	Configuration	1 byte	The modulation type of the native mode transmission.	see <b>Table 92 (TX/RX DEFAULT DATA RATE TABLE)</b>
Receive modulation for native mode	Configuration	1 byte	The modulation of the native mode receive.	see <b>Table 92 (TX/RX DEFAULT DATA RATE TABLE)</b>
Transmit data rate out of session	Configuration (initialization data from host)	1 byte	The default transmit data rate (or bit rate).	see <b>Table 92 (TX/RX DEFAULT DATA RATE TABLE)</b>
Receive data rate out of session	Configuration (initialization data from host)	1 byte	The default receive data rate (or bit rate).	see <b>Table 92 (TX/RX DEFAULT DATA RATE TABLE)</b>
User bytes	Service request from host	10 bytes	The user data bytes. These bytes are used for very small messages requiring minimal latency.	Each byte has the range 0 to 0xff.
Reed Solomon	Configuration	1 byte	Error detection/correction circuitry.	Enabled/disabled
Wakeup security enable	Initialization value from host	1 byte	Privacy, authentication, etc.	Enabled/ disabled  This parameter is only pertinent to the local broadcast wakeup type. <sup>(1)</sup>
Wakeup User Data Present	Service request from host	1 byte	Enabled when user data is exists in the User bytes	Enabled/disabled

1. Local broadcast is the only wakeup type that provides both the receptor and instigator IDs. Both IDs are needed to secure the wakeup user data.

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### 5.3.6.2 REQUIREMENTS

#### TLMM\_M\_364 - WIRELESS WAKEUP - INITIATE INSTIGATOR WAKEUP

A telemetry M instigator node, by initiating a external service: discover, open, security, or network shall invoke the wakeup internal service. Channel recovery shall also invoke the wakeup internal service. See [TLMM\\_M\\_359 - CH RECOVERY - WAKEUP TRANSMISSION](#)

[Information pertaining to wakeup, provided from the external service, will be transferred to the wakeup internal service. See [Table 87 \(INSTIGATOR WAKEUP VS. SERVICE\)](#)]

### 5.3.6.3 WAKEUP PACKETS

A wakeup packet consists of 22 bytes with 3 bytes of baseband hardware generated CRC (cyclic redundancy check) appended to the end.

- **Header Byte** - defines the control of the wakeup packet. The header byte defines items such as wakeup type (Global broadcast wakeup...) and user data security.
- **Sequence Bytes**- the next two bytes, in the wakeup packet, are reserved for the wakeup sequence number. For the instigator, the sequence number tracks how many wakeup packets are left to send. The sequence number bytes are filled in by the baseband hardware. For the receptor, the sequence number bytes are used to determine how many packets are left before the end of the wakeup burst.
- **Station Id and Receptor Bit Map Bytes**- the next 7 bytes are the station id and the receptor bit map. These bytes are used to determine the id of the node who is sending the wakeup packets and the ids of the nodes that should be receiving the wakeup packets The bytes are used differently depending on the type of wakeup packet being sent.
- **Configuration Bytes**- the two configuration bytes, in the wakeup packet, are used to setup the instigator's transmitting hardware and the receptor's receiving hardware to operate in a synchronized manner. Hardware settings such as modulation and data rate are saved in the configuration bytes.
- **User Data Bytes**- the user data bytes can be used to send small amounts of user defined data quickly, by not having to open a native mode session with the receptor. The user data can be sent unsecured or sent secured. Security reduces the number of user data bytes available, to the user, to four.

Many of the fields in the wakeup packet will be filled in by information provided by the instigator's internal wakeup service request.

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### 5.3.6.4 REQUIREMENTS

<b>Header</b> 1 byte	<b>Wakeup seq #</b> 2 bytes	<b>Station ID</b> 6 Bytes	<b>Receptor bit map</b> 1 byte	<b>Configuration</b> 2 bytes	<b>User data</b> 10 bytes	<b>CRC</b> 3 bytes
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**Figure 112: Wakeup Packet**

#### **TLMM\_MS\_365 - WIRELESS WAKEUP - WAKEUP PACKET**

The wakeup packet shall be defined as the following: see **Fig. 112 (Wakeup Packet)**

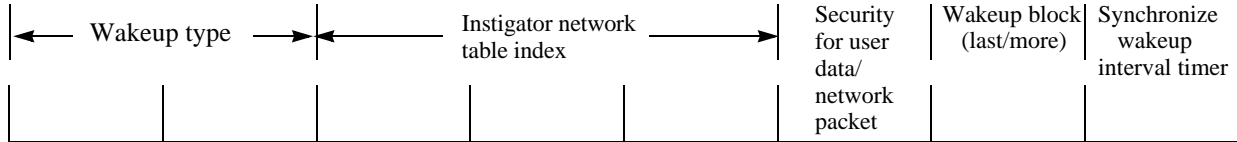
[For more information on how the individual wakeup packet bytes are defined see the following requirements:

- TLMM\_MS\_366 - WIRELESS WAKEUP - WAKEUP HEADER BYTE,
- TLMM\_MS\_367 - WIRELESS WAKEUP - WAKEUP SEQUENCE NUMBER BYTES,
- TLMM\_MS\_368 - WIRELESS WAKEUP - WAKEUP STATION ID BYTES,
- TLMM\_MS\_369 - WIRELESS WAKEUP - WAKEUP RECEPTOR BIT MAP BYTE,
- TLMM\_MS\_370 - WIRELESS WAKEUP - WAKEUP CONFIGURATION BYTES,
- TLMM\_MS\_371 - WIRELESS WAKEUP - WAKEUP USER DATA BYTES]

#### **TLMM\_MS\_366 - WIRELESS WAKEUP - WAKEUP HEADER BYTE**

The wakeup packet header byte shall have the following format:

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**Figure 113: Wakeup header byte**

1. Wakeup type - see **Table 89 (WAKEUP TYPES VALUES)**
2. Instigator network table index - see **Table 90 (WAKEUP NETWORK ID INDEX VALUES)**
3. Wakeup user data/network packet security enable - a value of one enables user data or network data security; a value of zero disables user data and network security [See **Table 91 (SECURE USER DATA/NETWORK PACKET)**]
4. Last wakeup block - a value of one means this is the final block of wakeup packets; a value of zero means there will be more
5. Synchronize wakeup interval timer - a value of one means synchronize; the value is zero otherwise

[See **TLMM\_MS\_371 - WIRELESS WAKEUP -WAKEUP USER DATA BYTES** and **TLMM\_M\_372 - WIRELESS WAKEUP- SECURE WAKEUP USER DATA INSTIGATOR**]

**TABLE 89: WAKEUP TYPES VALUES**

VALUE	TYPE
00	Unicast wakeup
01	Local broadcast wakeup
10	Non-local broadcast wakeup
11	Global broadcast wakeup

**TABLE 90: WAKEUP NETWORK ID INDEX VALUES**

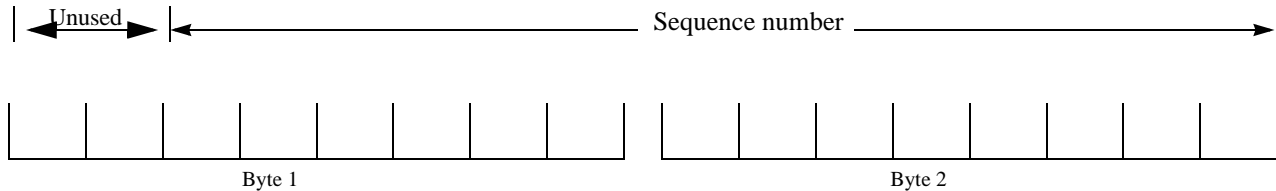
VALUE	ID
000	Network Id (Coordinator)
001	Child 1
010	Child 2
011	Child 3

**TABLE 91: SECURE USER DATA/NETWORK PACKET**

User Data (see <b>Fig. 115 (Wakeup configuration bytes)</b> )	Security for User data/network packet (see <b>Fig. 113 (Wakeup header byte)</b> )	Note
0	0	No user data in the local wakeup packet; Network packet is not secured.
0	1	No user data in the local wakeup packet; Network packet is secured.
1	0	There is User data in the local wakeup packet; Neither user data nor network packet is secured.
1	1	There is User data in the local wakeup packet; Both user data and network packet are secured.

**TLMM\_MS\_367 - WIRELESS WAKEUP -WAKEUP SEQUENCE NUMBER BYTES**

The wakeup packet sequence bytes shall have the following format:



**Figure 114: Wakeup sequence number bytes**

1. Wakeup packet sequence number - The instigator data link layer shall write the baseband hardware's starting sequence number and ending sequence number (where start > end)  
 [The baseband hardware shall fill in the sequence number, in the wakeup packet, send the wakeup packet, then decrements the fourteen bit sequence number and then shall send another wakeup packet until the end sequence number has been sent.]

**TLMM\_MS\_368 - WIRELESS WAKEUP -WAKEUP STATION ID BYTES**

The wakeup packet shall have six station id bytes having the following format:

1. station ID = network ID for the local broadcast wakeup type
2. station ID = receptor ID for the unicast wakeup type
3. station ID = for the non-local broadcast wakeup type, the three most significant bytes are the receptor model and sub-model which can be all wildcard (zero). The three least significant bytes are the instigator model and sub-model.
4. station ID = for the global broadcast wakeup type, the three most significant bytes are the receptor model and sub-model which can be all wildcard (zero). The three least significant bytes are the instigator model and sub-model.



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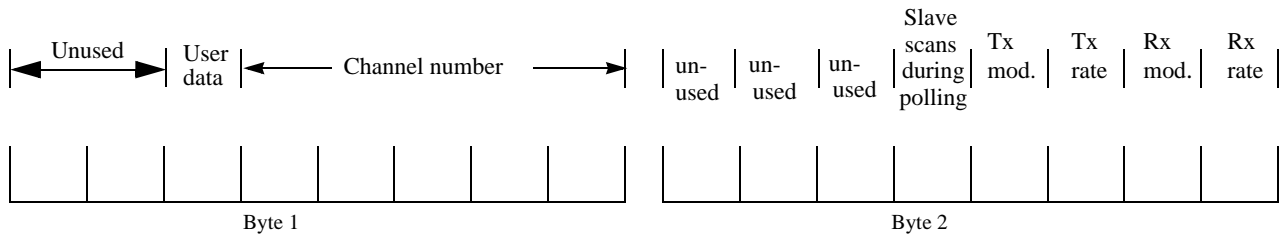
**TLMM\_MS\_369 - WIRELESS WAKEUP -WAKEUP RECEPTOR BIT MAP BYTE**

The wakeup packet shall have a receptor map byte of the following format:

1. Each bit shall represent a node (child) in the network
2. A value of one in a given bit shall indicate the node (child) shall be woken up
3. A value of zero in a given bit shall indicate the node (child) shall not be woken up see **Fig. 111 (Receptor bit map)**

**TLMM\_MS\_370 - WIRELESS WAKEUP -WAKEUP CONFIGURATION BYTES**

The wakeup packet shall have two wakeup configuration bytes having the following format:



**Figure 115: Wakeup configuration bytes**

1. User data - a value of one indicates that user data exists; a value of zero indicates that no user data exists
2. Channel number - channel number of 1 to 30 to be used in native mode
3. Slave scans during polling - a value of one means the slave should scan during polling, a value of zero means the slave should alternate between native mode listening and consecutive asynchronous receptor wakeup
4. Instigator native mode transmit modulation - see **Table 92 (TX/RX DEFAULT DATA RATE TABLE)**
5. Instigator default transmit data rate - see **Table 92 (TX/RX DEFAULT DATA RATE TABLE)**, used outside of the session.
6. Instigator native mode receive modulation - see **Table 92 (TX/RX DEFAULT DATA RATE TABLE)**
7. Instigator default receive data rate - see **Table 92 (TX/RX DEFAULT DATA RATE TABLE)**, used outside of the session.

**TABLE 92: TX/RX DEFAULT DATA RATE TABLE**

TX/RX MODULATION	BAND	
	WIDE <sup>(1)</sup>	NARROW <sup>(2),(3)</sup>
DQPSK (LOW)	380 Kbps (00) <sub>b</sub>	97 Kbps (01) <sub>b</sub>
DBPSK (HIGH)	190 Kbps (10) <sub>b</sub>	48 Kbps (11) <sub>b</sub>

1. Wide is defined as the value 0
2. Narrow is defined as the value 1
3. MEDS is always narrow band. MICS can be wide band or narrow band.

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**TLMM\_MS\_371 - WIRELESS WAKEUP -WAKEUP USER DATA BYTES**

The wakeup packet shall have 10 bytes of user data, these bytes will be provide as part of initialization data from the host. When wakeup user data security is enabled only 4 bytes shall be available for user data. The remaining 6 bytes shall be used for a 3 byte security counter and for a 3 byte security MAC.

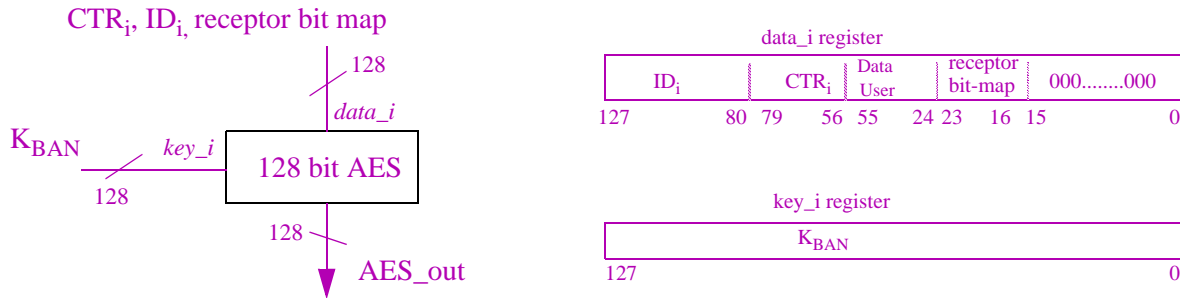
[When security is enabled, the first 4 bytes are used for the user data bytes. Bytes 5,6 and 7 are used for the security counter. Bytes 8,9, and 10 are used for the security MAC.]

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### TLMM\_M\_372 - WIRELESS WAKEUP- SECURE WAKEUP USER DATA INSTIGATOR

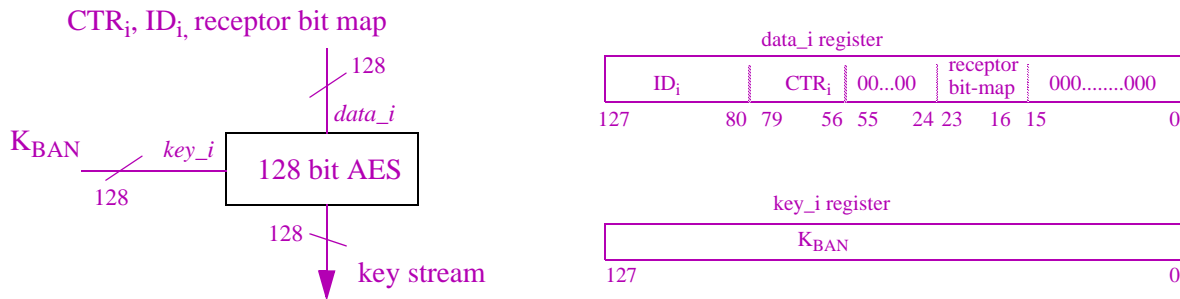
The instigator will perform the following to secure the wakeup user data bytes when the Wakeup security byte is enabled:

1. Generate an random number and use 3 bytes as the instigator's secure wakeup counter ( $CTR_i$ ).
2. Calculate the AES\_out using the block cipher using the instigator's secure wakeup counter ( $CTR_i$ ), instigator's station ID ( $ID_i$ ) the four user data bytes and the receptor bit map for the data input, and the BAN key ( $K_{BAN}$ ) for the key input.



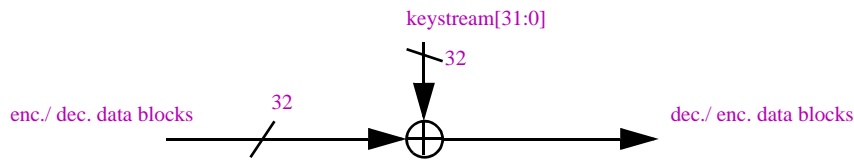
**Figure 116: Calculate AES\_out for wakeup security**

3. Encrypt the 4 bytes of user data by calculating the key stream using the block cipher shown:



**Figure 117: Calculate keystream to encrypt/ decrypt user data in a wakeup packet**

4. Complete the user data encryption by performing an exclusive or of the user data with the key stream. created in step 3.



**Figure 118: Encrypt/ decrypt the wakeup data**

The 10 bytes of user data will contain the following bytes: four bytes encrypted user data, three byte of instigator secure wakeup counter ( $CTR_i$ ), and three byte of MAC ( $AES\_out[23:0]$ ).

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### 5.3.6.5 WAKEUP TX (INSTIGATOR)

In order to have a successful synchronous wakeup sequence, the instigator must begin transmitting its wakeup packets before the receptor's sniff interval begins, and must transmit enough wakeup packets to assure that at least one complete wakeup packet is sent after the receptor's sniff interval begins. The original synchronization should be done with an asynchronous transmission (restart wakeup interval upon the receipt of last packet, last block). Subsequent wakeup transmissions can use a much shorter synchronous wakeup burst. If one or more synchronous wakeup bursts fail, another asynchronous wakeup burst should be used. Finally the number of wakeup packets to use during a synchronous wakeup burst is dependent on the clock drift (how long since the last wakeup burst). The sync start time and synchronous wakeup burst length should be adjusted accordingly.

For asynchronous wakeup, the instigator must send a duration of wakeup packets that is at least slightly longer than the receptor's sniff interval. For long duration wakeup transmissions, the baseband hardware will break every 5 seconds to execute a required clear channel assessment (CCA).

### 5.3.6.6 REQUIREMENTS

#### **TLMM\_M\_373 - WIRELESS WAKEUP -WAKEUP INTERVAL SYNC START TIME**

To determine when the wakeup packets transmissions should start, the instigator shall set the wakeup interval sync start time.

[This defines the amount of time the wakeup transmission should start before the receptor's sniff interval starts. This is needed to compensate for clock drift between the instigator and receptor(s). The wakeup interval sync start time is also needed to account for the CCAs that will occur before the next sync interval.]

To achieve a successful synchronous wakeup transmission, the instigator's sniff interval should match the receptor's sniff interval. The instigator's sniff interval is not in the EEPROM nor the parameters from host. This should be set with a local data service request or via the (address, value) pairs of the master initialize service.]

#### **TLMM\_M\_374 - WIRELESS WAKEUP -WAKEUP INITIAL CCA**

The instigator shall perform a clear channel assessment (CCA) before the start of wakeup packet transmission.

[The above requirement applies to both synchronous instigator wakeup and asynchronous receptor wakeup.]

If the last block wakeup transmissions take a long time (i.e., X second), master will have (5-X) seconds to transmit native mode packets before another CCA has to be started. This is fine if slave is not configured to scan during polling as the native mode timer is relative small (i.e., 500ms). If slave is configured to scan during polling, slave will need to scan on all the channels and therefore will have less chance hearing the native mode packets. By performing CCA after the wakeup transmissions, master will have more time to transmit native mode packets (i.e., Discover ID) and slave shall be able to hear the native mode packets.

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### TLMM\_M\_441 - WIRELESS WAKEUP - CCA AFTER WAKEUP

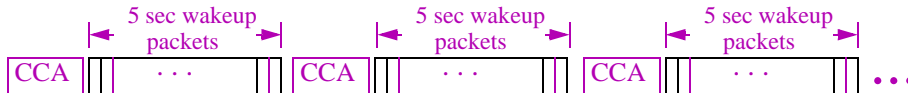
If instigator is configured to do “CCA before and after wakeup = 1” and “slave scan during polling = 1” (see **Table 123 (Master parameters from host)**), the instigator shall perform a clear channel assessment (CCA) after the last block wakeup packets have been transmitted.

[The above requirement applies to both synchronous instigator wakeup and asynchronous receptor wakeup. But it does not apply to the network service]

### TLMM\_M\_375 - WIRELESS WAKEUP - WAKEUP WITH CCA BREAKS

The instigator shall perform a clear channel assessment (CCA) every five seconds. This means that a wakeup burst duration longer than five seconds will be separated by a CCA. See **Fig. 119 (Wakeup with CCA breaks)**

[The above requirement applies to asynchronous receptor wakeup. It also applies to synchronous receptor wakeup, although synchronous receptor wakeup should rarely use a long wakeup burst (greater than 5 seconds). **Note** the data link layer will be notified, by the baseband hardware, when all of the wakeup packets have been sent. The data link layer will then take the next action of the discover service, open service, network service, medical event service, or channel recovery internal service (or more wakeup packets if necessary).]



**Figure 119: Wakeup with CCA breaks**

#### 5.3.6.7 SLAVE (RECEPTOR)

A node can configure itself to become a receptor by using the internal receptor wakeup service request. The node will then transition into a energy saving sleep state. If configured to synchronous sniff the wakeup baseband hardware will wakeup periodically to sniff for transmitted wakeup packets. If a valid wakeup packet is found, the baseband hardware will generate a interrupt to bring the node out of the sleep state.

#### 5.3.6.8 REQUIREMENTS

The slave will sniff asynchronously in the following cases:

1. CHANNEL RECOVERY STATE if “slave scans during polling” is off and slave is in Unspecified Channel Recovery
2. ACQUIRE STATE if “slave scans during polling” is off and either one of the following is true:
  - a) initiated by Patient Name Request or
  - b) after native mode timeout

The slave will sniff synchronously in the following cases:

1. DISABLE STATE if either one of the following is true:
  - a) In Disable CPU Off. or
  - b) In Disable CPU On and a Security service duration or EBAN Key timer is active.

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The slave will not sniff for wakeup packets in the following cases:

1. STANDBY STATE
2. COMM STATE
3. CHANNEL RECOVERY STATE if either one of the following is true:
  - a) “slave scans during polling” is on or
  - b) slave is in Same Channel Recovery.
4. ACQUIRE STATE if one of the following is true:
  - a) “slave scans during polling” is on or
  - b) the native mode timer has not expired.

**TLMM\_S\_377 - WIRELESS WAKEUP - WAKEUP SNIFF FREQUENCY RANGE**

The slave (receptor) shall be configurable to sniff channels in the following ways:

1. MICS only or
2. MEDS only or
3. Both MICS and MEDS

[Wakeup sniff list is defined in EEPROM, see wu\_sniff\_list in A44088, Telemetry M RF Module EEPROM Specification . The sniff list can be overwritten by slave host via initialization request, see Table 124 (SLAVE PARAMETERS FROM HOST)]

**TLMM\_S\_378 - WIRELESS WAKEUP - SNIFF INTERVAL**

Upon initialization the node will setup the sniff interval timer to periodically wakeup the baseband hardware to sniff for a wakeup packet.

[Wakeup sniff interval is provided by slave host via initialization request, see Table 124 (SLAVE PARAMETERS FROM HOST)]

**TLMM\_S\_402 - WIRELESS WAKEUP - DISABLE WAKEUP**

If the wakeup disable bit in the initialization request is set to 1, the slave will not sniff for wakeup packets.

[The wakeup disable bit is provided by slave host via initialization request, see Table 124 (SLAVE PARAMETERS FROM HOST).

If the wakeup disable bit is cleared, the slave hardware should sniff when the standby timer or the disable timer expires.

If wakeup disable bit is set, the slave hardware wakeup state machine is disabled and the module will not sniff for any wakeup packets.]

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**TLMM\_S\_379 - WIRELESS WAKEUP- SECURE WAKEUP USER DATA RECEPTOR**

The receptor will perform the following upon receipt of a wakeup packet containing secure user data (wakeup user data security bit set to enabled):

1. Use the received instigator's secure wakeup counter (CTR<sub>i</sub> contained in the wakeup packet).
2. Calculate the key stream using the block cipher. See **Fig. 117 (Calculate keystream to encrypt/decrypt user data in a wakeup packet)**.
3. Decrypt the user data by performing an exclusive or of the user data with the key stream produced in bullet 3 above. See **Fig. 118 (Encrypt/decrypt the wakeup data)**.
4. Calculate the AES<sub>out</sub> using the block cipher using the instigator's secure wakeup counter (CTR<sub>i</sub>), instigator's station ID (ID<sub>i</sub>) and the four user data bytes, and the BAN key (K<sub>BAN</sub>) for the key input. See **Fig. 116 (Calculate AES<sub>out</sub> for wakeup security)**.
5. If the calculated MAC (AES<sub>out</sub>[23:0]) is equal to the received user data (bytes 8, 9, and 10 of the user data),  
the user data is valid and wakeup indication will be sent to the host.(see **Table 93 (WAKEUP INDICATION (SLAVE))**);  
else,  
the user data is invalid and and wakeup indication with invalid MAC will be sent to the host.(see **Table 93 (WAKEUP INDICATION (SLAVE))**);

**TLMM\_S\_380 - WIRELESS WAKEUP - WAKEUP COMPLETE INDICATION**

A wakeup indication "Wakeup Complete", containing the wakeup packet contents, shall be sent to the upper layer when the "last packet last block" wakeup packet is received (see **Table 93 (WAKEUP INDICATION (SLAVE))**).

[Note, user data may be present in the "Wakeup Complete" wakeup packet contents. Upon receiving a "Wakeup Complete", the host will normally issue a initialize service request

Also note, an implicit wakeup indication (the same indication as described above) will be sent to the upper layer under the following conditions:

- a. A wakeup packet (non last block) is heard, and
- b. No subsequent wakeup packet (last block) is heard when performing asynchronous sniff.

This asynchronous sniff is designed to occur during the last block. The subsequent wakeup packet (last block) is less likely to be heard if the last wakeup block is short.]

**TLMM\_S\_381 - WIRELESS WAKEUP - WAKEUP IN PROGRESS USER DATA AVAILABLE INDICATION**

When valid user data is present, in the wakeup packets, a wakeup indication "Wakeup In Progress User Data Available" containing the wakeup packet contents shall be sent to the upper layer upon receipt of the first valid wakeup packet containing user data (see **Table 93 (WAKEUP INDICATION (SLAVE))**).

[When invalid user data is present, in the first valid wakeup packet, no wakeup indication shall be sent to the upper layer.]

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### TLMM\_S\_382 - WIRELESS WAKEUP - WAKEUP COMPLETE INDICATION ONLY

If the first valid wakeup packet, containing valid user data, is also the “last packet last block” wakeup packet; then only the “Wakeup Complete” indication shall be sent to the host.

If the first valid wakeup packet, containing invalid user data, is also the “last packet last block” wakeup packet; then only the “Wakeup Complete with Invalid user data” indication shall be sent to the host.

(see **Table 93 (WAKEUP INDICATION (SLAVE))**)

[Note that if the first wakeup packet is also the last wakeup packet and it has user data, two wakeup indications will be sent to the host. The first will be sent before reading EEPROM. The second will be sent after reading EEPROM. This is done in case the EEPROM read is delayed due to power inhibit. An initialization request while reading EEPROM will be rejected (if initialization sent after the first wakeup indication). Initialization after the second wakeup indication should be successful.]

When host receives the “Wakeup Complete with Invalid User Data” indication, host should send initialization request with valid Ban Key and Network Table to Mozart and then Mozart will update its Ban Key and Network Table accordingly. Then Mozart will be ready for the any other wakeup packet with user data once sniffing again.

### TLMM\_S\_383 - WIRELESS WAKEUP - INDICATIONS

The received wakeup packet shall be assembled into an indication message and passed onto the host. The indication message shall have a format defined in **Table 93 (WAKEUP INDICATION (SLAVE))**.

**TABLE 93: WAKEUP INDICATION (SLAVE)**

FIELD	FIELD INFO	DESCRIPTION	VALUES
Type	NA	The type of indication	Wakeup indication = 0x2B
Sub-type	The type of packet received	The indication sub-type	0x01 = Wakeup Complete 0x02= Wakeup In Progress User Data Available 0x03 = Wakeup Complete with Invalid User Data
Size	The size of the wakeup packet	The size of the info field	0x16
Info	The wakeup packet data	Contains the bytes received in the latest wakeup packet	See wakeup packet format defined in <b>TLMM_MS_365 - WIRELESS WAKEUP - WAKEUP PACKET</b>



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### 5.3.7 ANTENNA SELECTION

To improve reliability of data transfer in a fading signal environment, spatial diversity is implemented by the master. Spatial diversity is implemented with two antennas at the master, and with an antenna selection algorithm that selects the active antenna. If the signal level received by each antenna is independent (or nearly so), then when the signal level from the current antenna is inadequate to sustain reliable communications the second antenna will often have an adequate signal level. The antenna selection algorithm switches to the second antenna when packet errors occur during transmit or receive operations. Implementation details are specified in the paragraphs that follow.

The master will toggle the transmit antenna (vs. the previous transmit antenna) when the master detects that the slave is not receiving its packets correctly. The slave reports this by using the ACK bit (see control bytes). An exception occurs during the low energy mode. The slave is not expected to receive the master packet successfully when the master packet is sent using negative correlation preamble.

Toggle the transmit antenna (vs. the previous transmit antenna) if the first (N-1) uplink packets are received with MAC error.

#### TLMM\_M\_386 - ANTENNA SELECTION - TRANSMIT

The master will toggle the transmit antenna (vs. the previous transmit antenna) if any of the following conditions are met:

1. The previous master packet was received with a MAC error by the slave (provided the master packet was not sent with negative correlation preamble). The master knows the slave received its packet in error if the slave's ACK bit is false. Note that only the first N-1 packets are checked. In the event that N is equal to one, the single uplink packet is checked.
2. Each of the first (N-1) uplink packets are received with MAC error (or the single uplink packet has a MAC error in the event that N is equal to one).

[“N” can be either of the “slave xmit packet count for nominal mode” or “slave xmit packet count for max throughput mode” as determined by the preceding master packet’s transfer mode. See **Table 123 (Master parameters from host)** for the “packet count” parameters.]

### 5.3.8 SIGNAL STRENGTH INDICATOR

The signal strength indication can be read by the host at any time, this value is updated once per uplink frame. The frequency of update is approximately once per 10ms (uplink and downlink data rates both ~ 380Kbps). The signal strength indicator is located in dual port memory. The general purpose telemetry write 0 register (reg\_hst\_gp\_tm\_w0). This register is write only for Mozart and read only for the host, there are not read or write contention issue.

The signal strength indicator is displayed on the top left corner of the screen of the programmer.

The user desires an indication that communication will be reliable. A signal strength indicator is one way to accomplish this. One way to implement a signal strength indicator is to quantize the average signal.

**TABLE 94: SIGNAL STRENGTH INDICATOR**

Telemetry state	average signal (dB)	signal strength indicator
Communication	K6 <sup>(1)</sup> <= aveSignal	7
Communication	K5 <sup>(1)</sup> <= aveSignal < K6	6

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**TABLE 94: SIGNAL STRENGTH INDICATOR**

Telemetry state	average signal (dB)	signal strength indicator
Communication	$K4^{(1)} \leq \text{aveSignal} < K5$	5
Communication	$K3^{(1)} \leq \text{aveSignal} < K4$	4
Communication	$K2^{(1)} \leq \text{aveSignal} < K3$	3
Communication	$K1^{(1)} \leq \text{aveSignal} < K2$	2
Communication	$\text{aveSignal} < K1$	1
not Communication <sup>(2)</sup>	-	0

1. See **Table 123 (Master parameters from host)**.
2. This includes standby, acquire, and channel recovery.

**TLMC\_M\_156 - SIGNAL - STRENGTH INDICATOR**

The master shall set the signal strength indicator to give feedback to the user about the link quality.

[signal strength indicator = min(SSI', last SSI-1) if SSI' < last SSI

= max(SSI', last SSI+1) if SSI' >= last SSI

where,

SSI' = min(SSI'', signal strength input limit) if no waveform packet in the slave frame  
 = SSI'' otherwise

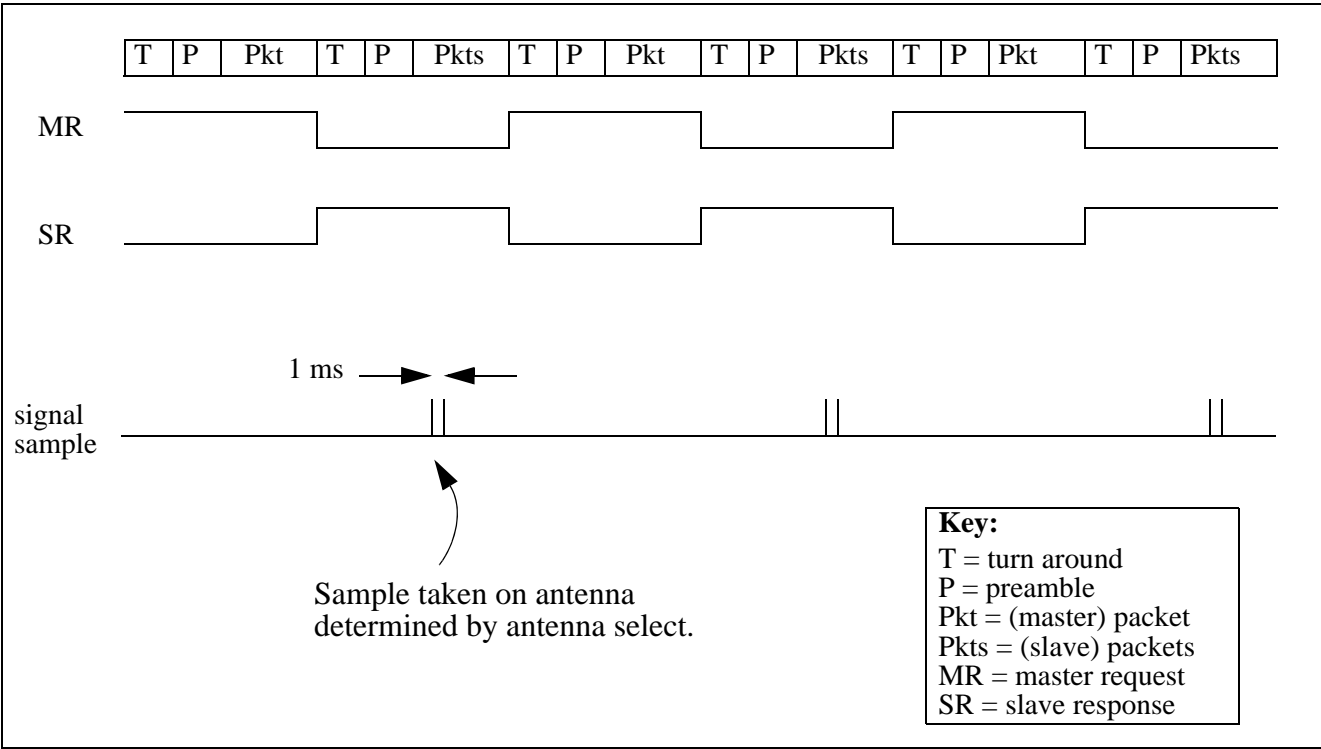
and

SSI'' is determined from **Table 94 (SIGNAL STRENGTH INDICATOR)**

Note that “signal strength input limit” is found in **Table 123 (Master parameters from host)**. A value of “7” will disable the input limiting. Hosts without periodic waveform (or infrequent waveform relative to the “superframe interval”) should consider disabling input limiting. Hosts with frequent waveform (i.e., telemetry C Concerto) may set this value to “3”.]

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The hardware measures the receive signal strength. It measures the signal during the first slave packet (after the preamble). Refer to **Fig. 120 (Signal to noise measurement system)**.



**Figure 120: Signal to noise measurement system**

The Data Link Layer will read the signal after the first slave packet is complete. It will not read the signal on any subsequent packets. These packets may be unused (analog hardware OFF to save energy). The slave will always utilize the first packet of the slave frame.

**TLMM\_M\_387 - SIGNAL STRENGTH INDICATOR SETUP**

The master will setup the hardware to take periodic signal measurements:

1. Enable power bar measurements
2. Set CCA dwell time to a value smaller than the duration of a slave packet (so the “signal” contains no portion of an inactive packet)

**5.3.9 TUNE AND TRIM**

The Mozart hardware can notify the data link layer of a phase lock loop (PLL) error. This error can occur if the Mozart module is not within the operating temperature range (it is too cold or too hot).

When a PLL lock error occurs, the data link layer should initiate a coarse trim and a fine trim on all 30 channels of the system, the data link layer initiated trim can either succeed or fail.

**Upon trim success:**

- The master will initiate channel assessment, transmit wakeup packets and send discover or open packets. Note that channel assessment is skipped if trim success occurs during communication

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(same channel recovery initiated). Also note that the wakeup packets are suppressed if same channel recovery is initiated, or if the master knows the slave is scanning.

- The slave will resume listening (for native mode packets or wakeup packets).

**Upon trim failure:**

- The master will go to standby and notify the host that downlinks to the slave have ceased.
- The slave will go to standby, notify the host that listening for master downlink has (momentarily) ceased. If the host does not issue a subsequent request, the slave will resume synchronous receptor wakeup.

5.3.9.1 **REQUIREMENTS:**

**TLMM\_MS\_391 - PLL LOCK ERROR**

Upon receiving the PLL lock error data link layer will:

1. Perform idle immediate and turn off wakeup,
2. Start the trim process by initiating a coarse trim and then a fine trim on all 30 channels.

[The trim process will stop if a trim failure occurs.]

**TLMM\_M\_392 - MASTER TRIM SUCCESS**

The master will perform the following if the data link layer initiated trim is successful:

- a. Perform clear channel assessment (see note below)
- b. Transmit wakeup (see note below)
- c. Transmit discover or open (discover if the discover service was interrupted by the PLL lock error, open otherwise)

Note that channel assessment is skipped if trim success occurs during communication (same channel recovery initiated). Also note that the wakeup packets are suppressed if same channel recovery is initiated, or if the master knows the slave is scanning (see **TLMM\_M\_359 - CH RECOVERY - WAKEUP TRANSMISSION**).

[The remote diagnostic service and the mapping diagnostic service is cancelled if interrupted by a PLL lock error (and a subsequent trim success). The service response status will be 0x26.]

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### **TLMM\_S\_393 - SLAVE TRIM SUCCESS**

The slave will perform the following if the data link layer initiated trim is successful:

Listen for Tel M native mode, listen for TelC packets, listen for asynchronous wakeup, or reconfigure for synchronous sniff (whichever was in progress when PLL lock error occurred).

[That is slave will resume the actions (if possible) before the PLL lock error is occurred:

- 1) Turn 2Volt off if slave is enabled by PLL lock error, or
- 2) Perform synchronous sniff if slave is sniffing during Disable CPU ON state when PLL lock error is occurred, or
- 3) Start same channel recovery if PLL lock error is occurred during communication state, or
- 4) Restart to listen for native mode in the same channel recovery if PLL lock error is occurred during same channel recovery state, or
- 5) Restart to listen (for native mode or asynchronous sniffing) in the unspecified channel recovery if PLL lock error is occurred during unspecified channel recovery state, or
- 6) Restart to listen for native mode or asynchronous sniffing in the acquire state if PLL lock error is occurred while polling in acquire state, or
- 7) Restart to uplink medical event if PLL lock error is occurred during uplinking medical events, or
- 8) Restart to listen for network packet if PLL lock error is occurred during network service.]

### **TLMM\_M\_394 - MASTER TRIM FAIL**

The master will perform the following if the data link layer initiated trim fails:

- a. Transition to the standby state (stop downlinking to the slave)
- b. Send an external service response (failure) to the host if a service was in progress (see the requirement note below)
- c. Send a telemetry ceased indication to the host

[Note that a discover cancelled indication is used for a trim failure during discover since a successful service response is sent when the service is initiated. All other service requests utilize a cancelled service response (failure code 0x1d).]

### **TLMM\_S\_395 - SLAVE TRIM FAIL**

The slave will perform the following if the data link layer initiated trim fails:

- a. Transition to the standby state if not in the disable state (momentarily stop listening to the master)
- b. Send a telemetry ceased indication to the host if not in the disable state
- c. Start the standby timer if not in the disable state. Note the disable timer is utilized in the disable state.

[Note that if the standby timer expires (or the disable timer expires) the slave will return to synchronous receptor wakeup operation. If the wakeup disable bit is set to 1 in the initialization request firmware does not set the wakeup enable bit bp\_wakeup\_en bit in REG\_BP\_WU\_CTRL0 register. See requirement **TLMM\_S\_402 - WIRELESS WAKEUP - DISABLE WAKEUP**]

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### TLMM\_MS\_396 - TELEMETRY CEASED INDICATION

The data link layer will send telemetry ceased indication to the host if the following conditions are true:

- a. A PLL lock error occurs, and
- b. The coarse trim or the fine trim procedure fails, and
- c. The state is not disable

[This indication could be generated when PLL lock error is encountered during either the coarse or fine trim when not in the disable state. This could happen during the acquire, communication and channel recovery states.]

**TABLE 95: TELEMETRY CEASED INDICATION (MASTER/SLAVE)**

FIELD	FIELD INFO	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0x35 - Telemetry ceased
Sub-type	N/A	1	The indication sub-type	n/a
Size	N/A	1	The size of the info field	1
Info	Telemetry Ceased indication status	1	Status of indication	0x01 - fine trim failed 0x02 - coarse trim failed
CRC	N/A	2	CRC of all the above field	This value is computed by data link layer and is used by upper layer to verify the integrity of the indication

### TLMM\_MS\_397 - TRIM FAILURE INDICATION

The data link layer will send a trim failed indication to the host if the following conditions are true:

- a. A PLL lock error occurs, and
- b. The coarse trim or the fine trim procedure fails, and
- c. The "trim failed indication to host" flag is set

[Trim failed indication flag is a configuration parameter - it can be set or cleared by the host]

**TABLE 96: TRIM FAILURE INDICATION (MASTER/SLAVE)**

FIELD	FIELD INFO	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0x34 - Trim failure
Sub-type	N/A	1	The indication sub-type	n/a

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**TABLE 96: TRIM FAILURE INDICATION (MASTER/SLAVE)**

Size	N/A	1	The size of the info field	3
Info	Trim failure indication status	1	Status of indication	0x0D - coarse trim failed 0x0E - fine trim failed
	Power inhibit status	1	Power inhibit status at the time of the trim failure	0 = power inhibit not asserted during trim 1 = power inhibit asserted during trim
	Firmware state	1	State of the firmware at the time of the trim failure	000 -0xff
CRC	N/A	2	CRC of all the above field	This value is computed by data link layer and is used by upper layer to verify the integrity of the indication

### 5.3.10 MEMORY TEST AND PARAMETER CORRUPTION

#### 5.3.10.1 PARAMETER CORRUPTION

Soft Error can occur due to the upset of a bit due to ionizing radiation: thermal neutrons, energetic neutrons, and alpha particles. The 3V power domain (a.k.a., the "always on") is always powered up. There are two flavors of 3V registers: normal and radiation hardened (RH). Only RH 3V registers are essentially immune to ionizing radiation at the energy levels of concern.

As there is no parity check for always on registers from hardware, the following Parameters (in always on non-RH register area) shall be checked by firmware:

- those needed to perform WU sniffing or needed to boot the Tel M RFM CPU,
- those which are not normally refreshed from EEPROM and are not able to "heal" themselves over time.

There are certain parameters which are passed by the host to the Mozart module as part of the initialization service. Examples are BAN Key, Wakeup Falsing Enable and Wrap up interval, etc.

The BAN Key is used as part of the Security feature.

Wakeup falsing enable controls are used to optimize the wakeup algorithm for the hardware by lengthening or shortening the sniff and wrap up intervals, etc.

The wrap up interval is used to configure the refresh rate of non-volatile parameters and to accumulate the statistical information for the hardware to optimize the radio sensitivity for wakeup algorithm.

In the event that non-volatile parameters which do not have an EEPROM backup are corrupted (i.e., wakeup falsing enable), the host will be notified of parameter corruption so the parameters can be re-initialized.

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### 5.3.10.2 REQUIREMENTS

#### TLMM\_S\_398 - PARAMETER CRC UPDATE

The CRC of all the Parameters in **Table 97 (PARAMETER CRC LIST)** will be calculated and stored

**TABLE 97: PARAMETER CRC LIST**

Address	#bytes	Parameter Name	Parameters could be Changed
0X040A-0X0429	32	Sniff list	when slave processes an Initialize Service Request, or when Slave is enabled by Wrap-up or High Current.
0X042B-0X0430	6	Coordinator ID	when slave processes an Initialize Service Request, or a Configure Network Request.
0X045C-0X045F	4	Noise floor estimation enables	when slave is booted
0X05B2-0X05CB	26	network table and its CRC	when slave processes an Initialize Service Request, or a Configure Network Request.
0X05CC - 0X05CE	3	Sniff Interval Original	when slave processes an Initialize Service Request.
0X05CF-0X05D0	2	Interval Wrap up Count Normal	
0X05D1	1	Wakeup Falsing Enable Bits	when Slave is booted, or when slave processes an Initialize Service Request.
0X05D2	1	Wakeup Falsing Cycle Bits	when slave is enabled by Wrap-up or High Current.
0X05D3	1	Restricted Channel Removed Actual	
0X05D4-0X05D9	6	Restricted Channels	
0X05DA-0X05E9	16	Ban Key	when slave processes an Initialize Service Request, or a Create Key or an Assert Key Security Request.
0X05EA	1	Security Flags	

[The CRC is stored at always on RH area 0x05A1-0x05A2.

“Slave Checks Always On CRC” parameter is located at always on RH area, 0x0005A0 (bit0).

The CRC is updated only when “Slave Checks always on CRC” parameter is set to TRUE.

“Slave Checks Always On CRC” parameter is cleared when slave is booted via reset by Hardware; “Slave Checks Always On CRC” is set to the same value as “slave shall calculate and check Always On parameters” (see **Table 124 (SLAVE PARAMETERS FROM HOST)** when slave processes an Initialize Service Request.]



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### TLMM\_S\_399 - PARAMETER CRC CHECK

The CRC of all the Parameters in **Table 97 (PARAMETER CRC LIST)** will be calculated and checked against to the stored CRC under the following cases:

1. On every boot (except any Resets), or
2. Before turn 2V off.

[Note the CRC will also be calculated and checked against the stored CRC before any of the parameters are changed.

The CRC is checked only when “Slave Checks always on CRC” parameter is set to TRUE.

Note the following:

1. The wrap up interrupt will not be processed until the disable timer expires if the interrupt occurs while the CPU is enabled. This negates any potential latency associated with this interrupt.
2. The wrap up interval is typically equal to the sniff interval times the wrap up count. However, the first wrap up interrupt will be one sniff interval shorter than all the remaining interrupts. For example if the sniff interval is two seconds and the wrap up count is five, the first wrap up interrupt will occur 8 seconds later. The remainder will occur every 10 seconds.
3. After initialization, the sniff interval is re-loaded but the wrap up count is not. The wrap up count is reloaded once the old one is complete.]

### TLMM\_S\_400- PARAMETER CORRUPTION INDICATION

If the two CRCs compared in the PARAMETER CRC CHECK are not identical, a Parameter corruption indication will be sent to the Host.

**TABLE 98: PARAMETER CORRUPTION INDICATION (SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0x37 - Parameter Corruption Indication
Sub-type	N/A	1	The indication sub-type	0
Size	N/A	2	The size of the info field	1
Info	Parameter Indication status	1	Status of the indication	0x01 - successful
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

#### 5.3.10.3 MEMORY TEST

Mozart firmware performs frequent memory tests to insure that memory integrity remains intact. This is accomplished by doing a CRC check on each structure once they have been copied into the RAM. These structures are defined in the **Table 122 (STRUCTURES IN EEPROM)**. If host receives the memory test failed indication this indicates that Mozart module’s RAM has been corrupted and its operation could be in question. It will be up to the host to take the appropriate action (i.e. reset the Mozart module or explant the device).

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### 5.3.10.4 REQUIREMENTS

#### **TLMM\_MS\_415 - MEMORY TEST - RAM STRUCTURES**

A memory test will be conducted once every second on a RAM structure. If any of the CRC check fails then memory test indication will be generated to the host. If all the structures pass the CRC check firmware will restart the process.

[Note: CRC values are stored at a fixed location of 0x38C0. Every second firmware will check the CRC for one of the structures in the RAM in the following order: Ramware code area 1, area2, ... area43, ramware enable and jump table, hardware1, hardware2, wakeup and firmware operation parameter structure. If any of the CRC check failed, the memory test failed indication will be sent to the host. If the check passed, the crc of the next structure will be checked on the next second. After the last parameter structure CRC is checked and passed, firmware will start from the first structure (i.e., ramware code area 1) CRC check again on the following second. If there is no ramware it will be skipped.]

**TABLE 99: MEMORY TEST FAILED INDICATION (MASTER OR SLAVE)**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	The type of indication	0x38 - Ramware failed indication
Sub-type	N/A	1	The indication sub-type	0
Size	N/A	1	The size of the info field	1
Info	Parameter Indication status	1	ID of failed memory structure	See the requirement note
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the indication.

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6.0 COMPLETION

This paragraph concludes this specification. This paragraph is followed by a set of appendices, including **Requirements Sorted by Tag**, **List Of Tables**, and others.

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7.0 APPENDICES

This section contains supporting information for the Telemetry M protocol. This information consists of: Telemetry M Data Throughput Analysis; followed by miscellaneous sections that contain Diagnostics data information (local and implant), and mapping data information.

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## 7.1 TELEMETRY M DATA THROUGHPUT ANALYSIS

This section provides data throughput analysis.

This section is divided into two main sections:

- Physical layer data rate requirements and other considerations
- A data throughput analysis for both master and slave messages

### 7.1.1 PHYSICAL LAYER REQUIREMENTS

Physical layer data rate requirements for Telemetry B, C and M are shown in Table 1:

**TABLE 100: DATA RATE**

	Telemetry B	Telemetry C	Telemetry M
<b>Master data rate</b>	12.5 Kbps	14.844 Kbps	48, 97, 190, 380 Kbps
<b>Slave data rate</b>	87.5 Kbps	100 Kbps	48, 97, 190, 380 Kbps

### 7.1.2 SYSTEM CONSIDERATIONS

In order to achieve the maximum data throughput with minimum complexity to the communication protocol the following items were considered:

- Typically the frequency of data transmitted in the slave direction is often and consists of Real time (Waveform packets), Unrequested (Supplemental Markers), and User requested (diagnostic/memory data). The overall data transmitted by the slave is more than the master.
- Typically the frequency of the master data transmission is low and the amount of data transmitted is less than the slave.
- A mechanism is needed to insure data integrity during a communication session between one master and one slave.
- Once the user has initiated the master request it should be transmitted within 2-3 seconds.
- At a minimum maintain the data throughput requirements or exceed the data through requirements of the existing telemetry systems.
- Keep the master and slave packet sizes fixed.

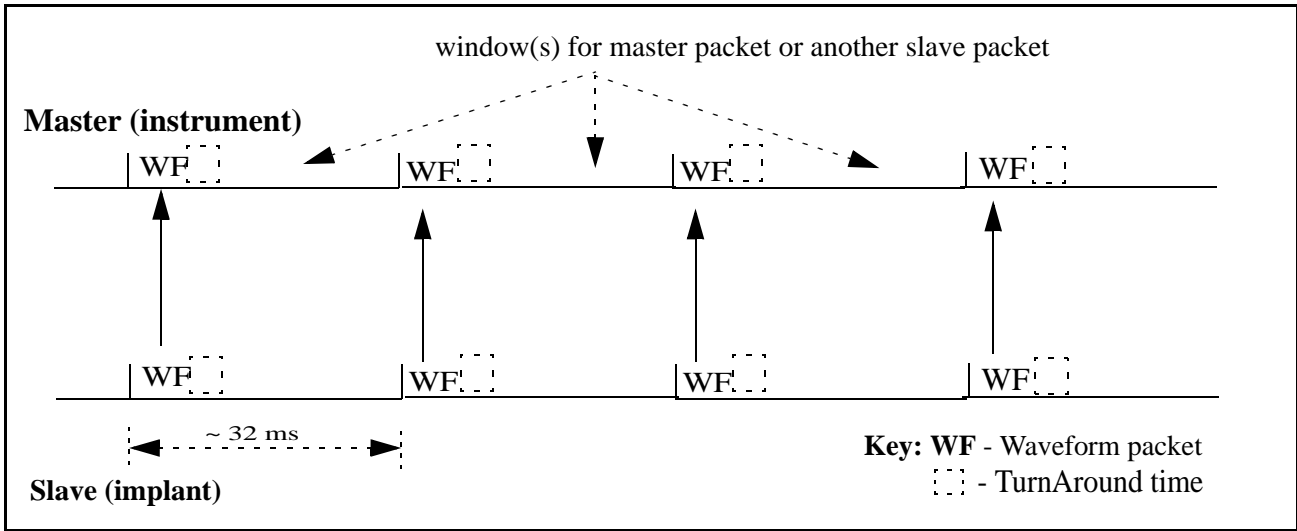
### 7.1.3 SUMMARY OF TELEMETRY B SYSTEM THROUGHPUT

In the telemetry B system, the slave (implant) transmits waveform packets at approximately every 32ms interval. After each waveform packet, the slave either receives a packet from the master or transmits one more slave packet. Once the waveform packet is transmitted, the slave listens for a master packet. If a master packet is detected then no slave data is transmitted. If no master packet is detected, the slave packet is transmitted. The timing of this sequence is shown below:

**Master throughput is:**

- A master frame is transmitted every 64ms
- Assuming the number of bytes per master frame is 29 bytes - excluding the (header, programmer id, and frame CRC)

The telemetry B master throughput  $B_{masterThroughput}$  is:



$$B_{masterThroughput} = \frac{\text{NumberOfMasterBytesPerFrame}}{64ms} = \frac{29bytes}{64ms} = 453((bytes)/s)$$

**Diagnostic/Memory data slave throughput is:**

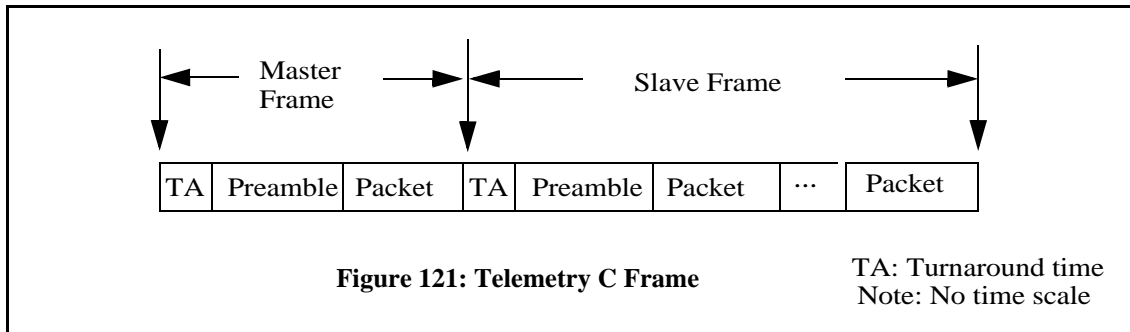
- A slave frame can be transmitted at approximately every 32ms - a master acknowledgement is expected to be transmitted on the 8th frame.
- Assuming the number of bytes per slave frame is 230 bytes - excluding the (header, command code, implant status, and frame CRC)

The telemetry B slave throughput  $B_{slaveThroughput}$  is:

$$B_{slaveThroughput} = \frac{\text{NumberOfSlaveBytesPerFrame}}{32ms} = \frac{230bytes \times 7}{32ms \times 8} = 6289((bytes)/s)$$

**7.1.4 SUMMARY OF TELEMETRY C SYSTEM THROUGHPUT**

The data flow between the master and slave is as follows:



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**Master throughput is:**

- A master frame is transmitted every 35.7ms (nominal mode)
- Assuming the number of bytes per master frame is 16 bytes - excluding the (header, and CRC)

Then, the highest telemetry C master throughput  $C_{masterThroughput}$  is:

$$C_{masterThroughput} = \frac{NumberOfMasterBytesPerFrame}{35.7ms} = \frac{16bytes}{35.7ms} = 392((bytes)/s)$$

**Diagnostic/Memory data slave throughput is:**

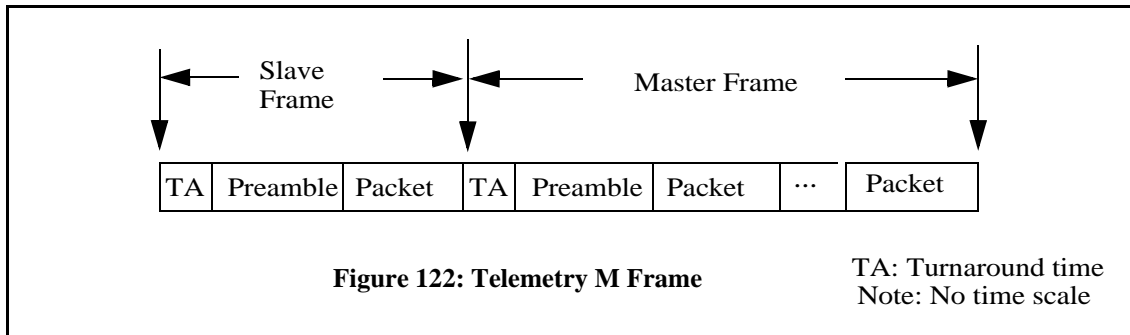
- A slave frame is transmitted every 115.6 ms (max throughput mode)
- Assuming the number of bytes per slave frame is 1024 bytes (32 packets \* 32 bytes/ packet). This excludes the header and CRC.

The telemetry C slave throughput  $C_{slaveThroughput}$  is:

$$C_{slaveThroughput} = \frac{NumberOfSlaveBytesPerFrame}{115.6ms} = \frac{1024bytes}{115.6ms} = 8858((bytes)/s)$$

**7.1.5 SUMMARY OF TELEMETRY M SYSTEM THROUGHPUT**

The data flow between the master and slave is based as follows:



Assume that the master packet size ( $S_m$ ) is controlled by the Reed Solomon code. A code of [63,51] results in a packet 63\*6 bits long (378 bits = 47.25 bytes). Of the 378 total bits only 240 bits can be used for the packet content field (30 bytes). The rest is overhead for Reed Solomon, message authentication code and control bytes. Assume the master packet count is  $C_m$ .

Assume that the slave packet size ( $S_s$ ) is controlled by the Reed Solomon code. A code of [63,51] results in a packet 63\*6 bits long (378 bits = 47.25 bytes). Of the 378 total bits only 240 bits can be used for the packet content field (30 bytes). The rest is overhead for Reed Solomon, message authentication code and control bytes. Assume the slave packet count is  $C_s$ .

Finally, assume that 40 bits are used for the preamble.

### 7.1.5.1 MASTER FRAME TIMING

The master frame time  $T_m$  is:

$$T_m = TurnaroudTime + PreambleTime + masterPktTime$$

If master transmit data rate is  $R_m$  and only one master packet ( $C_m = 1$ ) will be transmitted, then

$$masterPktTime = \frac{378 \cdot C_{mbits}}{R_m((Kbits)/s)} = \frac{378bits}{R_m((Kbits)/s)}$$

### 7.1.5.2 SLAVE FRAME TIMING

The slave frame time  $T_s$  is:

$$T_s = TurnaroudTime + PreambleTime + slavePktTime$$

If slave transmit data rate is  $R_s$ , then

$$slavePktTime = \frac{(378 \cdot C_s)bits}{R_s((Kbits)/s)}$$

Total Timing for master and slave frames

Then total time  $T_t$  for each master and slave frame is:

$$T_t = T_m + T_s = 2(TurnaroudTime + Preamble) + \frac{378bits}{R_m((Kbits)/s)} + \frac{(378 \cdot C_s)bits}{R_s((Kbits)/s)}$$

The TurnaroundTime and PreambleTime are different for different data rate. The TurnaroundTime depends on the turnaround count registers' value. See **TABLE 101: Telemetry M TurnAroundTime and Preamble Time** for default turnaround count which is selected by Mozart Programmer's Manual.

**TABLE 101: TELEMETRY M TURNAROUND TIME AND PREAMBLE TIME**

$(R_M, R_S)$ DATA RATE $K_{bps}$	TURNAROUND COUNT (default)	Turnaround Time (ms)	PREAMBLETIME (ms)
(48,48)	124	3.55	1.950
(97,97)	248	3.55	1.900
(190,190)	221	1.58	0.500
(380,380)	442	1.58	0.500



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7.1.5.3 MASTER THROUGHPUT

The master throughput is:.

$$MasterThroughput = \frac{NnumberOfMasterContentBytesPerFrame}{Tt} = \frac{30}{Tt}((bytes)/(ms))$$

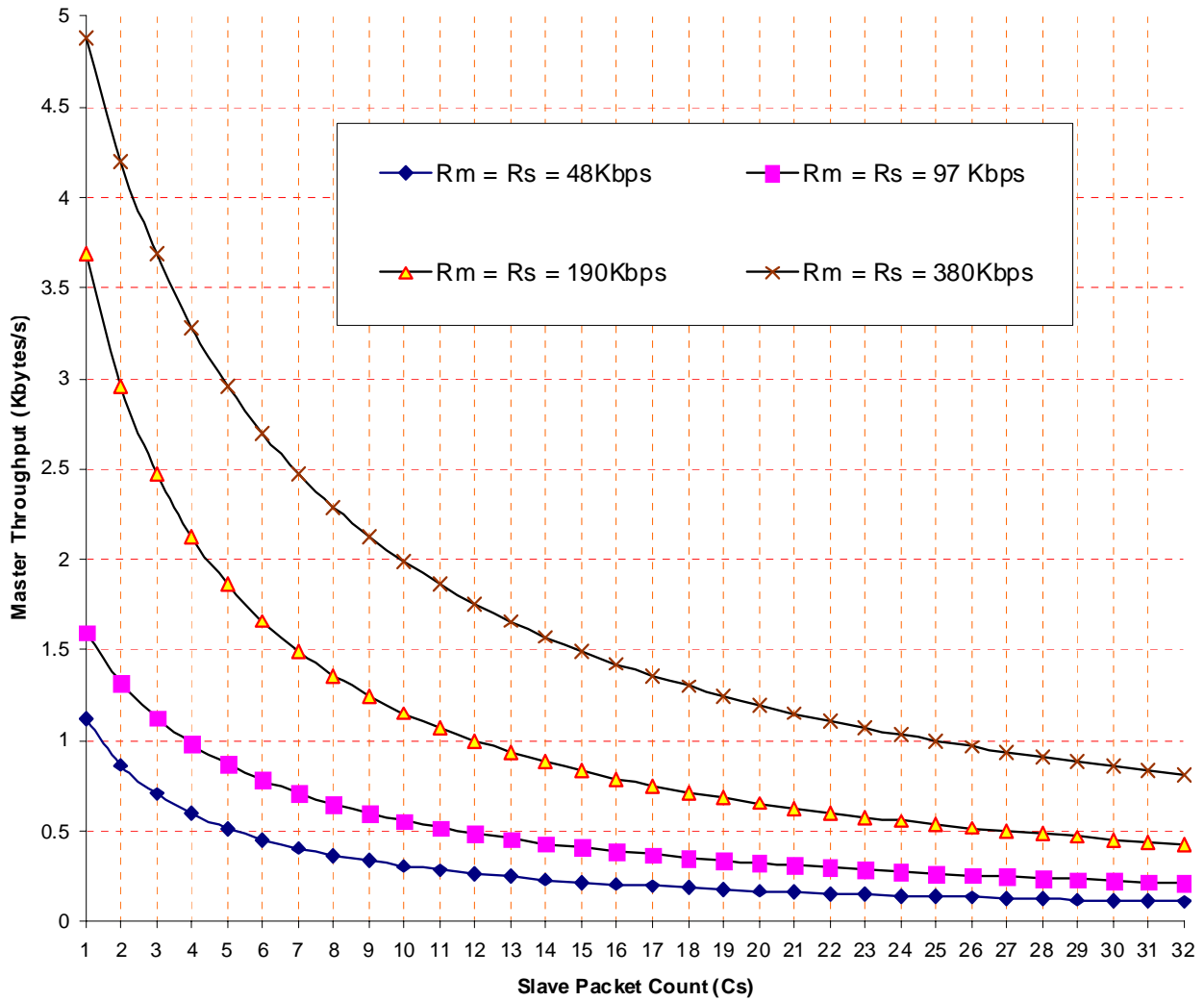
7.1.5.4 SLAVE THROUGHPUT

The slave throughput is:

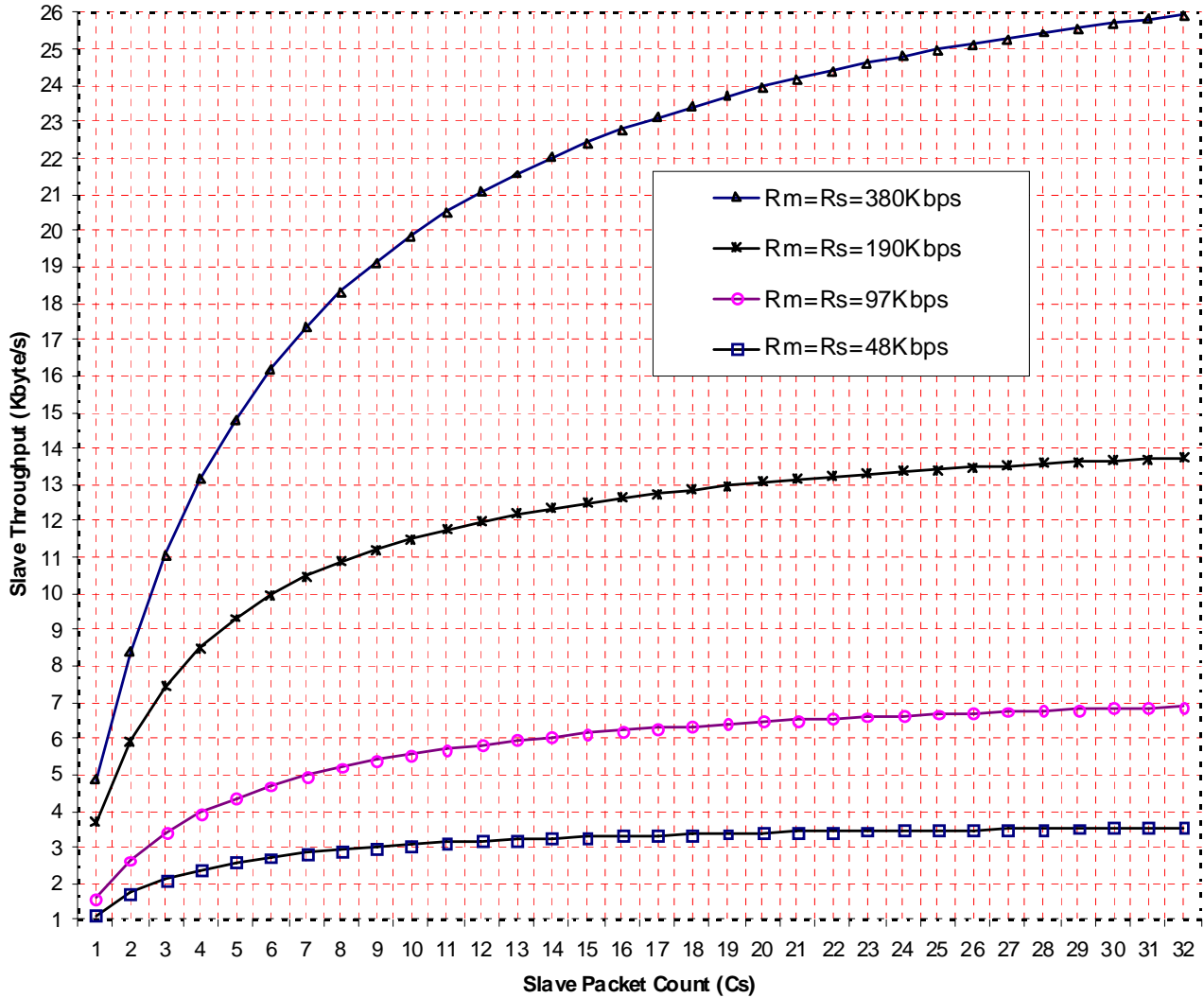
$$SlaveThroughput = \frac{NumberOfSlaveContentBytesPerFrame}{Tt} = \frac{(30 \bullet Cs)}{Tt}((bytes)/(ms))$$

See the two figures below for master and slave throughput vs. different data rate and slave packet count Cs.

### Master Throughput for Different Data Rate



### Slave Throughput for Different Data Rates



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### 7.1.5.5 THROUGHPUT SUMMARY

The table (below) summarizes the throughputs for each telemetry type:

**TABLE 102: THROUGHPUT SUMMARY**

TELEMETRY TYPE	DATA RATE (Rm, Rs)Kbps	MASTER THROUGHPUT (Kbytes/sec)	SLAVE THROUGHPUT <sup>(1)</sup> (Kbytes/sec)
B	(12.5, 87.5)	0.4	6.3
C	(14.8, 100)	0.4	8.9
M	(48, 48)	1.1 <sup>(2)</sup>	3.5
	(97, 97)	1.3 <sup>(3)</sup>	6.9
	(190, 190)	1.9 <sup>(4)</sup>	13.8
	(380, 380)	2.1 <sup>(5)</sup>	26

1. Assumes the frame has 1 downlink packet and 32 uplink packets.
2. Assumes the frame has 1 downlink packet and 1 uplink packet.
3. Assumes frame has 1 downlink packet and 3 uplink packet.
4. Assumes frame has 1 downlink packet and 5 uplink packet.
5. Assumes frame has 1 downlink packet and 9 uplink packet.

The Telemetry M master throughput is for recommended nominal mode with only low energy mode enabled, and slave throughput is for recommended maximum slave transmit mode. See **TABLE 103: Telemetry M Recommend Slave Packet Count**. The recommended slave packet count (Cs) for nominal mode takes the low energy mode into count. This is because the maximum slave packet count (Cs) in the low energy mode is the same as the slave packet count (Cs) in the nominal mode and the active slave packet count (i.e., the actually transmitted slave packets) in the low energy mode can vary from 1 to the maximum slave packet count (Cs). In case there is only 1 slave packet is transmitted, the slave transmitter off time should be no more than 10ms in order to keep the channel from chosen by others.

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**TABLE 103: TELEMETRY M RECOMMEND SLAVE PACKET COUNT**

$(R_M, R_S)$ DATA RATE $K_{BPS}$	NOMINAL MODE			MAX. SLAVE TRANSMIT MODE
	ONLY LOW ENERGY MODE ENABLED	POWER INHIBIT MODE ENABLED	BOTH LOW ENERGY AND POWER INHIBIT MODE DISABLED	
(48,48)	1	NOT RECOM- MENDED	CAN CHOOSE ANY VALUE FROM 1 TO 32	32
(97,97)	2			32
(190,190)	5	3		32
(380,380)	9	6		32

If power inhibit mode (1 to 3) is enabled during the nominal mode for slave, then the recommended slave packet count ( $C_s$ ) for nominal mode will be even smaller. This is because the slave transmitter is off totally during power inhibit. For the data rate 48Kbps and 98Kbps both directions, even though slave packet count of 1 will exceed 10ms, therefore power inhibit mode is not recommended.

If neither low energy mode nor power inhibit mode is enabled, then the slave packet count for nominal mode can be any value from 1 to 32. The consideration should be including the master throughput and the slave throughput as well as the amount of real time data to be transmitted etc.

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7.2 MISCELLANEOUS

7.2.1 DIAGNOSTIC LOCAL DATA

**TABLE 104: DIAGNOSTIC SERVICE RESPONSE — LOCAL DATA**

BYTE OFFSET	DETAILED DESCRIPTION	HIGH LEVEL DESCRIPTION
1	Channel 1, Antenna 1 mapping value	Most recent mapping information <sup>(1)</sup>
2	Channel 1, Antenna 2 mapping value	
·	·	
·	·	
20	Channel 10, antenna 2 mapping value	
21	Telem state	Current master data link information
22	channel	
23	Channel recovery reason (see <b>TABLE 105: Master channel recovery reason</b> )	
24	Low energy mode (0 = off, non-zero = on)	
25-28	Master packets	
29-32	Receive packet timeouts	
33-36	Slave packets w/ good CRC	
37-40	Slave packets w/ CRC error	
41-44	Slave preamble timeouts	
45-48	# same channel rec init.	
49-52	# unspecified channel rec init.	
53-56	# channel rec success	
57-60	# channel rec failure	
61	Mozart FW version #	
62	Mozart FW version #	
63	Mozart FW version #	
64	Mozart FW version #	
65-68	Recovery to hibernate transitions	
69-72	Master bit error rate packets	
73-76	Slave bit error rate packet opportunities	
77-80	Slave bit error rate packets received	
81-84	Slave non bit error rate packets received	
85-88	packet CRC errors (after transmitting BER packet)	
89	PLL Lock Error count <sup>(2)</sup>	
90	Coarse Trim Failure count	
91	FineTrim Failure count.	
92	signal (instantaneous signal strength measurement)	
93-96	Slave bit errors	
97-100	Missed telemetry M Rx interrupts <sup>(3)</sup>	
101	Diagnostic Status Byte	
102-N	Slave bytes (diagnostic uplink contents)	

1. These values come from the most recent channel selection mapping or diagnostic mapping. Note that channel selection mapping is initiated by discover and open.

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2. Number of trim successes = lock error count - coarse trim failure count - fine trim failure count
3. A missed telemetry M receive interrupt could occur if the CPU speed were too slow to support the rate of the receive interrupts.

**TABLE 105: MASTER CHANNEL RECOVERY REASON**

BIT	DESCRIPTION
0	Receive packet timeout occurred (digital mode only)
1	Received a packet from the slave with a mismatching ID (vs. ID at open)
2	Received a packet from the slave with inconsistency between the ACK bit and the reset ACK bit
3	N1 consecutive frames have occurred without receipt of a slave packet with a valid MAC
4	N2 consecutive frames have occurred without the receipt of a slave packet with a valid CRC nor valid preamble (telemetry C only)
5	Trim successful.
6	Bits 0-5 detail the explicit recovery reason. When this bit is set it means one of the above reasons occurred and additionally one or more Rx interrupts was missed (a receive interrupt to receive interrupt deadline was missed). This could occur if the host sets the CPU speed too low for the native mode data rate. This bit is not an explicit recovery reason.
7	Unused

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7.2.2 DIAGNOSTIC IMPLANT DATA

**TABLE 106: DIAGNOSTIC SERVICE RESPONSE — IMPLANT DATA**

ADDRESS	DESCRIPTION	SIZE
0x0F00 <sup>(1)</sup>	Type from Host side(bit 7 bit 6 bit 5 bit 4 bit 3 bit2 bit1 bit0) <sup>(2)</sup>	1byte
0x0F01	CPU fast speed	1byte
0x0F02	CPU slow speed	1byte
0x0F03	Received Data Rate Out of Session (Apply only to Telemetry M)	1byte
0x0F04	Transmit Data Rate Out of Session (Apply only to Telemetry M)	1byte
0x0F05- 0x0F08	Mozart Firmware Version Number	4bytes
0x0F09	Current Communication Channel Number	1byte
0x0F0A-0x0F0B	Channel Recovery Reason <sup>(3)</sup>	2bytes
0x0F0C	Fault 1Flags(bit 7 bit 6 bit 5 bit 4 bit 3 bit2 bit1 bit0) <sup>(4)</sup>	1byte
0x0F0D	Fault 2 Flags (bit 7 bit 6 bit 5 bit 4 bit 3 bit2 bit1 bit0) <sup>(5)</sup>	1byte
0x0F0E	Max. Retransmission due to Good&Bad Downlink Counter	1byte
0x0F0F	Network Unexpected Event Counter	1bytes
0x0F10- 0x0F13	Total Received Master Packet Counter (Communication State)	4bytes
0x0F14- 0x0F17	Received Master Packet Bad Preamble Counter (Communication State)	4bytes
0x0F18- 0x0F1B	Received Master Packet Bad CRC Counter (Communication State)	4bytes
0x0F1C- 0x0F1F	Received Master Packet with Bad Preamble and Bad CRC Counter (Communication State)	4bytes
0x0F20- 0x0F23	Same Channel Recovery Started Counter	4bytes
0x0F24- 0x0F27	Same Channel Recovery Successful Counter	4bytes
0x0F28- 0x0F2B	Unspecified Channel Recovery Successful Counter	4bytes
0x0F2C- 0x0F2F	Total Slave Transmitted Counter (Communication State) <sup>(6)</sup>	4bytes
0x0F30- 0x0F33	Slave Resend Waveform Packet Counter (not Low Energy Mode)	4bytes
0x0F34- 0x0F37	Slave New Waveform Packet Counter	4bytes
0x0F38- 0x0F3B	Slave Memory Resend Packet Counter due to Bad CRC Master Packet	4bytes
0x0F3C- 0x0F3F	Slave Memory Resend Packet Counter due to Good CRC Master Packet	4bytes
0x0F40- 0x0F43	Slave Supplemental Transaction Request Counter	4bytes
0x0F44- 0x0F47	Slave Supplemental Packet Counter	4bytes
0x0F48- 0x0F4B	Received Master Memory Transaction Request Counter	4bytes
0x0F4C- 0x0F4F	Received Master Memory Packet Counter	4bytes
0x0F50- 0x0F53	Slave Memory Transaction Request Counter	4bytes
0x0F54- 0x0F57	Slave Memory Packets Counter	4bytes
0x0F58- 0x0F5B	Received Master Bad CRC Counter (Non-Communication State)	4bytes
0x0F5C- 0x0F5F	Memory Resend Counter due to More Slave Space	4bytes



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**TABLE 106: DIAGNOSTIC SERVICE RESPONSE — IMPLANT DATA**

ADDRESS	DESCRIPTION	SIZE
0x0F60- 0x0F63	Total Received Master Packets Counter (Non-Communication State)	4bytes
0x0F64- 0x0F67	Total Slave Transmitted Packets Counter (Non-Communication State)	4bytes
0x0F68- 0x0F6B	Received BER Master Bit Error Counter for Good & Bad CRC packets	4bytes
0x0F6C- 0x0F6F	Received BER Master Bit Error Counter for Good CRC packet	4bytes
0x0F70- 0x0F73	Received BER Master packets (good CRC) counter	4bytes
0x0F74- 0x0F77	BER Slave Transmitted Packets counter	4bytes
0x0F78- 0x0F7B	Slave Resend Waveform Packet Counter (Low Energy Mode)	4bytes
0x0F7C- 0x0F7F	Received Last Packet Last Block Wakeup Counter in Disable State	4bytes
0x0F80- 0x0F83	Received Last Packet Last Block Wakeup Counter in Acquire State	4bytes
0x0F84- 0x0F87	Received Last Packet Last Block Wakeup Counter in Recovery State	4bytes
0x0F88- 0x0F8B	Received Last Packet Last Block Wakeup Counter in Communication State	4bytes
0x0F8C- 0x0F95	Error Event Array	10bytes
0x0F96-0x0F9F	Current State Array when each Error Event occurs	10bytes
0x0FA0	The next Error Event and Current State Array Index	1bytes
0x0FA1-0x0F04	Power Inhibit Rising Counter in Communication State	4bytes
0x0FA5-0x0F08	Power Inhibit Rising Counter in Same Recovery State	4bytes
0x0FA9-0x0FAC	Power Inhibit Rising Counter in Different Recovery State	4bytes
0x0FAD-0x0FB0	Power Inhibit Rising Counter in Acquire State	4bytes
0x0FB1-0x0FB4	Power Inhibit Rising Counter in Standby State	4bytes
0x0FB5-0x0FB8	Power Inhibit Rising Counter in Disable On State	4bytes
0x0FB9-0x0FBC	Power Inhibit Rising Counter in Eeprom Access State	4bytes
0x0FBD-0x0FC0	Waveform request has transmitted counter	4bytes
0x0FC1-0x0FC4	Waveform request from slave host counter	4bytes
0x0FC5	PLL Lock Error count <sup>(7)</sup>	1 byte
0x0FC6	Coarse Trim Failure count	1 byte
0x0FC7	FineTrim Failure count.	1 byte
0x0FC8	First_scan_channel_number_when_unicase_rxed	1 byte
0x0FC9	slave received open type byte (see <b>Fig. 41 (Open type byte (Request))</b> )	1 byte
0x0FCA-0x0FD5	Unused Bytes	12 bytes

1. Default address for slave filler packet.
2. See **TABLE 107: Type From Host** for detail.
3. See **TABLE 108: Channel Recovery Reason** for detail.
4. See **TABLE 109: Fault 1 flags** for detail.
5. See **TABLE 110: Fault 2 Flags** for detail.

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6. Consider Max. slave throughput mode, the number will be 0xFFFFFFFF in 179.59 days, the number will be 0xFFFFFFFF in 16.84hours if telemetry C is used.
7. Number of trim successes = lock error count - coarse trim failure count - fine trim failure count

**TABLE 107: TYPE FROM HOST**

<b>0x0F00</b>	bit0	<b>Telemetry Type (0- Telemetry C; 1- Telemetry M)</b>
	bit1	<b>Authorize To Talk Unsecurely (0 - Must be Secure; 1 - It's OK to be unsecure)</b>
	bit2	<b>Number of Waveform Data Offset Bytes(0- 4bytes offset, 1- 2bytes offset) from the Service Request buffer 3 and Service Request buffer4</b>
	bit3- bit7	<b>unused</b>

**TABLE 108: CHANNEL RECOVERY REASON**

<b>0x0F0A</b>	bit0	<b>First Received packet is Invalid Secured packet after open session</b>
	bit1	<b>Received Open request while in communication state (For development only)</b>
	bit2	<b>Received Master Frame Error Exceeded (Tel C only)</b>
	bit3	<b>Received Master Packet Error Exceeded</b>
	bit4	<b>Received Master Type is ARQ and Master ID Mismatched</b>
	bit5	<b>Received Master Type is Diagnostic and Master ID Mismatched</b>
	bit6	<b>Received Master Type is Memory Data and Master ID Mismatched</b>
	bit7	<b>Power Inhibit triggered channel recovery</b>
<b>0x0F0B</b>	bit0	<b>No packet is received after open session</b>
	bit1	<b>Receive Interrupt Times out in Communication state(Apply only to Tel M, digital link, for development only)</b>
	bit2	<b>Received Master Data packet type in Low Energy Mode (For development only)</b>
	bit3	<b>Trim successful (For development only)</b>
	bit4	<b>Received Master Type is BER and Master ID Mismatched (For development only)</b>
	bit5	<b>Received Slave Packet while in Communication State</b>
	bit6-bit7	<b>unused</b>

**TABLE 109: Fault 1 flags** and **TABLE 110: Fault 2 Flags** are logged for firmware development only. None of the faults will generate a fault reset.

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**TABLE 109: FAULT 1 FLAGS**

<b>0x0F0C</b>	bit0	<b>Hear more than 10 stations (Discover Name) during scan</b>
	bit1	<b>Memory Data master buffer over flow</b>
	bit2	<b>Master Transaction from other master station. Will trigger Channel Recovery.</b>
	bit3	<b>Too many unacknowledged memory packets, mem_unacked_buf overflow</b>
	bit4	<b>Local waveform buffer logic error (used in development)</b>
	bit5	<b>unused</b>
	bit6	<b>Telemetry M Transmit FW and HW Counters Mismatch (in Low Energy Mode)</b>
	bit7	<b>unused</b>

**TABLE 110: FAULT 2 FLAGS**

<b>0xF0D</b>	bit0	<b>Master Sequence Number Unexpected</b>
	bit1	<b>Error in mem_unacked_buf</b>
	bit2	<b>Memory packet size is zero</b>
	bit3	<b>the discover collision avoidance time is zero and the correspond master ID is still in discover collision avoidance control structure</b>
	bit4	<b>Local first Waveform Buffer Uncompleted Sent</b>
	bit5	<b>Local second Waveform Buffer Uncompleted Sent</b>
	bit6	<b>Stop Retransmit Waveform When Both Waveform Requests have been Received from Host</b>
	bit7	<b>Stop Retransmit and Transmission Waveform When new Waveform Request has been Received from Host</b>

7.2.3 MAPPING DATA

**TABLE 111: MAPPING DIAGNOSTIC SERVICE RESPONSE - ATTACHED DATA**

BYTE OFFSET	DETAILED DESCRIPTION	HIGH LEVEL DESCRIPTION
1	channel 1, antenna 1 mapping value	Current mapping information <sup>(1)</sup>
2	channel 1, antenna 2 mapping value	
.	.	
.	.	
20	channel 10, antenna 2 mapping value	

1. These values come from the just completed diagnostic mapping.

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## 7.2.4 DISCOVER NAME SLAVE RESPONSE FORMAT

All the values in **TABLE 126: SLAVE POLLING REQUEST** will be uplinked in five discover name response packets. **Table 112 (DISCOVER NAME SLAVE RESPONSE FORMAT)** shows an example of the CRM devices.

**TABLE 112: DISCOVER NAME SLAVE RESPONSE FORMAT**

FIELD NAME <sup>(1)</sup>	REQUIRED/ OPTIONAL	BYTES
Station Serial Number	Required	20
Null termination	Required	01
Station Name	Required	32
Null termination	Required	01
Station Med/Vit	Required	02
Station status	Optional	02
Application-specific info	Optional	16
<b>Tel M Patient Name</b>	Required	30
<b>Message CRC</b>	Required	02

1. Same format as for Telemetry B, except the following are added to the format for Telemetry M: “Tel M Patient Name” and “Message CRC”.

## 7.3 PSEUDO RANDOM NUMBER GENERATION

The security feature requires pseudo-random numbers. This appendix describes the implementation of a NIST-recommended pseudo random number generator (PRNG) based on the ANSI X9.31 specification (appendix A.2.4). This realization of the ANSI X.9.31 PRNG specification uses the AES block cipher (FIPS PUB 197).

It is assumed that two 128 bit random number are “installed” into the telemetry M module during production. One of the random numbers is permanent and the other is updated every time a new pseudo-random number is generated (both reside in keep alive memory).

Generation of a 128 bit pseudo random number (PRN) using the AES block cipher, as specified in ANSI X9.31, takes place as follows. First, assume that two 128 bit random numbers are available to the PRNG,  $K_R$  and  $R_0$ .  $K_R$ , the PRNG key, does not change and is always loaded into the *key\_i* input of the block cipher.  $R_0$  is the PRNG’s secret and random initialization vector which is updated with the new and current PRN ( $R_1, R_2, \dots$ ) every time the PRNG generates a 128 bit pseudo random number. Both  $K_R$  and the current R need to be stored in keep alive memory as they are required for the generation of any new pseudo random numbers.

The generation of the  $(i+1)^{th}$  PRN is a three step process. In step one, the AES block cipher is used to encrypt a nonce (number used once) using  $K_R$  as the key input, as shown in **Fig. 123 (Step one in generating a 128 bit pseudo random number using the AES block cipher)**. The nonce, which could consist of the telemetry M module’s current real time clock value, is loaded into the 128 bit *data\_i*

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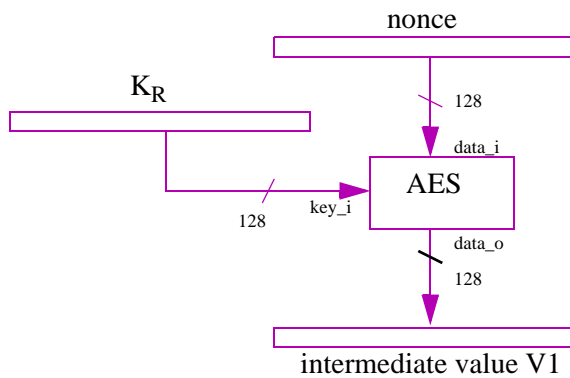
input of the block cipher. If the real time clock is used as the nonce and the clock is longer than 128 bits, then the least significant 128 bits of the real time clock should be used as the nonce. If the real time clock is shorter than 128 bits, then zeros shall be used to pad the most significant bits of the nonce. The output of the block cipher (*data\_o*) is an intermediate value called V1.

In step two, the 128 bit intermediate value V1 is XORed (modulo 2 added) with the current R ( $R_0$  is the very first pseudo random number is to be generated,  $R_i$  otherwise). This 128 bit value, V1 XOR  $R_i$ , is then encrypted with the block cipher. As shown in **Fig. 124 (Step two in generating a 128 bit pseudo random number using the AES block cipher)**, this means that  $K_R$  is loaded into the *key\_i* input of the block cipher and V1 XOR  $R_i$  is loaded into the *data\_i* input of the block cipher. This output of the block cipher (*data\_o*) is an intermediate value called V2.

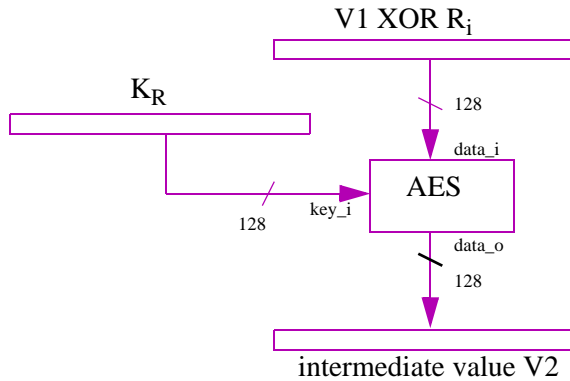
In the third and final step, the 128 bit intermediate values V1 and V2 are XORed together and encrypted with the block cipher. As shown in **Fig. 125 (Step three in generating a 128 bit pseudo random number using the AES block cipher)**, this means that  $K_R$  is loaded into the *key\_i* input of the block cipher and V1 XOR V2 is loaded into the *data\_i* input of the block cipher. The output of the block cipher (*data\_o*) contains the new PRN,  $R_{i+1}$ . If no additional pseudo random numbers are required then  $R_{i+1}$  is stored in memory for generation of future PRNs. The PRNG key,  $K_R$ , also needs to be stored in memory.

The PRNG algorithm is best summarized by using a functional description. If the block cipher is represented by the function  $F(data_i; key_i) = data_o$ , then the algorithm can be summarized as follows:

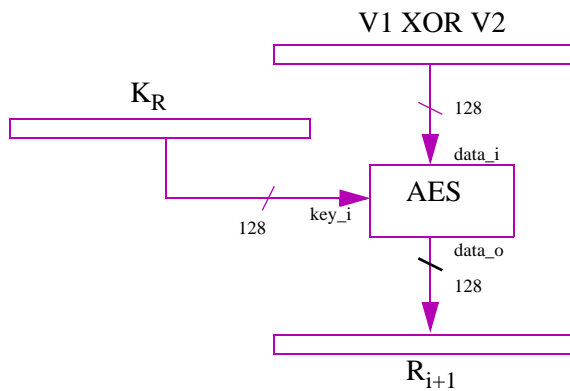
- Step 1:  $V1 = F(\text{nonce}; K_R)$
- Step 2:  $V2 = F(V1 \text{ XOR } R_i; K_R)$
- Step 3:  $R_{i+1} = F(V1 \text{ XOR } V2; K_R)$



**Figure 123: Step one in generating a 128 bit pseudo random number using the AES block cipher**



**Figure 124: Step two in generating a 128 bit pseudo random number using the AES block cipher**



**Figure 125: Step three in generating a 128 bit pseudo random number using the AES block cipher**

## 7.4 MISC HOST INTERACTIONS

### 7.4.1 GENERAL NOTES:

The purpose of this section is to temporarily capture the interactions notes between host and Tel M firmware:

On April 17, 2008 a meeting was held between CSE and Neuro. We discussed the method the host would tell if the Mozart module was sniffing. The two choices were:

1. Issue host dummy write and initialize every 12 hours to redundantly "reconfigure" sniffing
2. Enable the power monitor bit every 12 hours (with interrupt enabled) for a duration greater than the sniff interval. If an interrupt occurs sniffing is enabled. If no interrupt occurs sniffing is not enabled. The host can then perform host dummy write and reconfigure sniffing.

The second method was agreed to by the CSE and Neuro teams. Since this algorithm could be used by multiple business units it is proposed that this is added to the protocol spec as text for the host (not a requirement). This way all business units can benefit from this knowledge.

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7.4.2 DUAL PORT INTERFACE BUFFERS

**TABLE 113: MOZART DUAL PORT REQUEST INTERFACE**

DUAL PORT INTERFACE BUFFERS	MASTER	SLAVE
Request 0 buffer (512 bytes)	All commands Except Emergency	All Except Waveform and Data
Request 1 buffer (512 bytes)	Emergency	Uplink0
Request 2 buffer (512 bytes)	Unused	Uplink1
Waveform buffer 0 (256 bytes)	Unused	WF0
waveform buffer 1 (256 bytes)	Unused	WF1

**TABLE 114: MOZART DUAL PORT INDICATION INTERFACE**

INDICATION BUFFERS	MASTER	SLAVE
Indication 0 buffer (512 bytes)	Event indication (Notification)	Event indication (Notification)
Indication 1 buffer (512 bytes)	DATA	DATA 0 (DOWNLINK)
Indication 2 buffer (512 bytes)	UNREQUESTED DATA	DATA 1 (DOWNLINK)
Indication 3 buffer (256 bytes)	WAVEFORM	UNUSED
Indication 4 buffer (256 bytes)	UNUSED	WAKEUP

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## 7.5 FIRMWARE INTERACTION BETWEEN HOST AND TELEMETRY

In order to send real time waveform data service requests independent of non-real time data service requests, the host slave application needs to utilize the waveform buffers (host interface request buffers 3 and 4) along with a few related host interface registers that are utilized to control these transactions. Keep in mind that when utilizing this alternate method of data transmission that no response is received from the slave data link layer as to the success or failure of the requested data transmission. This is because the channel is primarily designed for hardware DMA control blocks to act as the primary user of this channel in order to offload data transfer processing from the host firmware. Because the host interface hardware will not likely have the complexity to understand or react to a service response message, no such handshake occurs for these requests. Furthermore, this channel is designed to transfer real time data that is of no value if not delivered on time, so responding with a success or failure indication would add little or no benefit to the design.

The Tel M data link layer will retry a waveform request upon failure only until the next real-time waveform service request is issued. When a both a waveform and a memory write data service request are issued concurrently, the waveform data takes a higher priority and will be transmitted prior to the memory data request.

As stated previously, the waveform data request service is primarily designed for being exercised by host application hardware. However, the tel M data link layer provides the flexibility for host application software to also make these requests (however, hardware and firmware operation of this feature are mutually exclusive). To select between hardware and firmware control of this service, the host interface register bit `tcds_enable` of the register `HST_MARKERS_TCDS`. By setting the `tcds_enable` bit, it instructs the TM to service waveform data service requests in response to host interface writes to bits 3 (for buffer 3) and 4 (for buffer 4) of `HST_IRQ2TEL`. Alternatively, clearing the `tcds_enable` bit instructs the TM to service waveform data service requests in response to edge transitions of the TCDS input signal from the host hardware. When under hardware control, rising edges of TCDS means that data is available in buffer 4, while a falling edge indicates that data is available in buffer 3.

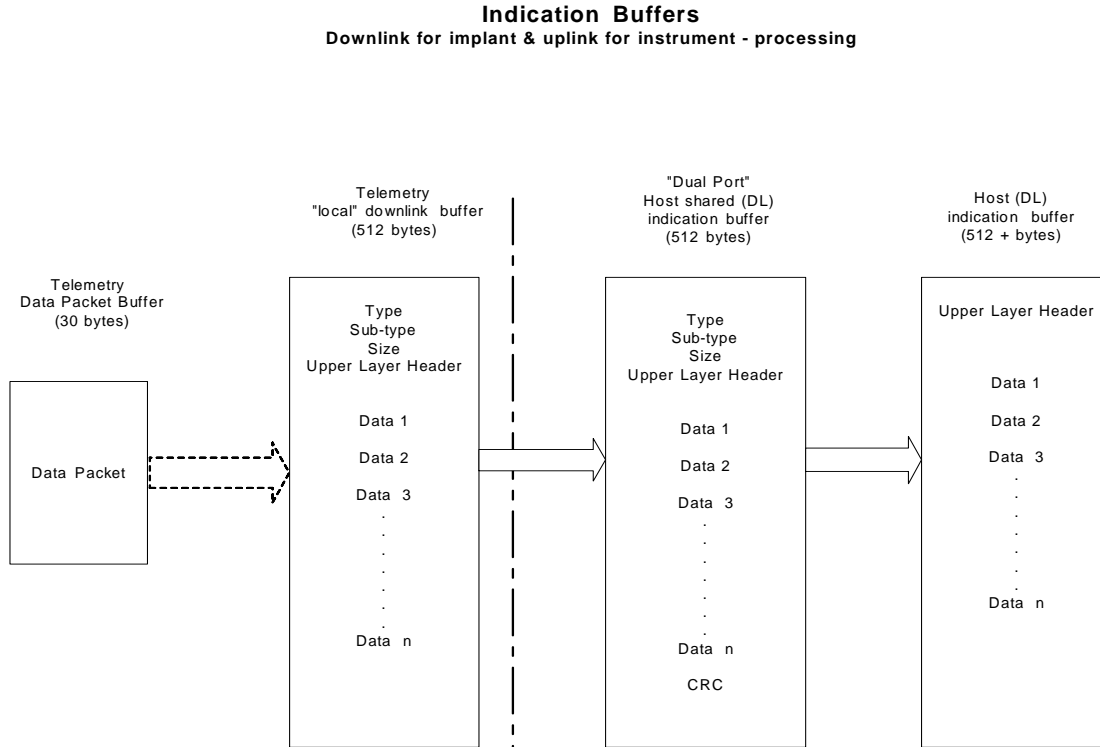
To specify the size of the payload contained in the waveform service request buffers, the slave host is required to specify the number of waveform bytes and the number of markers bytes/words that are contained in the buffer. The registers `HST_WFCNT0` and `HST_WFMKRCNT0` are used to specify the number of waveform bytes and markers contains in host interface buffer 3, while `HST_WFCNT1` and `HST_WFMKRCNT1` are used to specify the number of waveform bytes and markers contains in host interface buffer 4. Markers are located after the last waveform byte. When markers are present in the waveform buffer, bit `marker0` (for host interface buffer 3) and bit `marker1` (for host interface buffer 4) of the register `HST_MARKERS_TCDS` are used to indicate that markers are present as part of a waveform data service request.

The description of the algorithms listed below provide the mechanism used to interact to received downlink, send memory and streaming uplink data.



### 7.5.1 INDICATION BUFFER USAGE (SLAVE)

Below is the mechanism used to receive the downlink data from external instrument and passing it to the host.



*The word downlink is being used in the description below - for instrument it represents uplink*

#### Registers for Indication (DL)

- hst\_irq2host\_0** - Interrupt register  
 # of bytes - third and fourth bytes in shared (dl) buffer reflect the size of the indication data in the buffer
- hst\_irq2tel\_1** - indication ack to telemetry

#### Algorithm

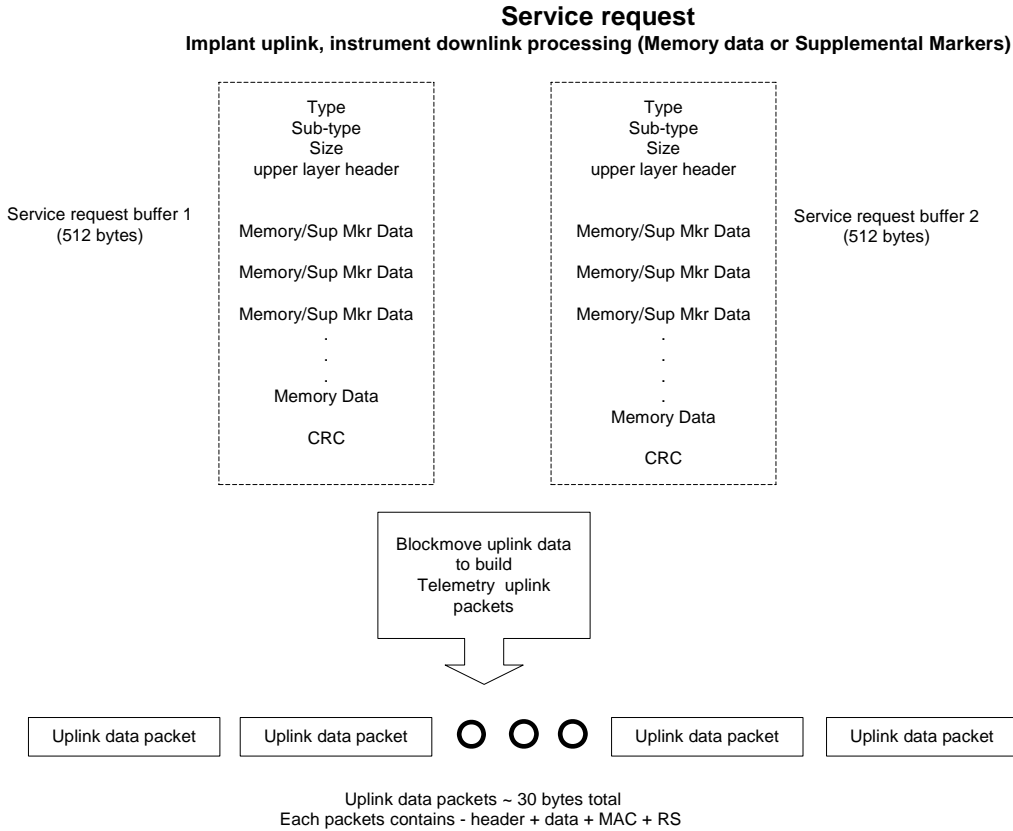
1. Each time a downlink packet is received
  - a) Remove the telemetry specific header and CRC information
  - b) Blockmove the data into the telemetry local\_dl\_buffer
2. When a final packet is received
  - a) Blockmove the local dl buffer data into the shared dl buffer if downlink interrupt bit is low.
  - b) Generate a indication interrupt to the HOST via **hst\_irq2host\_0.indication(n)** bit.
  - c) HOST clears the (DL) Indication interrupt in the **hst\_irq2host\_0** register after moving the data to the HOST indication buffer". Hardware automatically generates **hst\_irq2tel\_1.indication(n)\_ack**.

**Note:** The host use the upper layer header byte to combine the downlink transactions into the downlink message. Once the complete downlink message is in the host downlink buffer, then host start to validate and start the processing of the downlink message.

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## 7.5.2 MEMORY/SUP. MARKER DATA BUFFER USAGE

Below is the mechanism used to received memory and supplemental marker data from the host and transmit.



*The word uplink is being used in the description below - for instrument it represents downlink*

### Registers

**hst\_irq2tel\_0** - Interrupt register service\_request\_(n)

**hst\_irq2host\_1** - service\_response\_(n) - NOTE - this should correspond to same as in hst\_irq2tel\_0.

### Algorithm

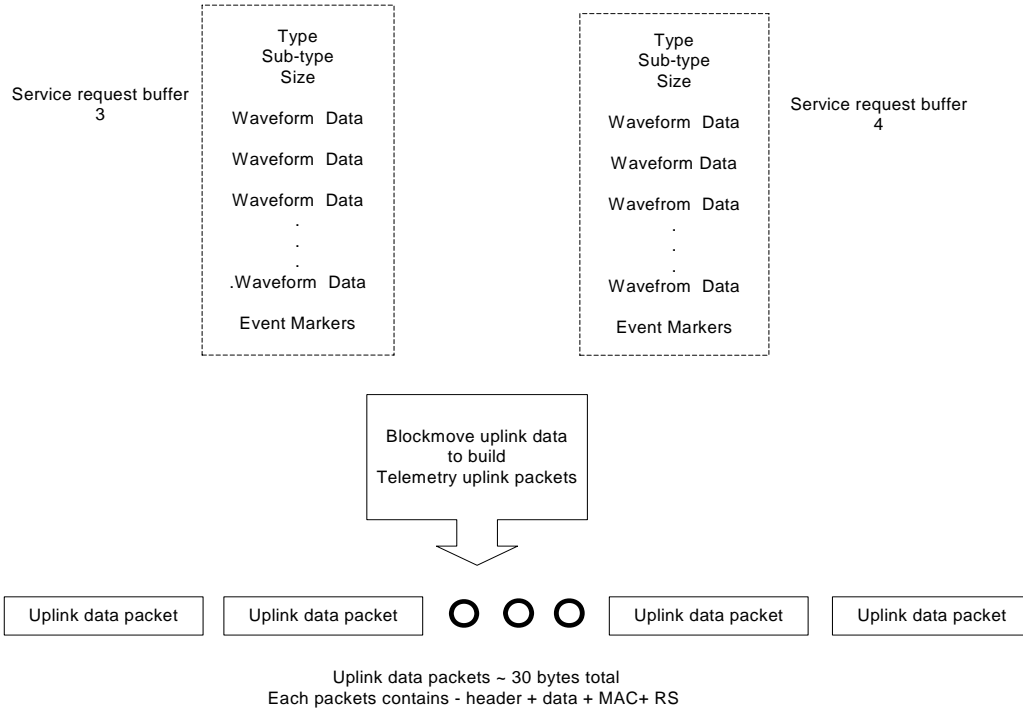
1. HOST checks the **service\_request\_(n)** register for empty buffer availability:
  - a) Blockmove the data into the available buffer.
  - b) Write the type, subtype and data size followed by CRC.
  - c) Set the appropriate **service\_request\_(n)** in the **hst\_irq2tel\_0** register to generate interrupt to Telemetry.
2. When Telemetry C receives a memory data uplink request interrupt **local\_hst\_irq2tel\_0** then
  - a) FW clears the **hst\_irq service\_request\_(n)** bit. (Stop HW from bothering FW).
  - b) Build an uplink packet by blockmoving <= 30bytes of data in each packet.
  - c) Transmit these packets.
  - d) Once all the data is copied to the uplink packets (FW) clears appropriate **service\_request\_(n)** bit in **hst\_irq2tel\_0** register.
  - e) Service response (uplink complete) interrupt is generated to the HOST:  
 When (FW) clears the **service\_request\_(n)** bit in the **hst\_irq2tel\_0** register (HW) sets the **service\_response\_(n)** bit in the **hst\_irq2host\_1** register.

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### 7.5.3 STREAMING DATA BUFFER USAGE

Below is mechanism used to received EGM/event marker data from the host to transmit.

#### Uplink Processing: Waveform data



*The word uplink is being used in the description below - for instrument it represents downlink*

#### Registers

- hst\_irq2tel\_0** - Interrupt register service\_request\_(n) - where n is 3 or 4.
- hst\_wfcnt0, hst\_wfcnt1** - # of EGM uplink bytes in the service\_request\_(n) buffer
- hst\_markers\_tcds** - informs telemetry if markers are present in the buffer
- hst\_wfmkrct0, hst\_wfmkrct1** - # of EGM & Event Markers uplink bytes in the service\_request\_(n) buffer

NOTE - For each buffer two registers are needed to determine the size (Opportunity for host improvement)

NOTE: if variable WF size is to be used - HW or FW from the host need to provide the size...

#### Algorithm

1. Host hardware fills the service request buffer with EGM.
  - a) Host will put the marker in the available buffer (assuming HW is still doing EGM).
  - b) Set the **service\_request\_(n)** bit in the **hst\_irq2tel\_0** to indicate the buffer written with data for uplink (done by hardware)
  - c) In **hst\_markers\_tcds** register firmware sets bit0 or bit1 indicating if markers are in **service\_request\_(3)** or **service\_request\_(4)**
2. Upon receiving the service\_request\_(n) telemetry will do the following:
  - a) FW will clear the **hst\_irq** service\_request\_(n) (Keep HW from bothering FW).
  - b) Check **hst\_markers\_tcds** register to use appropriate register to get the size of the buffer  
**hst\_wfcnt0, hst\_wfcnt1, hst\_wfmkrct0, hst\_wfmkrct1**
  - c) Blockmove the EGM/Marker data into the local buffers and clear appropriate **service\_request\_(n)** in **hst\_irq2tel\_0**, hardware will clear the **hst\_markers** bits accordingly.  
 Note for (c): Host can mask this interrupt since this is primarily used by the hardware

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## 7.6 RAMWARE

The capability of be able to read and write memory on to the telemetry module allows the following:

- Ability to either download via telemetry a new set of functionality in the SRAM, or
- Ability to download firmware patches via telemetry to enhance or fix ROM issues.
- Ability for slave host to provide ramware via local data request.
- Ability for master host to provide ramware via local data request.

Typically ramware is generated by the master's host application software. Master host uses the upper layer header byte to indicate the intended recipient of the ramware (i.e. master or slave).

This allows the ramware to download to the telemetry module once a secure communication session is successfully opened (See **5.2.10 OPEN SESSION**). An external data service provides a mechanism through which master's host application downloads the ramware to the slave's telemetry module.

The slave host has an ability to provide ramware to the telemetry slave module prior to establishing the session using the local data request1 buffer.

Master's host uses two destination bits in the upper layer header byte (See **Figure 48: Master's ULH byte** and **Figure 49: Slave's ULH byte** for details). Master's host uses three types of record formats to download data to slave's telemetry module. These record types consist of Start of message followed by either Mozart module read or write or special function. The slave acknowledges the successful receipt of the transaction via Ready receive or Reject response.

### **TLMM\_S\_412 - RAMWARE RESTRICTIONS**

The slave shall reject a RAMWARE request (data service request destined for slave Mozart) under the following conditions:

- a. The session was started using Telemetry C, or
- b. Telemetry M session is not secure, or
- c. Telemetry M session was started with an EBAN key

[Ramware request from master host to slave mozart must be done using a secure telemetry M session started with a permanent BAN key. Telemetry C must use a master host to slave host data service request followed by a slave host to slave Mozart data request.

Additionally note that the master host should send the slave host a message to stop using service request buffer 1 before downlinking any ramware. The slave RFM uses the service request buffer when responding to a ramware downlink. If the slave host continues to use the buffer as well, unpredictable results will occur. The Slave Received Mozart Data Indication attempts to do the same thing, but a host to host downlink provides better protection. It prevents the race condition of the host sending a request on buffer 1 at the "same time" it is receiving a Slave Received Mozart Data Indication.]

### **TLMM\_S\_430 - MOZART DATA REQUEST INDICATION**

The slave shall send Slave Received Mozart Data Indication (**TABLE 115: SLAVE RECEIVED MOZART DATA INDICATION**) to host when slave receives RAMWARE request (data service request destined for slave Mozart) from master during communication state.

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When slave host receives the Slave Received Mozart Data Indication, host should stop using the data service request1 buffer and then acknowledge the indication. This is because slave Mozart will utilize the data service request1 buffer to send the Mozart data response to master once slave receives the indication acknowledge. Since there is no way for the slave host to know when the “ramware uplink” is complete, the slave host should discontinue using service request buffer 1 indefinitely (until the part is shutdown and re-enabled).

Finally since the slave host is prevented from using service request buffer 1, the master should no longer send data requests destined to the slave host after sending a ramware downlink. It is safe for the master to send normal (non-ramware) requests to the slave host once the session is closed and subsequently re-opened.

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**TABLE 115: SLAVE RECEIVED MOZART DATA INDICATION**

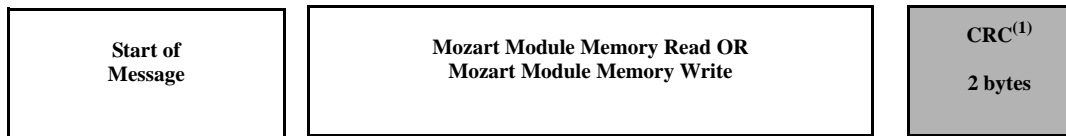
FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	Type of indication	0x39 - slave received mozart data indication
Sub-type	N/A	1		n/a
Size	N/A	2		1 bytes
Info	Slave Received Mozart Data Indication		Status of the indication	0x01 - successful
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

### 7.6.1 RAMWARE REQUESTS

There are three types of request messages - Mozart module memory read, Mozart module memory write and special function commands. Every message has a Start of Message record as the first two bytes and a message CRC as the last two bytes.

### 7.6.2 MOZART MODULE MEMORY READ AND WRITE

Master host to slave Mozart read and write commands must be performed after successful open session (communication state). Master host to master Mozart read and write commands must be performed before open session (master standby state). Slave host to slave Mozart read and write commands must be performed before open session (slave standby state). Each Mozart module message can contain a single read or a write request. The purpose of Mozart module memory read and write commands is to allow read and write access of the telemetry module's local memory. These commands can also be used to download telemetry ramware patches into the module's SRAM as necessary. An example of a Mozart module memory read or write message is shown below:



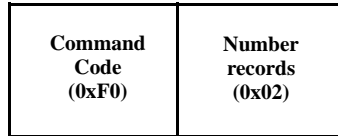
**Figure 126: Mozart Module Memory Read or Write Message Format**

(1) The CRC excludes the command code byte of the start of message record.

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### 7.6.3 START OF MESSAGE

Each Mozart module memory read or write message will begin with a start of message record as follows:



**Figure 127: Start of Message record format**

The command code identifies this record is a start of message record. The second byte of the record defines the number of records in the message. The number of records will always be 2 for Mozart module memory read and write.

#### 7.6.3.1 MOZART MODULE MEMORY READ

The master host or slave host will use the Mozart read command to retrieve the content of the Mozart master or Mozart slave's RAM. The maximum number of bytes to read is limited by the maximum transaction size (See **TABLE 113: Mozart dual port request interface**). Note that the master host can read the master Mozart memory or the slave Mozart memory. The slave host can only read the slave Mozart memory.

#### **TLMM\_MS\_388 - MOZART MODULE MEMORY READ**

The host will use the Mozart module memory read command to retrieve the content of telemetry RAM using the specified memory read record.

- The command code identifies the record as a Mozart module memory read record.
- The second, third, and fourth bytes of the record define the address of memory from which to start the read response.
- The fifth and sixth bytes define the number of memory bytes which are to be read. The number of memory bytes shall never be zero.

[The following are valid memory read addresses:

- \* 0x0000 - 0x3eff (fixed RAM - bank 0)
- \* 0x4000 - 0x7fff (non-fixed RAM - bank 1)
- \* 0x8000 - 0xbfff (non-fixed RAM - bank 2)

Other addresses are invalid.]

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<b>Command Code (0x00)</b>	<b>Address (High)</b>	<b>Address (Med)</b>	<b>Address (Low)</b>	<b>#Memory Bytes (High)</b>	<b>#Memory Bytes (Low)</b>	<b>CRC  2 bytes</b>
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**Figure 128: Mozart Module Memory Read Format**

### 7.6.3.2 MOZART MODULE MEMORY WRITE

The host will use the Mozart module memory write command to write the content into the telemetry module's memory using the memory write record. The memory write record can be used to write one or more data bytes. This memory write must be contiguous bytes from the starting address specified in the address field where message size is <= transaction size. (See **TABLE 113: Mozart dual port request interface**)

#### **TLMM\_MS\_389 - MOZART MODULE MEMORY WRITE**

The host will use the Mozart module memory write command to write contiguous bytes of the Mozart module.

- The command code identify the record as a Mozart memory write record
- The second, third, and fourth bytes of the record define the first memory location which is to be updated.
- The fifth and sixth bytes define the number of bytes to update. The number of bytes shall never be zero

[The following are valid memory write addresses:

- \* 0x0000 - 0x3eff (fixed RAM - bank 0)
- \* 0x4000 - 0x7fff (non-fixed RAM - bank 1)
- \* 0x8000 - 0xbfff (non-fixed RAM - bank 2)

Other addresses are invalid.]

<b>Command Code (0x80)</b>	<b>Address (High)</b>	<b>Address (Med)</b>	<b>Address (Low)</b>	<b>#Memory Bytes (High)</b>	<b>#Memory Bytes (Low)</b>	<b>Data (#bytes to be written)</b>	<b>CRC  2 bytes</b>
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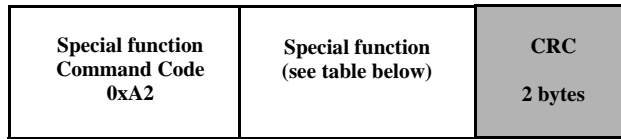
**Figure 129: Mozart Module Memory Write record format**



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### 7.6.3.3 SPECIAL FUNCTION COMMANDS

A message which contains a Special function command record (2 bytes), should begin with a Start of message as its first record. When the Mozart module receives a message with a special function command, it will execute that function (i.e., write EEPROM, or trigger/clear ramware). Refer to **TABLE 116: Special function commands** for the list of special command functions. Note that when the master host sends a special command to write EEPROM to the Mozart slave, the action will be deferred until the session is closed. This is done because concurrent telemetry and EEPROM writing cannot occur due to the large current demands of these functions.



**Figure 130: Special function record format**

**TABLE 116: SPECIAL FUNCTION COMMANDS**

VALUE	EEPROM STRUCTURES	RAM ADDRESS	OPERATION
0x01	P_HDW1	0X3600	write to eeprom <sup>(1)</sup>
0x02	P_HDW2	0X3670	write to eeprom <sup>(1)</sup>
0x03	P_WAKEUP	0x36E0	write to eeprom <sup>(1)</sup>
0x04	P_CONFIG	0x3750	write to eeprom <sup>(1)</sup>
0x05	P_RAMWARE	0x2300	write to eeprom <sup>(1)</sup>
0x06	TRIGGER RAMWARE	n/a	enable ramware
0x07	CLEAR RAMWARE	n/a	clear ramware <sup>(2)</sup>

1. The EEPROM block needs the CRC bytes swapped (whereas the application message level CRC does not). Additionally the polling duration (master initialize request) must be zero to write the slave EEPROM. Finally, the EEPROM is not written until a close session is performed (slave).
2. This command clears the RAMware from RAM. It does not clear it from EEPROM. If that is desired, a subsequent write ramware to EEPROM special command (value 0x05) must be used.

#### **TLMM\_MS\_436 - MOZART MODULE WRITE TO EEPROM**

When a valid write to EEPROM special function command is received from upper layer, Mozart shall write the appropriate structure to EEPROM. See **TABLE 116: Special function commands** (values 0x01 - 0x05).

#### **TLMM\_S\_437 - MOZART MODULE WRITE TO EEPROM AFTER CLOSE WITHOUT POLLING INDICATION**

When a valid write to EEPROM special function command is received from master Mozart Master, the slave Mozart shall write the appropriate structure to EEPROM after close with out polling indication is generated. (i.e., after close request is received and the polling duration is zero). See **TABLE 116: Special function commands** (values 0x01 - 0x05).

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**TLMM\_MS\_438 - MOZART MODULE ENABLE RAMWARE**

When a valid enable ramware special function command is received from upper layer, Mozart shall enable ramware.

**TLMM\_MS\_439 - MOZART MODULE CLEAR RAMWARE**

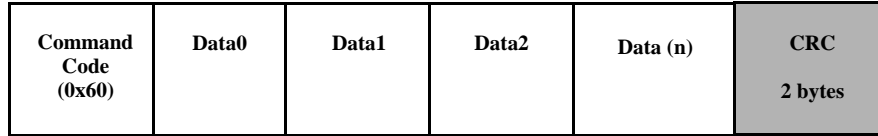
When a valid clear ramware special function command is received from upper layer, Mozart shall clear the ramware areas.

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## 7.6.4 RAMWARE RESPONSES

### 7.6.4.1 RESPONSE TO MOZART MEMORY READ

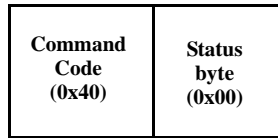
Response messages are constructed with one byte of command code which identifies the message, followed by a variable number of data bytes followed by two bytes of CRC on the data values. The message is generated by the Mozart module. An example is shown below.



**Figure 131: Mozart Module memory response format**

### 7.6.4.2 RESPONSE TO MOZART MEMORY WRITE (RECEIVE READY)

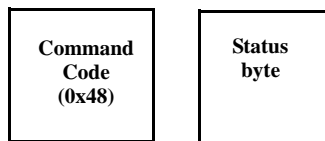
The Mozart module will use a receive ready to signal that the processing of the memory write (or special command) is completed. An example is shown below.



**Figure 132: Ready Receive message format**

### 7.6.4.3 REJECT

The Mozart module will use a reject message to signal that the processing associated with the current Mozart request (memory read, memory write, or special command) has failed due to an interface error. This type of error is due to interface issues and can be used for system testing.



**Figure 133: Reject message format**

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**TABLE 117: REJECT STATUS**

VALUE	DESCRIPTION
0x01	CRC failure
0x02	Start of Message (F0,02) error
0x03	Unknown command
0x04	Record size too small (Slave only)
0x05	Record size too big (Slave only)
0x06	Message too short (Master only)
0x07	Invalid read record <sup>(1)</sup> (Master only)
0x08	Invalid write record <sup>(1)</sup> (Master only)
0x09	Run-time error <sup>(2)</sup>
0x0A	RAMWARE not supported in TelC (Master only) <sup>(3)</sup>
0x0B	RAMWARE not supported in unsecured session or secure session with EBAN key (Master only) <sup>(4)</sup>
0x0C	Record after the special command is unknown
0x0D	EEPROM write failed
0x0E	EEPROM write duration failed
0x0F	EEPROM write duration failed because Power Inhibit takes too long (slave only)

1. This status value is used by the master only. It occurs if the bytes to read (or write) are zero, too big, or any address is beyond 0xbfff (Note that fixed RAM bank 0 is at 0-0x3fff, non-fixed RAM bank 1 is at 0x4000-0x7fff and non-fixed RAM bank 2 is at 0x8000-0xbfff).
2. The format of the request message was correct, but the command failed due to one of the following: invalid CRC on RAM to copy to EEPROM.
3. This status can only occur when Master tries to send RAMWARE to slave Mozart while Telemetry C is running.
4. This status can only occur when Master tries to send RAMWARE to slave Mozart in unsecured session or secure session with EBAN key.

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#### 7.6.4.4 INTERFACE BETWEEN SLAVE HOST AND TELEMETRY MODULE

This capability allows the slave host to provide the ramware content to telemetry module. The host on the slave will use (data request1 buffer) to read, write, request to slave's telemetry module, as well as command telemetry module to write to EEPROM while telemetry module in the standby state. The telemetry module will be in the standby state after the initialization service request has been completed and no polling request has been issued by the slave host. The data service interface is used by the slave host to interface with the telemetry module. Slave's ULH byte should have a value of 0x30 see **Figure 49: Slave's ULH byte**. The data request transaction format for read, write, and special function command are the same as **Fig. 126 (Mozart Module Memory Read or Write Message Format)**. Slave's telemetry module will provide an appropriate data response upon completion. Following tables provide the interface responses read, write and special function commands:

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**TABLE 118: SLAVE READ RESPONSE**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	Local ramware response	0x04 - data response
Sub-type	N/A	1	The service response sub-type	0 - memory data
Size	N/A	2	The size of the info field	n+6 bytes where n +1 = #bytes of data to read
Info	Slave local ramware		Status of the service request	byte1 - 0x01 (successful) byte2 - 0x30 <sup>(1)</sup> byte3 - 0x60 byte4 - data0 byte5 - data1 ..... byte(n+4) - data(n) byte(n+5) - crc high byte byte(n+6) - crc low byte and CRC for all data values (data0 through data(n))
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

- The ULH byte is 0x30 when the slave state is communication (response destined for master host). The ULH byte is 0x38 when the slave state is standby (response destined for slave host).

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**TABLE 119: SLAVE REJECT DATA SERVICE RESPONSE**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	Local ramware response	0x04 - data response
Sub-type	N/A	1	The service response sub-type	0 - memory data
Size	N/A	3	The size of the info field	4 bytes
Info	Slave local ramware		Status of the service request	byte1 - 0x01 (successful) byte2 - 0x30 <sup>(1)</sup> byte3 - 0x48 byte4 - status byte For status byte information see <b>TABLE 117: Reject status</b>
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

1. The ULH byte is 0x30 when the slave state is communication (response destined for master host). The ULH byte is 0x38 when the slave state is standby (response destined for slave host).

**TABLE 120: SLAVE READY DATA SERVICE RESPONSE**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	Local ramware response	0x04 - data response
Sub-type	N/A	1	The service response sub-type	0 - memory data
Size	N/A	3	The size of the info field	4 bytes
Info	Slave local ramware		Status of the service request	byte1 - 0x01 (successful) byte2 - 0x30 <sup>(1)</sup> byte3 - 0x40 byte4 - 0x00
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

1. The ULH byte is 0x30 when the slave state is communication (response destined for master host). The ULH byte is 0x38 when the slave state is standby (response destined for slave host).

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**TABLE 121: SLAVE EEPROM WRITE INDICATION**

FIELD	INFO FIELD	# OF BYTES	DESCRIPTION	VALUES
Type	N/A	1	Type of indication	0x2F - eeprom write indication
Sub-type	N/A	1		n/a
Size	N/A	2		1 bytes
Info	Slave Eeprom Write Indication		Status of the indication	0x01 - successful 0x08 - failed 0x03 - timeout 0x12 - timeout because Power Inhibit takes too long
CRC	N/A	2	CRC of all the above fields. Two bytes.	This value is computed by the data link layer. It is used by the upper layer verify the integrity of the service response.

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## 7.7 MASTER TELEMETRY C DIFFERENCES - LEM VS. MOZART

This section describes the master telemetry C differences (LEM vs. Mozart). All master telemetry C requirements are listed below (i.e., TLMC\_E and TLMC\_IE).

### Master Telemetry C Requirements

TLMC_IE_001 - DOWNLINK PACKET CONTROL BYTES	IMPLEMENTED
TLMC_IE_002 - UPLINK PACKET CONTROL BYTES	IMPLEMENTED
TLMC_IE_003 - PACKET TYPES	IMPLEMENTED
TLMC_IE_004 - INSTRUMENT ID	IMPLEMENTED <sup>(A)</sup>
TLMC_IE_006 - EXTERNAL SERVICE REQUEST PROCESSING	IMPLEMENTED
TLMC_E_237 - SERVICE DURATION TOLERANCE	IMPLEMENTED <sup>(B)</sup>
TLMC_E_243 - UPLINK PACKET RESPONSE TIMEOUT	IMPLEMENTED
TLMC_E_010 - DISCOVER SERVICE REQUEST FROM C INTERFACE LAYER	IMPLEMENTED <sup>(C)</sup>
TLMC_E_011 - VALID IMPLANT ID WITH STOP ON MATCH	IMPLEMENTED <sup>(D)</sup>
TLMC_IE_012 - DISCOVER FULL - DISCOVER ID PACKET FORMAT	IMPLEMENTED
TLMC_E_013 - DISCOVER FULL - DOWNLINK DISCOVER ID REQUEST PACKET	IMPLEMENTED
TLMC_E_014 - DISCOVER FULL - RETRY DISCOVER ID REQUEST	IMPLEMENTED
TLMC_E_016 - DISCOVER FULL - LISTEN BEFORE TALK TIMER DURING ID	IMPLEMENTED <sup>(E)</sup>
TLMC_IE_017 - DISCOVER FULL - DISCOVER ID RESPONSE PACKET FORMAT	IMPLEMENTED
TLMC_IE_018 - DISCOVER FULL - DISCOVER NAME REQUEST PACKET FORMAT	IMPLEMENTED
TLMC_E_019 - DISCOVER FULL - DOWNLINK DISCOVER NAME REQUEST PACKET	IMPLEMENTED <sup>(F)</sup>
TLMC_E_020 - DISCOVER FULL - RETRY DISCOVER NAME REQUEST	IMPLEMENTED
TLMC_IE_022 - DISCOVER FULL - DISCOVER NAME RESPONSE PACKET FORMATS	IMPLEMENTED
TLMC_E_024 - DISCOVER FULL - RESPONSE TO C INTERFACE LAYER	IMPLEMENTED <sup>(G), (H)</sup>
TLMC_E_025 - DISCOVER NAME - DOWNLINK REQUEST PACKET	NOT NEEDED <sup>(I)</sup>
TLMC_E_026 - DISCOVER NAME - RETRY DOWNLINK PACKET	NOT NEEDED
TLMC_E_027 - DISCOVER NAME - LISTEN BEFORE TALK TIMER DURING ID	NOT NEEDED
TLMC_E_028 - DISCOVER NAME - RESPONSE TO C INTERFACE LAYER	NOT NEEDED
TLMC_E_029 - DISCOVER STOP ON MATCH - DISCOVER ID RESPONSE MATCH INSTR ID	IMPLEMENTED
TLMC_E_030 - DISCOVER STOP ON MATCH - DISCOVER NAME REQUEST	IMPLEMENTED
TLMC_E_031 - DISCOVER STOP ON MATCH - MATCHING IMPLANT ID	NOT NEEDED <sup>(J)</sup>

A.Host interface difference. The master ID was set using the programmer ID ICCG request on the LEM. This is set via the master init request in Mozart.

B.Implementation difference. All timers had a resolution of 5 msec. On Mozart both discover and open have a resolution of one second. The tolerance for these request is +/- 1 second.

C.Host interface difference. The discover service duration is located in the master init request. The implant scan duration (now discover collision avoidance duration) is in the master init. The discover implant ID is still a parameter of discover on Mozart, but it does nothing.

D.Mozart does not have an explicit discover stop on match feature. However the discover full parameter called “discover slave ID” can be used to mimic the discover stop on match feature. On the LEM the “discover slave ID” cannot be set to all wildcards; on Mozart it can (i.e., discover full).

E.Implementation difference. LEM CCA took 223 to 934 msec. On Mozart it takes 275 msec.

F.Implementation difference. The discover retry is controlled by discover name retry timer (EEPROM) on Mozart. This timer has a resolution of 31 msec. It may not be possible to get exactly two retries.

G.Host interface difference. There are additional failed service responses on Mozart (see TLMC\_M\_024). The service response status 0x06 is not shown in this requirement. This response is pertinent to telemetry C. It means the service request is invalid in the current state (state is recovery; sending hibernate downlinks).

H.On the LEM the service response occurs at the end of the service. On Mozart the response is immediate. A timeout indication is used to communicate the service end. All ID/ name pairs were given at service end on the LEM. The ID/ name pairs are given as they are found on Mozart (discover indication). Note discover can be terminated via a discover stop service request as well (see req TLMM\_M\_274).

I.This feature was not brought forward since the host no longer needs it. The host won't given an ID without a name.

J.The Mozart discover implementation is terminated upon a service duration timeout or a discover stop service request.



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1	TLMC_E_034 - DISCOVER STOP ON MATCH - RESPONSE TO C INTERFACE LAYER	IMPLEMENTED <sup>(G)</sup>	1
2	TLMC_E_040 - OPEN - C INTERFACE LAYER PARAMETERS	IMPLEMENTED <sup>(K)</sup>	2
3	TLMC_IE_041 - OPEN - DOWNLINK REQUEST PACKET FORMAT	IMPLEMENTED	3
4	TLMC_IE_042 - OPEN - UPLINK OPEN RESPONSE PACKET FORMAT	IMPLEMENTED	4
5	TLMC_E_043 - OPEN - DOWNLINK REQUEST	IMPLEMENTED <sup>(L)</sup>	5
6	TLMC_E_044 - OPEN - NO VALID UPLINK RESPONSE RETRY DOWNLINK REQUEST	IMPLEMENTED	6
7	TLMC_E_045 - OPEN - LISTEN BEFORE TALK TIMER OPERATIONS	IMPLEMENTED	7
8	TLMC_E_047 - OPEN - A VALID UPLINK RESPONSE	IMPLEMENTED	8
9	TLMC_E_048 - OPEN - RESPONSE TO C INTERFACE LAYER	IMPLEMENTED <sup>(M)</sup>	9
10	TLMC_E_215 - OPEN - HIBERNATE DOWNLINK REQUEST	IMPLEMENTED <sup>(N)</sup>	10
11	TLMC_E_049 - DATA - C INTERFACE LAYER TO DATA LINK LAYER PARAMETERS	IMPLEMENTED <sup>(O)</sup>	11
12	TLMC_IE_050 - DATA - DOWNLINK REQUEST PACKET FORMAT(S)	IMPLEMENTED	12
13	TLMC_E_051 - DATA - DOWNLINK OF DATA PACKET	IMPLEMENTED	13
14	TLMC_E_053 - DATA - PACKETIZATION OF THE DOWNLINK DATA	IMPLEMENTED	14
15	TLMC_E_054 - DATA - RETRANSMISSION OF DOWNLINK PACKET - NO ACK RECEIVED	IMPLEMENTED	15
16	TLMC_E_058 - DATA - RESPONSE TO C INTERFACE LAYER	IMPLEMENTED <sup>(P), (Q)</sup>	16
17	TLMC_E_063 - DATA - RECEIPT OF AN INVALID UPLINK PACKET	IMPLEMENTED	17
18	TLMC_E_064 - DATA - ASSEMBLING DATA PACKET INTO TRANSACTIONS	IMPLEMENTED <sup>(R)</sup>	18
19	TLMC_E_065 - DATA - RESPONSE BEFORE DATA INDICATION	NOT NEEDED <sup>(S)</sup>	19
20	TLMC_E_066 - DIAGNOSTIC SERVICE REQUEST FROM C INTERFACE LAYER	IMPLEMENTED <sup>(T)</sup>	20
21	TLMC_E_067 - REMOTE DIAGNOSTIC - DOWNLINK PACKET FORMAT	IMPLEMENTED	21
22	TLMC_E_071 - REMOTE DIAGNOSTIC - DOWNLINK REQUEST RETRANSMISSION	IMPLEMENTED	22
23	TLMC_E_072 - REMOTE DIAGNOSTIC - RESPONSE TO C INTERFACE LAYER	IMPLEMENTED <sup>(U)</sup>	23
24	TLMC_E_073 - LOCAL DIAGNOSTIC - RESPONSE TO C INTERFACE LAYER	IMPLEMENTED <sup>(V)</sup>	24
25	TLMC_E_074 - MAPPING DIAGNOSTIC - RESPONSE TO C INTERFACE LAYER	IMPLEMENTED <sup>(W)</sup>	25
26	TLMC_E_075 - DIAGNOSTIC FILLER - DOWNLINK FILLER PACKETS	IMPLEMENTED	26
27	TLMC_E_077 - EMERGENCY - C INTERFACE LAYER PARAMETERS	IMPLEMENTED <sup>(X)</sup>	27
28	TLMC_E_078 - EMERGENCY - DOWNLINK OF EMERGENCY REQUEST	IMPLEMENTED	28
29	TLMC_E_079 - EMERGENCY - DOWNLINK REQUEST NOT ACKNOWLEDGED	IMPLEMENTED	29
30	TLMC_E_080 - EMERGENCY - DOWNLINK REQUEST ACKNOWLEDGED	IMPLEMENTED	30
31	TLMC_E_081 - EMERGENCY - STATUS RESPONSE TO C INTERFACE LAYER	IMPLEMENTED <sup>(Y), (Z)</sup>	31
32	TLMC_E_082 - RAW MODE - C INTERFACE LAYER DOWNLINK PARAMETERS	IMPLEMENTED <sup>(AA)</sup>	32
33	TLMC_E_083 - RAW MODE - DOWNLINK ATTACHED OPERATION	IMPLEMENTED	33

K.Host interface difference. The open service duration resides in the init request on Mozart. The open sub-type enumerations are as follows: 0 - open immediate; 1 - open hibernate.

L.Implementation difference. LEM CCA took 223 to 934 msec. On Mozart it takes 275 msec.

M.Host interface difference. There are additional failed service responses on Mozart (see TLMM\_M\_296). Note that the responses about BAN key do not apply.

N.The Mozart RFM does not send telem B device ID in parallel with telemetry C hibernate downlink packets.

O.Host interface change. On the LEM, the C interface layer managed the data service's reset parameter. In Mozart, the C interface layer has been removed. The data link layer now controls reset (see telem M req TLMM\_M\_362 and TLMM\_M\_363). Additionally the service duration has been replaced by the reply duration. On the LEM, the C interface layer controlled data service retry (failed due to recovery). On Mozart, this functionality has been moved into the data link layer (see TLMM\_M\_298, TLMM\_M\_299).

P.Host interface change. There are additional failed service responses on Mozart (see TLMC\_M\_058). The service response 0x29 is not used by telemetry C. Additionally the service response status 0x06 is not shown in this requirement. This response is pertinent to telemetry C. It means the service request is invalid in the current state (state is recovery; sending hibernate downlinks).

Q.On the LEM the service response occurs when the downlink transaction is fully acknowledged. On Mozart the service response occurs when the final uplink indication has been given to the master host.

R.Host interface difference. On the LEM, the data link layer sent a data indication to the C interface layer. The C interface layer then sent a downlink ICCC response to the host. On Mozart the data link layer sends a data indication directly to the host (see TLMM\_M\_297).

S.This requirement is not needed in Mozart since the host interface is different. Now a data service response comes after all indications.

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1	TLMC_E_084 - RAW MODE - DOWNLINK ATTACHED UPLINK RESPONSE.....	IMPLEMENTED <sup>(AB)</sup>	1
2	TLMC_E_085 - RAW MODE - ECHO ON STATUS TO C INTERFACE LAYER.....	NOT NEEDED <sup>(AC)</sup>	2
3	TLMC_E_086 - RAW MODE - ECHO ON - DOWNLINK PACKET.....	NOT NEEDED	3
4	TLMC_E_087 - RAW MODE - ECHO ON - UPLINK PACKET.....	NOT NEEDED	4
5	TLMC_E_088 - RAW MODE - ECHO OFF STATUS TO C INTERFACE LAYER.....	NOT NEEDED	5
6	TLMC_E_089 - CLOSE - C INTERFACE LAYER DOWNLINK PARAMETERS.....	IMPLEMENTED <sup>(AD)</sup>	6
7	TLMC_IE_090 - CLOSE - DOWNLINK PACKET FORMAT.....	IMPLEMENTED	7
8	TLMC_IE_091 - CLOSE - UPLINK PACKET FORMAT.....	IMPLEMENTED	8
9	TLMC_E_092 - CLOSE - DOWNLINK REQUEST.....	IMPLEMENTED	9
10	TLMC_E_093 - CLOSE - RETRANSMISSION OF DOWNLINK REQUEST.....	IMPLEMENTED	10
11	TLMC_E_096 - CLOSE - RECEIPT OF A VALID RESPONSE.....	IMPLEMENTED	11
12	TLMC_E_097 - CLOSE - IMPLICITLY SUCCESSFUL.....	IMPLEMENTED	12
13	TLMC_E_098 - CLOSE - RESPONSE TO C INTERFACE LAYER.....	IMPLEMENTED <sup>(AE)</sup>	13
14	TLMC_E_099 - CLOSE - RECOVERY DURING CLOSE.....	IMPLEMENTED	14
15	TLMC_E_218 - MEDICAL EVENT - C INTERFACE PARAMETERS.....	IMPLEMENTED <sup>(AF)</sup>	15
16	TLMC_IE_219 - MEDICAL EVENT - UPLINK PACKET FORMAT.....	IMPLEMENTED	16
17	TLMC_E_220 - MEDICAL EVENT - MEDICAL EVENT REQUEST.....	IMPLEMENTED	17
18	TLMC_E_221 - MEDICAL EVENT - MEDICAL EVENT UPLINK.....	IMPLEMENTED	18
19	TLMC_E_222 - MEDICAL EVENT - INVALID MEDICAL EVENT UPLINK.....	IMPLEMENTED	19
20	TLMC_E_223 - MEDICAL EVENT - ANTENNA TIMEOUT.....	IMPLEMENTED	20
21	TLMC_E_224 - MEDICAL EVENT - LISTEN BEFORE TALK TIMEOUT.....	IMPLEMENTED	21
22	TLMC_E_228 - MEDICAL EVENT - RESPONSE TO C INTERFACE LAYER.....	IMPLEMENTED <sup>(AG)</sup>	22
23	TLMC_E_100 - ARQ - STOP AND WAIT DOWNLINK ACKNOWLEDGMENT.....	IMPLEMENTED	23
24	TLMC_IE_101 - ARQ - DOWNLINK ARQ PACKET FORMAT.....	IMPLEMENTED	24
25	TLMC_E_102 - ARQ - UPDATING OF ARQ INFORMATION.....	IMPLEMENTED	25
26	TLMC_E_103 - ARQ - MEMORY DATA UPLINK PACKET ACKNOWLEDGMENT.....	IMPLEMENTED	26
27	TLMC_E_104 - ARQ - UPLINK ACK NOT RECEIVED.....	IMPLEMENTED	27
28	TLMC_E_105 - ARQ - INITIATE DOUBLE-UP WAVEFORM.....	IMPLEMENTED	28
29	TLMC_E_112 - CH MAPPING - COLLECT MAPPING DATA.....	IMPLEMENTED <sup>(AH)</sup>	29
30	TLMC_E_113 - CH MAPPING - PROCESS MAPPING DATA.....	IMPLEMENTED <sup>(AI)</sup>	30
31	TLMC_E_114 - CH MAPPING - CALCULATE AVERAGES.....	IMPLEMENTED	31
32	TLMC_E_115 - CH MAPPING - COLLECT MAPPING DATA.....	NOT NEEDED <sup>(AJ)</sup>	32
33	TLMC_E_116 - CH MAPPING - EVALUATE COLLECTED DATA.....	NOT NEEDED <sup>(AJ)</sup>	33
34	TLMC_E_117 - CH MAPPING - EVALUATION CONTROL.....	IMPLEMENTED <sup>(AK)</sup>	34

T.Host interface difference. The diagnostic service duration is not a parameter, it is obtained via the master init request (vs. a direct parameter of the diagnostic request on the LEM).

U.Host interface change. There are additional failed service responses on Mozart (see TLMC\_M\_072). The service response status 0x06 is not shown in this requirement. This response is pertinent to telemetry C. It means the service request is invalid in the current state (state is recovery; sending hibernate downlinks). Note, the info portion of the service response is defined in the telemetry M appendix (not the telemetry C appendix).

V.Host interface change. There are additional failed service responses on Mozart (see TLMC\_M\_073). Note, the info portion of the service response is defined in the telemetry M appendix (not the telemetry C appendix).

W.Host interface change. There are additional failed service responses on Mozart (see TLMC\_M\_074). The service response status 0x06 is not shown in this requirement. This response is pertinent to telemetry C. It means the service request is invalid in the current state (state is recovery; sending hibernate downlinks). Note, the info portion of the service response is defined in the telemetry M appendix (not the telemetry C appendix).

X.Host interface change. The service duration has been replaced by the reply duration (to be symmetric with the data service). This parameter resides in the master init reset on Mozart.

Y.Host interface difference. There are additional failed service responses on Mozart (see TLMC\_M\_081). The service response status 0x06 is not shown in this requirement. This response is pertinent to telemetry C. It means the service request is invalid in the current state (state is recovery; sending hibernate downlinks).

Z.On the LEM the data link sent an emergency service response when the emergency downlink was acknowledged. On Mozart, the emergency service response is not sent until the final uplink indication is given to the master host.

AA.Host interface difference. The raw mode service duration in the EEPROM (p\_config) in Mozart. The raw mode types of "echo on" and "echo off" are not supported.

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1	TLMC_E_118 - CH MAPPING - DIAGNOSTIC DATA COLLECTION . . . . .	IMPLEMENTED	1
2	TLMC_E_119 - CH MAPPING - CALCULATE DIAGNOSTIC DATA AVERAGES . . . . .	IMPLEMENTED <sup>(AL)</sup>	2
3	TLMC_E_120 - CH RECOVERY - TRIGGER CHANNEL RECOVERY . . . . .	IMPLEMENTED <sup>(AM)</sup>	3
4	TLMC_E_121 - CH RECOVERY - START SAME CHANNEL RECOVERY . . . . .	IMPLEMENTED	4
5	TLMC_E_122 - CH RECOVERY - SAME CHANNEL RECOVERY OPEN DOWNLINK . . . . .	IMPLEMENTED	5
6	TLMC_E_123 - CH RECOVERY - SAME CHANNEL RECOVERY SUCCESSFUL . . . . .	IMPLEMENTED	6
7	TLMC_E_124 - CH RECOVERY - SAME CHANNEL RECOVERY UNSUCCESSFUL . . . . .	IMPLEMENTED	7
8	TLMC_E_261 - CH RECOVERY - TOO MANY SAME CHANNEL RECOVERIES . . . . .	IMPLEMENTED	8
9	TLMC_E_125 - CH RECOVERY - START UNSPECIFIED CHANNEL RECOVERY . . . . .	IMPLEMENTED <sup>(AN)</sup>	9
10	TLMC_E_126 - REMAP CHANNEL - UNSPECIFIED CHANNEL RECOVERY TIMER EXPIRATION . . . . .	IMPLEMENTED <sup>(AO)</sup>	10
11	TLMC_E_127 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY SUCCESSFUL . . . . .	IMPLEMENTED	11
12	TLMC_E_128 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY UNSUCCESSFUL . . . . .	IMPLEMENTED	12
13	TLMC_E_129 - DATA TRANSFER MODE - MODE TRANSITIONS . . . . .	IMPLEMENTED <sup>(AP)</sup>	13
14	TLMC_E_140 - DATA TRANSFER MODE - NOMINAL TO LOW ENERGY MODE TRANSITIONS . . . . .	IMPLEMENTED	14
15	TLMC_E_141 - DATA TRANSFER MODE - NEGATIVE PREAMBLE RATIO IN LOW ENERGY MODE . . . . .	IMPLEMENTED	15
16	TLMC_E_142 - DATA TRANSFER MODE - LOW ENERGY TO NOMINAL TRANSITION . . . . .	IMPLEMENTED	16
17	TLMC_E_143 - DATA TRANSFER MODE - TRANSITION TO NEW MODE ON DOWNLINK . . . . .	IMPLEMENTED	17
18	TLMC_E_145 - RESET SERVICE - DOWNLINK PACKET WITH RESET BIT . . . . .	IMPLEMENTED <sup>(AQ)</sup>	18
19	TLMC_E_146 - RESET SERVICE - DOWNLINK RESET REQUEST RETRANSMISSION . . . . .	IMPLEMENTED <sup>(AR)</sup>	19
20	TLMC_E_148 - RESET SERVICE - OPERATION SUCCESSFUL . . . . .	IMPLEMENTED	20
21	TLMC_E_244 - RF HEAD LEDS . . . . .	NOT NEEDED <sup>(AS)</sup>	21
22	TLMC_E_156 - SIGNAL - STRENGTH INDICATOR . . . . .	IMPLEMENTED <sup>(AT)</sup>	22
23	TLMC_E_158 - CIL - REQUEST-RESPONSE-DEFINITION . . . . .	NOT NEEDED <sup>(AU)</sup>	23
24	TLMC_E_159 - CIL - ID ALL REQUEST AND RESPONSE VIA DISCOVER FULL . . . . .	NOT NEEDED <sup>(AV)</sup>	24
25	TLMC_E_161 - CIL - REQUEST ID WHEN DEVICE NAME NOT KNOWN . . . . .	NOT NEEDED <sup>(AW)</sup>	25
26	TLMC_E_162 - CIL - REQUEST ID STRING DEVICE NAME KNOWN . . . . .	NOT NEEDED	26
27	TLMC_E_164 - CIL - OPEN IMMEDIATE REQUEST . . . . .	NOT NEEDED <sup>(AX)</sup>	27
28	TLMC_E_165 - CIL - INVALID ICCC OPEN IMMEDIATE REQUEST . . . . .	NOT NEEDED	28
29	TLMC_E_166 - CIL - OPEN WITH DEVICE FOUND REQUEST . . . . .	NOT NEEDED <sup>(AY)</sup>	29
30	TLMC_E_167 - CIL - INVALID OPEN WITH DEVICE FOUND REQUEST . . . . .	NOT NEEDED	30
31	TLMC_E_217 - CIL - OPEN HIBERNATE REQUEST . . . . .	NOT NEEDED <sup>(AZ)</sup>	31
32	TLMC_E_236 - CIL - OPEN STOP HIBERNATE REQUEST . . . . .	NOT NEEDED	32
33	TLMC_E_168 - CIL - TARGET DEVICE ID . . . . .	NOT NEEDED <sup>(BA)</sup>	33

AB.Host interface difference. There are additional failed service responses on Mozart (see TLMC\_M\_084). The service response status 0x06 is not shown in this requirement. This response is pertinent to telemetry C. It means the service request is invalid in the current state (state is recovery; sending hibernate downlinks).

AC.This feature was not ported since it took more CPU processing than available on Mozart. The protocol analyzer takes its place.

AD.Host interface difference. The close service duration resides in the master init request on Mozart.

AE.Host interface difference. There are additional failed service responses on Mozart (see TLMC\_M\_098).

AF.Host interface difference. The requirement TLMC\_E\_218 lists a master medical event service duration. This was never utilized on the LEM. It was not brought forward to Mozart.

AG.Host interface difference. There are additional failed service responses on Mozart (see TLMC\_M\_231). The service response status 0x06 is not shown in this requirement. This response is pertinent to telemetry C. It means the service request is invalid in the current state (state is recovery; sending hibernate downlinks).

AH.Implementation difference. Mozart does not collect preamble detected/ not detected during CCA.

AI.Implementation difference. Mozart CCA performs the screen phase only. It does not perform the evaluate phase.

AJ.This requirement is not needed due to a redesign of the CCA feature (no evaluate phase).

AK.Implementation difference. Mozart will select the quietest channel at the end of the screen phase. (see req M\_357). Mozart noise not initialize the noise registers (the antenna select algorithm doesn't use them). Finally CCA cannot fail in Mozart. On the LEM it could if all channels detected a preamble.

AL.Implementation difference. The Mozart hardware computes the average CCA values.

AM.Implementation difference. Mozart has an additional recovery trigger (trim success). See req M\_392.

AN.Implementation difference. Mozart does not send telem B device ID downlink in parallel with telem C open downlink during channel recovery.

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1	TLMC_E_169 - CIL - VALIDATION OF TARGET DEVICE-ID . . . . .	NOT NEEDED	1
2	TLMC_E_170 - CIL - CLOSE REQUEST . . . . .	NOT NEEDED <sup>(BB)</sup>	2
3	TLMC_E_171 - CIL - DOWNLINK IN CLOSE REQUEST . . . . .	NOT NEEDED	3
4	TLMC_E_172 - CIL - RESET SERIAL NUMBER AFTER CLOSE . . . . .	NOT NEEDED	4
5	TLMC_E_173 - CIL - EMERGENCY DURING CLOSE REQUEST . . . . .	PORTED <sup>(BC)</sup>	5
6	TLMC_E_174 - CIL - RAW MODE DOWNLINK (ATTACHED) . . . . .	NOT NEEDED <sup>(BD)</sup>	6
7	TLMC_E_175 - CIL - REJECT RAW MODE DOWNLINK ATTACHED . . . . .	PORTED <sup>(BE)</sup>	7
8	TLMC_E_176 - CIL - RAW MODE DOWNLINK (ECHO ON) . . . . .	NOT NEEDED <sup>(BF)</sup>	8
9	TLMC_E_177 - CIL - RAW MODE DOWNLINK TO APPLICATION LAYER (ECHO ON) . . . . .	NOT NEEDED	9
10	TLMC_E_178 - CIL - RAW MODE UPLINK DATA . . . . .	NOT NEEDED	10
11	TLMC_E_179 - CIL - RAW MODE DOWNLINK (ECHO OFF) . . . . .	NOT NEEDED	11
12	TLMC_E_180 - CIL - UPLINK DATA INDICATION TIMERS . . . . .	NOT NEEDED <sup>(BG)</sup>	12
13	TLMC_E_181 - CIL - RESPONSE-APP-DATA-UPLINK . . . . .	PORTED <sup>(BH)</sup>	13
14	TLMC_E_182 - CIL - FINAL ICCC DOWNLINK REQUEST . . . . .	PORTED <sup>(BI)</sup>	14
15	TLMC_E_183 - CIL - RETRY DOWNLINK . . . . .	PORTED <sup>(BJ)</sup>	15
16	TLMC_E_184 - CIL - MULTIPLE TRANSACTION DOWNLINK - NOT FINAL . . . . .	PORTED <sup>(BK)</sup>	16
17	TLMC_E_184 - CIL - SERVICE DURATION TIMER . . . . .	NOT NEEDED	17
18	TLMC_E_185 - CIL - EMERGENCY WHILE WAITING FOR DATA . . . . .	PORTED <sup>(BL)</sup>	18
19	TLMC_E_186 - CIL - MESSAGE TAG IN THE DOWNLINK MESSAGE . . . . .	HOST REQUIREMENT <sup>(BM)</sup>	19
20	TLMC_E_187 - CIL - UPLINK WITH NON-MATCHING TAG . . . . .	HOST REQUIREMENT	20
21	TLMC_E_188 - CIL - EMERGENCY ICCC REQUEST DOWNLINK . . . . .	NOT NEEDED <sup>(BN)</sup>	21
22	TLMC_E_189 - CIL - ICCC EMERGENCY REQUEST DOWNLINK . . . . .	PORTED <sup>(BO)</sup>	22
23	TLMC_E_192 - CIL - SECOND ICCC EMERGENCY REQUEST WHILE PROCESSING FIRST . . . . .	PORTED <sup>(BP)</sup>	23
24	TLMC_E_193 - CIL - UPLINK EMERGENCY DATA INDICATION TIMEOUT . . . . .	PORTED <sup>(BQ)</sup>	24
25	TLMC_E_194 - CIL - RECOVERY-WHILE-WAITING-FOR-EMERGENCY . . . . .	NOT NEEDED <sup>(BR)</sup>	25
26	TLMC_E_195 - CIL - EMERGENCY COMPLETE REQUEST . . . . .	HOST REQUIREMENT <sup>(BS)</sup>	26
27	TLMC_E_196 - CIL - EMERGENCY COMPLETE RESPONSE . . . . .	HOST REQUIREMENT	27
28	TLMC_E_197 - CIL - REMOTE STATISTICS ICCC REQUEST . . . . .	NOT NEEDED <sup>(BT)</sup>	28
29	TLMC_E_198 - CIL - LOCAL STATISTICS ICCC REQUEST . . . . .	NOT NEEDED <sup>(BU)</sup>	29
30	TLMC_E_199 - CIL - MAPPING STATISTICS ICCC REQUEST . . . . .	NOT NEEDED <sup>(BV)</sup>	30
31	TLMC_E_200 - CIL - DISABLE DOWNLINK ICCC REQUEST . . . . .	NOT NEEDED <sup>(BW)</sup>	31
32	TLMC_E_201 - CIL - ENABLE DOWNLINK ICCC REQUEST . . . . .	NOT NEEDED <sup>(BX)</sup>	32
33	TLMC_E_245 - CIL - UPDATE DEVICE STATUS ICCC REQUEST . . . . .	PORTED <sup>(BY)</sup>	33
34	TLMC_E_200 - CIL - TELEMETRY ON STATUS TO APPLICATION . . . . .	NOT NEEDED <sup>(BZ)</sup>	34

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AO.Implementation difference. CCA lasts 275 msec on Mozart. The LEM was variable: 223 to 934 msec.

AP.Host interface difference. The correlate negative ratio resides in the EEPROM (p\_config) on Mozart.

AQ.Implementation difference. The master ULH reset bit is set if the data link layer detects conditions requiring reset (previous downlink failed or emergency).

AR.Implementation difference. The LEM continues to send reset until the service duration expires. Mozart continues to send reset until the reply duration expires. This is a very subtle difference.

AS.This requirement is not needed since the Mozart system has no RF head.

AT.Implementation difference. A new parameter called SSI limit is introduced on Mozart. To duplicate previous functionality, this parameter should be set to a value of "7" (no limiting). The parameter is intended for application which do not send periodic waveform. Also note that SSI is proportional to signal to noise ratio on the LEM. It is proportional to signal only on Mozart. Mozart does not measure the noise during the turn around time.

AU.This requirement is not needed since the C interface layer was removed when transitioning from LEM to Mozart.

AV.On the LEM the host used ID all to find all devices within range. On Mozart the host should use discover.

AW.The host used request ID string when it was given a list of ID/ name pairs where some had ID only (no name). This situation will not occur on Mozart. If the name is not obtained, Mozart does not give a discover indication to the host.

AX.On the LEM the host used open immediate ICCC request. On Mozart the host should use the open external service request. Additionally the LEM's C interface layer had some parameter checking. This was moved to the data link layer on Mozart (i.e., model, sub-model, serial number may not contain wildcards).

AY.The host never used open device found on the LEM. This was confirmed in a 05-March-2010 email from John Farr.

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TLMC_E_201 - CIL - TELEMETRY ON STATUS TO APPLICATION - CHANNEL RECOVERY.....	NOT NEEDED <sup>(CA)</sup>
TLMC_E_202 - CIL - TELEMETRY OFF MESSAGE APPLICATION.....	NOT NEEDED <sup>(CB)</sup>
TLMC_E_203 - CIL - TELEMETRY OFF MESSAGE DURING CHANNEL RECOVERY .....	NOT NEEDED <sup>(CC)</sup>
TLMC_E_204 - CIL - CHART RECORDER DOWN ARROW - DOWNLINK STARTED .....	NOT NEEDED <sup>(CD)</sup>
TLMC_E_205 - CIL - CHART RECORDER UP ARROW - UPLINK CONFIRMED .....	NOT NEEDED <sup>(CE)</sup>
TLMC_E_206 - CIL - CONFIRM-DETECTED-STATE-CHANGE-2 .....	NOT NEEDED
TLMC_E_207 - CIL - CONFIRM-DETECTED-STATE-CHANGE-3 .....	NOT NEEDED
TLMC_IE_246 - CIL - PROGRAMMING HEAD PRESENCE OR ABSENCE STATUS.....	PORTED <sup>(CF)</sup>
TLMC_E_247 - CIL - PROGRAMMING HEAD STATUS TO APPLICATION LAYER.....	PORTED <sup>(CG)</sup>
TLMC_E_260 - CIL - MEDICAL EVENT UPLINK TO APPLICATION .....	NOT NEEDED
TLMC_E_235 - CIL - MEDICAL EVENT REQUEST AND RESPONSE .....	NOT NEEDED <sup>(CH)</sup>
TLMC_E_248 - CIL - REACTION TO APPLICATION SYSTEM ERROR.....	NOT NEEDED <sup>(CI)</sup>

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- AZ.The host on the LEM used enable/ disable waveform ICCC request. The Mozart host should use open hibernate/ open normal external service request.
  - BA.The target ID was used for open device found. Since this feature wasn't used by the host this requirement was not brought forward into Mozart/
  - BB.The LEM host uses close ICCC request. The Mozart host should use close service request.
  - BC.This requirement was ported from the LEM's C interface layer to Mozart's data link layer. See status 0x03 in telem M requirement M\_081.
  - BD.The LEM host uses ram mode ICCC request. Mozart host uses raw mode service request.
  - BE.This requirement was ported from the LEM's C interface layer to Mozart's data link layer. See status 0x27 in telem M requirement M\_084.
  - BF.Raw mode echo was not ported on Mozart. This request took too much CPU processing. The protocol analyzer replaces this functionality.
  - BG.The LEM's concept indication timers was removed when transitioning to Mozart. The reply timer covers everything.
  - BH.This requirement was ported from the LEM's C interface layer. See telem M requirement M\_297.
  - BI.This requirement (bullet 4) was ported from the LEM's C interface layer. See telem M requirement M\_297. Note that Mozart does not strip the redundant command codes not the uplink CIH byte. The master host must perform that operation.
  - BJ.This requirement was ported (in spirit) from the LEM's C interface layer. See telem M requirement M\_298.
  - BK.This requirement was ported (in spirit) from the LEM's C interface layer. See telem M requirement M\_058. See note on non-final downlink transaction.

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"TELEM C REQUIREMENTS IN TELEM M PROTOCOL DOCUMENT

- TLMM\_MS\_428 - INITIALIZE - UPPER LAYER TO DATA LINK LAYER PARAMETERS
- TLMM\_MS\_353 - SHUTDOWN - SERVICE REQUEST PARAMETERS
- TLMM\_MS\_354 - SHUTDOWN - RESPONSE TO UPPER LAYER
- TLMM\_M\_266 - MASTER INITIALIZE SERVICE REQUEST FROM UPPER LAYER
- TLMM\_M\_267 - MASTER INITIALIZE SERVICE RESPONSE TO UPPER LAYER
- TLMM\_M\_362 - RESET SERVICE - INVOKE SERVICE 1
- TLMM\_M\_363 - RESET SERVICE - INVOKE SERVICE 2
- TLMM\_M\_297 - DATA - WAIT FOR INDICATION
- TLMM\_M\_298 - DATA - RECOVERY
- TLMM\_M\_299 - DATA - REPLY TIMEOUT
- TLMM\_M\_301 - EMERGENCY - WAIT FOR INDICATION
- TLMM\_M\_302 - EMERGENCY - RECOVERY
- TLMM\_M\_303 - EMERGENCY - REPLY TIMEOUT

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- BL.This requirement was "ported" from the LEM's C interface layer in the sense that the data service stops when emergency is received. Note the LEM had a retry mechanism built in for failed data. This was just for failed data service requests (via recovery) not for failed requests via emergency.
  - BM.A system decision was made to push the message tagging to the host in Mozart.
  - BN.The LEM host uses emergency ICCC request. The Mozart host uses emergency service request.
  - BO.This requirement (bullet 4) was ported to Mozart. See telem M requirement M\_301.
  - BP.Mozart will return "non-serial request" if a second emergency interrupts the first. Note the first emergency can be successful. See telem M requirement M\_081 (service status 0x0f).
  - BQ.Mozart uses a reply timeout (vs. indication timeout). See telem M requirement M\_301.
  - BR.On the LEM emergency is unsuccessful at recovery. On Mozart it is retried until the reply duration expires. This makes the feature symmetric with data.
  - BS.A host desiring this emergency complete functionality would need to add a layer between the host and Mozart. Rick Sanden has agreed this functionality will be added above the RFM (Mozart Host Interface or bridge component).
  - BT.The LEM uses remote statistics ICCC request. Mozart uses remote diagnostic service request.
  - BU.The LEM uses local statistics ICCC request. Mozart uses local diagnostic service request.
  - BV.The LEM uses mapping statistics ICCC request. Mozart uses mapping diagnostic service request.
  - BW.The host never used this feature on the LEM. It was not brought forward to Mozart.
  - BX.The host never used this feature on the LEM. It was not brought forward to Mozart.
  - BY.Mozart saves the device status (programming head detected during hibernate uplink) in a general purpose dual port register (tm\_w1). The host can read this at any time.
  - BZ.The host can infer "telemetry on" from a successful open service response.
  - CA.The host can infer "telemetry on" from a successful recovery indication.

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## 7.8 EEPROM CONTENT

The content of EEPROM consists of various structures, see **Table 122 (STRUCTURES IN EEPROM)**. For detail information regarding each structure, refer to Document **A44088, Telemetry M RF Module EEPROM Specification**.

Upon CPU enable, and if read EEPROM is successful, the parameters for each structure are copied from EEPROM into RAM. If read EEPROM is not successful, the parameters for each structure are copied from ROM into a RAM. Then the values in RAM will be copied to the corresponding registers.

The size for each of the four structures P\_HDW1, P\_HDW2, P\_WAKEUP and P\_CONFIG is fixed at 112bytes. As there are two bytes of CRCs for each 14bytes (block size) of data in EEPROM, each 112bytes of data will occupy 128bytes in EEPROM.

Similarly, the ramware control bytes is 14bytes in RAM and 16bytes in EEPROM; the maximum ramware code space reserved in RAM by firmware is 4816bytes and which occupies 5504bytes in EEPROM.

**TABLE 122: STRUCTURES IN EEPROM**

STRUCTURE NAMES		RAM ADDRESS	EEPROM ADDRESS
P_HDW1	Hardware Trim registers	0X3600-0x366F	0x00-0x7F
P_HDW2	Hardware Trim registers	0X3670-0x36DF	0x80-0x0FF
P_WAKEUP	Wakeup registers	0x36E0-0x374F	0x100-0x17F
P_CONFIG	Firmware specific parameters	0x3750-0x37BF	0x180-0x1FF
P_RAMWARE	Ramware control bytes	0x2300-0x230D	0x200-0x20F
P_RAMWARE_CODE	Ramware code	0x230E-0x35DD	0x280-0x17FF

CB.The host can infer "telemetry off" from a successful close response.

CC.The host can infer "telemetry off" from a recovery started indication.

CD.The host can infer downlink started from a "request first packet sent" indication.

CE.The host can infer a "confirm detect" from a successful service response (for data it should be a response where the request was the final transaction).

CF.This requirement was ported to Mozart. It results in a "device status" state change indication.

CG.This requirement was ported to Mozart. Mozart uses a device status indication. This indication has a type of 0xbb. Its sub-type is 0x01 if the slave is detecting the telemetry B programming head. The sub-type is zero otherwise. The size is 1 byte. The info[0] field is 0x01 (indication successful). Note that the LEM's device state change message communicated "device sending medical event uplink". Mozart has a separate indication for medical event.

CH.The LEM uses a medical event ICC request. Mozart uses a medical event service request.

CI.The Mozart RFM stays on if the host experiences a system error. On the LEM it will stay on for one minute and shut off.

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## 7.9 MASTER CONFIGURATION PARAMETERS

Following is the sample of parameters provided by the host as part of initialization sample configuration values in **Table 123 (Master parameters from host)** can be adjusted to enhance the performance of the system. The resolution of each value depends on the value in the “LSB” column. For example, if “LSB” is “1seconds”, it means the timer is -1s to +1s. The [MIN, MAX] column indicates the firmware operation range. The byte order uses “big endian” convention.

For the actual values, see System Interface Specification.

**TABLE 123: MASTER PARAMETERS FROM HOST**

PARAMETER	BYTES	LSB	SAMPLE VALUE	[MIN, MAX] <sup>(1)</sup>
Master Station ID <sup>(2)</sup>	6 bytes	n/a	non-zero value	[1, 0xFFFFFFFF]
Discover full service duration	2 bytes	1 second	120 seconds	[5, 0xFFFF]
Discover collision avoidance duration (for slave)	1 byte	1 second	30 seconds	[5, 0xFF]
Open service duration	1 byte	1 second	5 seconds	[1, 0xFF]
Diagnostic service duration	1 byte	31.25 ms	1 second	[1, 0xFF]
Close service duration	1 byte	31.25 ms	1 second	[1, 0xFF]
Network service duration	1 byte	1 second	5 seconds	[1, 0xFF]
Security service duration	1 byte	1 second	5 seconds	[1, 0xFF]
Ephemeral BAN Key timer	2 bytes	1 second	360 seconds (6 minutes)	[5, 0xFFFF]
Requested slave unspecified channel recovery duration (UCR)	2 bytes	1 second	5 seconds	[5, 0xFFFF]
Requested slave normal polling duration	2 bytes	1 second	0 seconds <sup>(3)</sup>	[0, 0x12C]
Requested slave standby polling duration (Tel C only)	2 bytes	1 second	1800 sec. (30 min)	na
Transmit wakeup burst length async	2 bytes	1 packet	96 (It takes ~3 seconds for MICS wide band.)  each packet represents - 31 ms (MICS wide band) <sup>(4)</sup> each packet represents - 93ms (MICS narrow band) each packet represents - 93ms (MEDS band)	[1, 0x3FFF]  1-16383packets
Unused	3 bytes	n/a	n/a	n/a
CCA band <sup>(5)</sup>	1 byte	n/a	0x02- MICS	0x01 - MEDS, 0x02- MICS, 0x03- MICS & MEDS
Transmit Power Hold	1 bytes	n/a	0 - Change Transmit Power based on TelC, TelM, Wakeup on Mics or Meds Band	1 = Don't Change Transmit Power (for manufacture testing) 0 = Change Transmit Power based on TelC, TelM, Wakeup on Mics or Meds Band



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**TABLE 123: MASTER PARAMETERS FROM HOST**

PARAMETER	BYTES	LSB	SAMPLE VALUE	[MIN, MAX] <sup>(1)</sup>
syncWakeupBurstType	1 byte	n/a	0	bit0: 1 - use sync wakeup transmit preceding open, 0 - use async wakeup transmit preceding open bit1: 1 - use sync wakeup transmit preceding network, 0 - use async wakeup transmit preceding network bits 2 -7: unused
Discover Wakeup Type	1 byte	n/a	0 - GLOBAL Wakeup	bit 0: 0 - GLOBAL Wakeup; 1 - NONLOCAL Wakeup; bits 1-7: Unused
Reply duration (for data & emergency)	1 byte	31.25 ms	3 seconds	[3,0xFF]
Security for wakeup user data/ network packet	1 byte	n/a	1 - secure	1 - secure, 0 - unsecure
Wakeup user data present	1 byte	n/a	0 - no data present	1 - user data present, 0 - no user data present
Wakeup user data	10 bytes	n/a	All zeroes	4 bytes for secure, 10 bytes for unsecure
Slave Model ID <sup>(6)</sup>	2 bytes	n/a	non-zero value	[1,0xFFFF]
Master test feature	1 byte	n/a	0	bit0: 1 - raw mode service enabled bit1: 1 - RF test service enabled bits 2 -7: unused
RF/Digital link	1 byte	n/a	1 - RF <sup>(7)</sup>	0 - digital, 1 - RF
Telemetry Scheme	1 byte	n/a	1 - TelM	0 - TelC, 1 - TelM
Transmit notification enabled (chart recorder triangles)	1 byte	n/a	1 - enable	0 - disable, 1 - enable
Signal strength indicator threshold K1	1 byte	1 count	48 counts (~24 dB)	na
Signal strength indicator threshold K2	1 byte	1 count	66 counts (~33 dB)	na
Signal strength indicator threshold K3	1 byte	1 count	84 counts (~42 dB)	na
Signal strength indicator threshold K4	1 byte	1 count	102 counts (~51 dB)	na
Signal strength indicator threshold K5	1 byte	1 count	120 counts (~60 dB)	na
Signal strength indicator threshold K6	1 byte	1 count	138 counts (~69 dB)	na
Master Xmit data rate for native mode	1 byte	See value	3-48Kbps	0-380Kbps, 1-97Kbps, 2-190Kbps, 3-48Kbps
Master Receive data rate for native mode	1 byte	See value	2-190Kbps	0-380Kbps, 1-97Kbps, 2-190Kbps, 3-48Kbps

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**TABLE 123: MASTER PARAMETERS FROM HOST**

PARAMETER	BYTES	LSB	SAMPLE VALUE	[MIN, MAX] <sup>(1)</sup>
TelM clock cpu fast speed	1 bytes	See value	0 = 22.8 Mhz	101 = 1.9MHz; 100 = 3.8MHz, 011 = 5.7 MHz, 010 = 7.6MHz, 001 = 11.4MHz, 000 = 22.8MHz <sup>(8)</sup>
TelM clock cpu slow speed	1 bytes	See value	0 = 22.8 Mhz	101 = 1.9MHz; 100 = 3.8MHz, 011 = 5.7 MHz, 010 = 7.6MHz, 001 = 11.4MHz, 000 = 22.8MHz <sup>(8)</sup>
HDR Mode	1 byte	n/a	0 - disable HDR mode	1 - enable HDR mode; 0 - disable HDR mode
Slave Xmit Packet count for nominal mode (For Tel M only)	1 byte	1 packet	non-zero value, default: 5 packets	See <b>Table 103 (Telemetry M Recommend Slave Packet Count)</b>
Slave Xmit Packet count for max throughput mode (For Tel M only)	1 byte	1 packet	non-zero value <sup>(9)</sup> , default: 32 packets	
<sup>(10)</sup> Threshold1: # of consec frames with no valid receive packets (For Tel M only)	1 byte	1 frame	non-zero value, default:2 frames	[0x02,0xFF]
Threshold2: # of consec frames with no valid receive packets (For power inhibit mode in Tel M)	1 byte	1 frame	non-zero value, default:6 frames	[0x06,0xFF]
Threshold3: # of consec frames with no valid receive packets (For power inhibit mode in Tel M)	1 byte	1 frame	non-zero value, default:10 frames	[0x0A,0xFF]
Too many recoveries threshold	1 byte	n/a	5 recoveries <sup>(11)</sup>	[5, 10]
Too many recoveries duration	2 bytes	1 sec	5 seconds	[0x05,0xFFFF]
Delay new waveform detection <sup>(12)</sup>	1 byte	n/a	0 - no delay to waveform detection	0 - no delay to waveform detection 1 - delay waveform detection
Slave scans during polling	1 byte	n/a	0x01 - scan during polling	bit 0: 1 = scan during polling, 0 = alternating async sniff/ native during polling bit 1 - 7: unused
Signal strength indicator input limit <sup>(13)</sup>	1 byte	n/a	7	1..7
LoadBan Key NetworkTable	1 byte	n/a	0x00	bit 0: 0 = do not load Ban Key 1 = load Ban Key - host should only set this bit if the request bankey local was successful. bit 1: 0 = do not load Network Table bit 1: 1 = load Network Table
Ban Key	16 bytes	n/a	all zeros	the saved Ban Key
Network Table	26 bytes	n/a	all zeros	the saved network table

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**TABLE 123: MASTER PARAMETERS FROM HOST**

PARAMETER	BYTES	LSB	SAMPLE VALUE	[MIN, MAX] <sup>(1)</sup>
CCA Before And After Wakeup Transmit	1 byte	n/a	0 = Perform CCA before wakeup transmitted	0 = Perform CCA before wakeup transmitted 1 = Perform CCA before and after-wakeup transmitted
Frequent Waveforms Expected (used in low energy mode only)	1 byte	n/a	0 = waveform(s) not expected in every uplink frame	0 = waveform(s) not expected in every uplink frame 1 = waveform(s) expected in every uplink frame
AddressH, AddressM, AddressL, Value (Total of 80 addresses and values are supported)	4bytes	n/a	0x00, 0x00, 0x00, 0x00 (default) Up to 80 (address, value) pairs may be utilized. Zero in all three address bytes indicates the end	For development only.

1. The ranges are not explicitly enforced (by a failed service response) unless otherwise noted.
2. Must be non-zero otherwise initialize service request failure. Note: In Tel M all six bytes are utilized, TelC only utilizes the first three bytes (last three bytes are ignored).
3. When Requested slave normal polling duration = 0, slave won't start polling after unspecified channel recovery fails or the session is closed. This should be OK for telemetry M because (1) If slave EBan key timer is running, then slave is sniffing in DisableON state. (2) If slave already be disabled (2v is off), slave is also sniffing. Master will send wakeup packets to wake up the slave right away.
4. If the CCA band is set to 3 - MICS and MEDS, and band control is set to wide, the length of each packet may be ~ 31ms or ~ 93ms depending on which channel, MICS or MEDS, is chosen for transmission.
5. The CCA band allows the user to select the band for wakeup transmit, native mode transmit, or medical event listening.
6. Config. slave model id must match open slave ID in open service request otherwise failure.
7. This value shall be zero (digital) for verification testing. The snf\_abort\_mask\_test parameter in the P\_Hardware1 EEPROM structure (see Document **A44088, Telemetry M RF Module EEPROM Specification**) should be set to 0x8F for a digital link, and to 0x00 for an RF Link.
8. The range is shown for bits 0 - 2. The hardware uses bits 3 and 4. These should be set to zero. Bits 5-7 are unused.
9. Slave xmit packet count for max throughput mode should be greater than or equal to slave xmit packet count for nominal mode.
10. These threshold is only pertinent to telemetry M. The telemetry C threshold is in EEPROM.
11. Note that this value should be set to zero (feature disabled) if the slave may perform periodic (idle immediate) power inhibit. The master cannot distinguish between pulse noise and power inhibit (idle immediate).
12. See the internal service (packet retransmission) for further definition of this parameter.
13. The use of this parameter is described in **5.3.8 Signal Strength Indicator**.

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## 7.10 SLAVE CONFIGURATION TABLE

The sample configuration values in **Table 124 (SLAVE PARAMETERS FROM HOST)** can be adjusted to enhance the performance of the system. See the device-specific SPD (System Parameters Database) for the actual values. The byte order uses “big endian” convention.

**TABLE 124: SLAVE PARAMETERS FROM HOST**

PARAMETER	#BYTES	LSB	SAMPLE VALUE	[MIN, MAX]
Slave station ID	6 bytes		non-zero value	[1,0xFFFFFFFFFFFF]
Total Polling duration for Scheduled Transmission(Tel C only) <sup>(1)</sup>	2 bytes	1 second	30 seconds	[3, 0xFFFF]
Total Initial Polling duration <sup>(2)</sup>	2 bytes	1 second	10 seconds	[5, 0xFFFF]
Scan duration during Polling (Tel C only)	1 byte	1 second	3 seconds	[3,0xFF]
Sleep duration during Polling (Tel C only)	1 byte	1 second	0 seconds	[0,0xFF]
Wait for Open packet after transmitting <sup>(3)</sup> (Medical Event channel transmit time)	1 byte	5 ms	35 ms (TelC) 55 ms (Tel M)	[0x07,0xFF]
Medical Event Service Duration	1 byte	1 second	30 seconds	[3, 0xFF]
Security Service Duration	1 byte	1 second	3 seconds	[3, 0xFF]
Authorize to talk unsecurely	1 byte	n/a	1 - unsecure, 0 - secure	na
Wakeup Sniff Interval	3 bytes	~ 0.9ms	2048 (2 seconds)	[1,0x3FFFF] 0.97ms - 256s
Wrap Up Interval  Number of Sniff Intervals between each Wrap Up (Mozart internal housekeeping routine). <sup>(4)</sup>	2 bytes	1 Sniff	21600  When the sniff interval is 2 seconds, this results in a wrap interrupt every 12 hours.	[0,0xFFFF]  0xff - 65535 sniff intervals
Sniff List and Band Control	36 bytes	n/a	See <b>Table 125 (SNIFF LIST FORMAT)</b>	
Falsing Enable (Typically set to zero for normal operation)	1 byte	n/a	0	Bit 0: 1 = Enable Peak Offender; 0 = Disable this feature Bit 1: 1 = Enable Lengthen Sniff Intvl; 0 = Disable this feature Bit 2: 1 = Enable Incr. Phase 1 Coarse; 0 = Disable this feature Bit 3: 1 = Enable Shorten Wrap Up; 0 = Disable this feature Bit 4: 1= Disable Wakeup; 0 Enable Wakeup Bit 5- Bit7: unused
Power Inhibit (This bit can be used by Telemetry C and Telemetry M although it's originally designed for power inhibit feature of Telemetry M)	1 byte	n/a	0x03	Bit 0: 1 = Enable WF in Recovery; 0 = Disable this feature Bit 1: 1 = Send channel recovery indication to host, 0 = Don't send channel recovery indication to host (see footnote <sup>(5)</sup> ) Bit 2: - 1 = Send Channel Recovery Imminent Indication to host; 0 = Don't send Channel Recovery Imminent Indication to host Bit 3: - 1 = Send Channel Recovery Imminent Resume Indication to host; 0 = Don't send Channel Recovery Imminent Resume Indication to host Bit 4: - Bit7: unused
Prog. head present status (Tel C only)	1 byte	n/a	0	0 - prog head not present, 1 - prog. head present

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**TABLE 124: SLAVE PARAMETERS FROM HOST**

PARAMETER	#BYTES	LSB	SAMPLE VALUE	[MIN, MAX]
RF/Digital link	1 byte	n/a	1 - RF <sup>(6)</sup>	0 - digital, 1- RF
Telemetry scheme and waveform setup	1 byte	n/a	0x01	Bit 0: Telemetry scheme - 0 - TelC, 1 - TelM Bit 1: Waveform data offset 0 - Waveform data offset by four bytes 1 - Waveform data offset by two bytes Bit 2: Delay sending new waveform 0 - Send the (n+2)th waveform transaction immediately. When the (n+2)th waveform transaction is received from the host, stop retrying old waveform transactions. Stop the retry of the n <sup>th</sup> waveform transaction and cancel the (n+1)th waveform transaction. 1 - Delay sending the (n+2)th waveform transaction. When the (n+2)th waveform transaction is received from the host, continue to retry old waveform packets of the n <sup>th</sup> waveform transaction if needed and transmit the (n+1) <sup>th</sup> waveform transaction packets before transmitting packets from the (n+2)th waveform transaction. Bit 3: Scan Tel M Mics Band Only (see note <sup>(7)</sup> ) Bit 4: Scan Tel M Meds Bands Only Bit 5: Scan Tel M Mics and Meds Bands Only Bit 6- Bit 7: unused
TelM clock cpu fast speed	1 byte	See value	0x03 - 5.7Mhz <sup>(8)</sup>	101 = 1.9MHz; 100 = 3.8MHz, 011 = 5.7 MHz, 010 = 7.6MHz, 001 = 11.4MHz, 000 = 22.8MHz <sup>(9)</sup>
TelM clock cpu slow speed	1 byte	See value	0x04 - 3.8Mhz	101 = 1.9MHz; 100 = 3.8MHz, 011 = 5.7 MHz, 010 = 7.6MHz, 001 = 11.4MHz, 000 = 22.8MHz <sup>(9)</sup>
Power reduction during security key transfer	1 byte	n/a	0 - no power reduction	0 - no power reduction 1 - use (Set 1) power reduction values from EEPROM (see structure p_hdw2) 2 - use (Set 2) power reduction values from EEPROM (see structure p_hdw2) 3 - use power reduction values from initialization
Unused	3 byte	n/a		
Slave Same channel recovery duration (should be the same as Master Same channel recovery duration, See <b>Table 129 (PARAMETERS FROM EEPROM)</b> )	1 byte	5 ms	0x58 - 440 ms	[0x24, 0xFF] 180ms - 1.275 s
Tel C version number	2bytes		'B' '0'	[0x0000, 0xFFFF]
Unused	1byte			
New Channel Recovery Trigger Threshold For Nominal mode	1 byte	1 packet	non-zero value default: 0x30	[0x04, 0xFF]
New Channel Recovery Trigger Threshold For Max. Transmit Mode	1 byte	1 packet	non-zero value default: 0x20	[0x04, 0xFF]
New Channel Recovery Imminent Threshold For Nominal mode	1 byte	1 packet	non-zero value default: 0x2E	[0x03, 0xFE]
New Channel Recovery Imminent Threshold For Max. Transmit Mode	1 byte	1 packet	non-zero value default: 0x1E	[0x03, 0xFE]

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**TABLE 124: SLAVE PARAMETERS FROM HOST**

PARAMETER	#BYTES	LSB	SAMPLE VALUE	[MIN, MAX]
Transmit Power Hold	1 bytes	n/a	0 - Change Transmit Power based on TelC, TelM, Wakeup on Mics or Meds Band	1 = Don't Change Transmit Power (for manufacture testing) 0 = Change Transmit Power based on TelC, TelM, Wakeup on Mics or Meds Band
LoadBan Key Network-Table/Check Always On Parameters CRC	1 byte	n/a	0x00	bit 0: 0 = do not load Ban Key 1 = load Ban Key host should only set this bit if the request bankey local was successful bit 1: 0 = do not load Network Table bit 1: 1 = load Network Table bit 2: 0 = slave does not calculate or check Always On parameters bit 2: 1 = slave shall calculate and check Always On parameters
Ban Key	16bytes	n/a	all zeros	the saved Ban Bey
Network Table	26 bytes	n/a	all zeros	the saved network table
BP_PA_Coarse_PWR <sup>(10)</sup> (Power Amplifier Coarse Power Control Value)	1 byte	n/a	0x0F	Reduced Key Tx Power Set 3 [0x01, 0x0F] Bits 0-4 are used, Bits 5-7 are ignored.
BP_PA_FINE_PWR <sup>(10)</sup> (Power Amplifier Fine Power Control Value)	1 byte	n/a	0x0F	Reduced Key Tx Power Set 3 [0x01, 0x0F] Bits 0-4 are used, Bits 5-7 are ignored.
BP_PA_BIAS_BUF_TRIM <sup>(10)</sup> (Power Amplifier Buffer Bias Current Trimming value)	1 byte	n/a	0x07	Reduced Key Tx Power Set 3 [0x00,0x07] Bits 0-2 are used, Bits 3-7 are ignored.
BP_PA_BIAS_TRIM <sup>(10)</sup> (Enable PA Positive Feedback and PA output Bias Current Trimming value)	1 byte	n/a	0x07	Reduced Key Tx Power Set 3 [0x00,0x07] Bits 0-2 are used, Bits 3-7 are ignored.
BP_TX_AFILTI_DC_CTRL <sup>(10)</sup> (TX DAC Filter DC Control (I channel))	1 byte	n/a	0x3F	Reduced Key Tx Power Set 3 [0x00,0x3F] Bits 0-5 are used, Bits 6-7 are ignored.
BP_TX_AFILTQ_DC_CTRL <sup>(10)</sup> (TX DAC Filter DC Control (Q channel))	1 byte	n/a	0x3F	Reduced Key Tx Power Set 3 [0x00,0x3F] Bits 0-5 are used, Bits 6-7 are ignored.
BP_TX_DACI_TRIM <sup>(10)</sup> (TX DAC Gain Trimming values (I channel))	1 byte	n/a	0x1F	Reduced Key Tx Power Set 3 [0x00,0x1F] Bits 0-4 are used, Bits 5-7 are ignored.
BP_TX_DACQ_TRIM <sup>(10)</sup> (TX DAC Gain Trimming values (Q channel))	1 byte	n/a	0x1F	Reduced Key Tx Power Set 3 [0x00,0x1F] Bits 0-4 are used, Bits 5-7 are ignored.
Unused	58Bytes	n/a		
AddressH, AddressM, AddressL, Value (Total of 80 addresses and values are supported)	4bytes	n/a	0x00, 0x00, 0x00, 0x00 (default) Up to 80(address, value) pairs may be utilized. Zero in all three address bytes indicates the end	For development only.

1. Values for Total Polling duration for Scheduled Transmission and Master initial implant listen duration and (Table 129 (PARAMETERS FROM EEPROM)) should be the same.

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2. This parameter has a resolution of 5ms and a size of 1 byte if polling service request is obtained following a local wakeup packet.
3. “Wait for Open packet after transmitting” timer is started/re-started before medical event packet is sent on each channel. The timer is cancelled when a valid open request is received for Tel C. The timer is cancelled when the last open response packet has been transmitted for Tel M. Use 35ms or bigger for TelC. Use 55ms or bigger for TelM (48Kbps is the out-of-session default data rate for Tel M) to cover the time of transmission one medical event packet and exchanging an open request packet and open response packets.
4. Example: If Sniff Interval = 2 Sec, then for a Wrap Up Interval of 12 hours, set this field to  $21600 = (60 \text{ Sec} * 60 \text{ Min} * 12 \text{ Hrs}) / 2 \text{ Sec}$
5. When the bit “send channel recovery indication to host” = 1, same channel recovery started indication, unspecified channel recovery started indication and channel recovery successful indication will be sent to the host. When the bit “send channel recovery indication to host” = 0, same channel recovery started indication, unspecified channel recovery started indication and channel recovery successful indication will not be sent to the host. Note the channel recovery failed indication will sent to the host whether the bit “send channel recovery indication to host” = 1 or not.
6. This value shall be zero (digital) for verification testing. The snf\_abort\_mask\_test parameter in the P\_Hardware1 EEPROM structure (see Document **A44088, Telemetry M RF Module EEPROM Specification**) should be set to 0x8F for a digital link, and to 0x00 for an RF Link.
7. If Telemetry scheme and waveform setup bit3-bit5 are all zero, MICS band will be used.
8. If the data rate is 190K for slave transmission, CPU fast speed = 5.7Mhz, CPU slow speed = 3.8Mhz.
9. The range is shown for bits 0 - 2. The hardware uses bits 3 and 4. These should be set to zero. Bits 5-7 are unused.
10. These values are only used if “power reduction during security key transfer” is set to a value of “3” (user supplied value). These values are not used otherwise.

**TABLE 125: SNIFF LIST FORMAT**

BYTE	VALUE	NOTES
1	Bit 0: 0 = leave sniff list unchanged 1 = load new sniff list Bits 1-7: Unused  <b>Default = 0</b>	Bytes 2 through 34 only apply if bit 0 of this byte is equal to 1
2	Bit 0: 0 = Configure for Single Channel sniffs 1 = Configure for Triad sniffs Bits 1-7: Unused  <b>Default = 0</b>	Configures the bp_triad_en bit of register REG_BP_WU_CTRL0. Refer to the Mozart Programmer’s Manual, 123970, for more information on Triad and Single channel sniffing.
3-34	Bits 0-4: center channel number Channels 1-10 = MICS Channels 11-20 = Lower MEDS Channels 21-30 = Upper MEDS <b>Note:</b> 0x00 - skip sniff, 0x1F - stop sniff (see footnote for more details) Bit-5: right channel enable (center channel + 1) Bit-6: center channel enable Bit-7: left channel enable (center channel – 1)  <b>Default = 0</b>	Each of the bytes 3 through 34 are copied to Registers REG_BP_SNF_LIST_0 through REG_BP_SNF_LIST_31, respectively <sup>(1)</sup> . Refer to the Mozart Programmer’s Manual, 123970, for more information on the Sniff List registers.
35	Bit 0: 0 = leave band ctrl unchanged 1 = load band ctrl Bits 1-7: Unused  <b>Default = 0</b>	Byte 36 only applies if bit 0 of this byte is equal to 1

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BYTE	VALUE	NOTES
36	Bit 0: 0 = Narrow band for MICS 1 = Wide band for MICS Bits 1-7:Unused  <b>Default = 0</b>	Band Control applies to CCA, Sniff, and Transmit of Wakeup Packets. It also applies to MICS only.

1. For example, if single channel sniffs on channels 1-10 are desired to be in the list, the following entries must be contained in the table: 0x41, 0x42, 0x43, 0x44, 0x45, 0x46, 0x47, 0x48, 0x49, 0x4A, 0xFF. Note, 0xFF is used to indicate the end of a list. If triad sniffs on channels 11-30 are desired, sniffing 10 channels per sniff, the following entries could be used in the table: 0xEC, 0xEF, 0xF2, 0x54, 0x00, 0xF6, 0xF9, 0xFC, 0x5E, 0xFF. Note that 0x00 is used to indicate a stop or break between sniffs; the next sniff will continue at the following entry.

## 7.11 SLAVE POLLING REQUEST TABLE

The slave polling request size can vary from 1 byte to 137bytes. All the values will be uplinked in five discover name response packets. See **Table 126 (SLAVE POLLING REQUEST)**.

**TABLE 126: SLAVE POLLING REQUEST**

Parameter	#Bytes	VALUES
Polling Request	1-137bytes <sup>(1)</sup>	[0x00,0xFF]

1. 137 bytes maximum = (5 packets\*30 bytes/packet) - 6 bytes master ID - 6 bytes slave ID - 1 byte proximity status

**Table 112 (DISCOVER NAME SLAVE RESPONSE FORMAT)** shows an example for the polling request info field.



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## 7.12 SUMMARY FOR INDICATION AND REQUEST

Following is the summary of the indications which are generated by telemetry to the host See **Table 127 (INDICATION SUMMARY)**

**TABLE 127: INDICATION SUMMARY**

INDICATION	SLAVE	MASTER
Ready	0x20	0x20
Polling	0x21	n/a
Discover	0x22	0xA2
Open	0x23	n/a
Data	0x24	0xA4
Close	0x25	n/a
Shutdown	0x26	0x26
Channel Recovery	0x27	0xA7
Medical Event	0x28	0xA8
First req. pkt sent	n/a	0xAA
Wakeup	0x2B	n/a
Emergency	n/a	0xAC
Network	0x2D	0xAD
EE Write	0x2F	n/a
EEPROM read failed	0x30	0x30
Fault	0x33	0x33
Trim Fail	0x34	0x34
Telemetry Ceased	0x35	0x35
Proximity Security	0x36	n/a
Parameter Corruption	0x37	0x37
Memory Test Failed	0x38	0x38
Slave Received Mozart Data	0x39	n/a
Network complete	n/a	0xBA

Following is the summary of service requests which are generated by the host to telemetry See **Table 128 (SERVICE REQUEST SUMMARY)**

**TABLE 128: SERVICE REQUEST SUMMARY**

SERVICE REQUESTS	SLAVE	MASTER
Initialize	0x01	0x81
Discover	n/a	0x82
Open	n/a	0x83
Data	0x04	0x84

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**TABLE 128: SERVICE REQUEST SUMMARY**

SERVICE REQUESTS	SLAVE	MASTER
Medical Event	0x0a <sup>(1)</sup>	0x85
Emergency	n/a	0x86
Close	n/a	0x87
Diagnostic	n/a	0x89
Polling	0x0A	n/a
Raw mode	n/a	0x8B
Network	0x0C	0x8C
Security	0x0D	0x8D
Power inhibit	0x0E	n/a
Shutdown	0x0F	0x8F

1. Medical Event Requests are processed via the Polling Service.

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## 7.13 MASTER/SLAVE EEPROM PARAMETERS

The sample configuration values from EEPROM in **Table 129 (PARAMETERS FROM EEPROM)** can be adjusted to enhance the performance of the system. These values are contained in the P\_CONFIG\_STRUCTURE structure. See below for the suggested values.

**TABLE 129: PARAMETERS FROM EEPROM**

PARAMETER	BYTES	LSB	VALUE	[MIN, MAX]
Unused	2 bytes			
Master Raw mode service duration	1 byte	31.25 ms	0x20 - 1 second	[0x20,0xFF] 1s - 7.968s
Unused	1 byte			
Master Same channel recovery duration (should be the same as Slave Same channel recovery duration See <b>Table 124 (SLAVE PARAMETERS FROM HOST)</b> )	1 byte	5 ms	0x58 - 440 ms	[0x24, 0xFF] 180ms - 1.275 s
unused	1 byte			
Master unspecified channel recovery duration	2 bytes	1 second	0x1C20 - 7200 seconds (2 hours)	[0x05, 0xFFFF]
Master Low energy mode	1 byte	n/a	1 - enable (default), 0 - disable,	
Master Low energy threshold N (After N consecutive filler master packets, start low energy mode). Apply only if Master Low energy mode is enabled.	1 byte	1 packet	0x08 - 8packets	[0x08, 0xFF]
Master Low energy negative correlation ratio N (Use negative correlation of the preamble on N-1 of N transmits. One out of N will have positive correlation.) Apply only if Master Low energy mode is enabled.	1 byte	n/a	5 - 1 positive, 4 negative	[0x05, 0xFF]
Unused	4 bytes			
Native mode duration	1 byte	5 ms	0x64 - 500ms	[0x64,0xFF]
Wakeup Sync type	1 byte	n/a	Bit 0 - Open, 0 - Async, 1 - Sync Bit 1 - Network 0 - Async, 1 - Sync	0x00 - default
Number of consecutive receive frames without a valid packet (telem C)	1 byte	1 packet	0x04 - 4 packets	[1,0xFF]
Number of bad consecutive received frames (telem C) <sup>(1)</sup>	1 byte	1 frame	0x02 - 2 frames	[1,0xFF]
Unused	5 bytes			
Master Log2 SNR filter size <sup>(2)</sup>	1 byte	n/a	0x03 (SNR filter length = 8)	[1,7]
Master BER enable	1 byte	n/a	0x01 - enable, 0x00 - disable (default),	For development only
Master BER byte pattern	1 byte	n/a	0xAA - default	
Master initial implant listen duration (Tel C only) <sup>(3)</sup>	2 bytes	1 second	0x001E - 30 seconds	[5, 0xFFFF]

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**TABLE 129: PARAMETERS FROM EEPROM**

PARAMETER	BYTES	LSB	VALUE	[MIN, MAX]
config_flags1	1 byte	n/a	0x02	bit0: 1 - Bypass AES (for testing only); 0 - no Bypass AES  bit1: 1 - Slave scan during polling, 0 - Slave sniffing during polling  bit2-bit 7: unused
wakeupConfigAO - long Sniff Time Meds Max	3 bytes		0,0,0	[0,0xFFFF]- 0 - 671s (40us/bit)
wakeupConfigAO - long Sniff Time Mics Max	3 bytes		0,0,0	[0,0xFFFF]- 0 - 671s (40us/bit)
wakeupConfigAO - long Sniff Time Meds Min	3 bytes		0,0,0	[0,0xFFFF]- 0 - 671s (40us/bit)
wakeupConfigAO - long Sniff Time Mics Min	3 bytes		0,0,0	[0,0xFFFF]- 0 - 671s (40us/bit)
wakeupConfigAO - phase1 Threshold Offset Mics	1 byte		0	[0,0xFF]
wakeupConfigAO - phase1 Threshold Offset Meds	1 byte		0	[0,0xFF]
wakeupConfigAO - Phase1 Threshold Offset Increase Amount	1 byte		Bit3 - bit 0: Meds Bit7 - bit 4: Mics	[0-0xF] [0-0xF]
wakeupConfigAO - phase2 High Aborts Mics Max	2 bytes		0,0	[0,0xFFFF] 0- 65535 aborts
wakeupConfigAO - phase2 High Aborts Meds Max	2 bytes		0,0	[0,0xFFFF] 0- 65535 aborts
wakeupConfigAO - phase2 High Aborts Mics Min	2 bytes		0,0	[0,0xFFFF] 0- 65535 aborts
wakeupConfigAO - phase2 High Aborts Meds Min	2 bytes		0,0	[0,0xFFFF] 0- 65535 aborts
wakeupConfigAO - phase1 Threshold Offset Decrease Amount	1 byte		Bit3 - bit 0: Meds Bit7 - bit 4: Mics	[0-0xF] [0-0xF]
wakeupConfigAO - restricted Channel Removed Max	1 byte		Bit3 - bit 0: Meds Bit7 - bit 4: Mics	[0-0xF] [0-0xF]
wakeupConfigAO - lengthen Sniff Interval Max	3 bytes		0,0,0	[0,0x3FFFF] 0- 256s (.97ms/bit)
wakeupConfigAO - lengthen Sniff Interval Increase Amount	3 bytes		0,0,0	[0,0x3FFFF] 0- 256s (.97ms/bit)
wakeupConfigAO - phase1 Threshold Offset Course Increase Amount Meds	1 byte		0	[0,0xFF]
wakeupConfigAO - phase1 Threshold Offset Course Increase Amount Mics	1 byte		0	[0,0xFF]
wakeupConfigAO - phase1 Threshold Offset Course Increase Max Meds	1 byte		0	[0,0xFF]

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**TABLE 129: PARAMETERS FROM EEPROM**

PARAMETER	BYTES	LSB	VALUE	[MIN, MAX]
wakeupConfigAO - phaseI Threshold Offset Course Increase Max Mics	1 byte		0	[0,0xFF]
wakeupConfigAO - interval Wrapup Count Shorten	2 bytes		0,0	[0,0xFF]
wakeupConfigAO - restricted Channel Event Count Max	1 byte		0	[0,0xFF]
process Error Reset Enabled	1 byte		0x01 - enable (default); 0x00 - disable	na
process Error Reset Threshold	1 bytes		1	[1,10]
Send Trim Fail Indication To Host	1 byte		0x01 - enable (default); 0x00 - disable	na
Disable On Timer	1 byte	1 second	0x06	[0x01, 0xFF]
Standby Timer	1 byte	1 second	0x02	[0x02,0xFF]
Timer between Shutdown Indication and Turn off 2V	1 byte	5 ms	0x50 - 400ms	For Devel- opment Only
CCA control - restricted channel	1 byte	n/a	bit3-bit0: MICS channels restricted 0 - No MICS channels restricted 1 - MICS channel 1 restricted 2 - MICS channel 2 restricted ..... A - MICS channel 10 restricted B - F: no channels restricted Bit 4: restrict MEDS channels bordering MICS 1 - restricted ch. 20 & 21 0 - no restrictions Bit7-bit5: unused	na
Default Downlink Native Mode Data Rate (For Tel M Out of Session only)	1 byte	0-380Kbps, 1- 97Kbps, 2-190Kbps, 3- 48Kbps	3 - 48 Kbps (default);	[0,0x03]
Default Uplink Native Mode Data Rate (For Tel M Out of Session only)	1 byte	0-380Kbps, 1- 97Kbps, 2-190Kbps, 3- 48Kbps	3 - 48 Kbps (default);	[0,0x03]
Slave channel listen Duration (Tel M only)	1 byte	5ms	0x16 - 110ms	[0x16, 0xFF] 110ms - 1.275 s
CCA stop on threshold value	1 byte		0 <sup>(4)</sup>	[0, 0xFF]
Open uplink packet count (Tel M Only)	1 byte	1 packet	2 <sup>(5)</sup>	[1, 5]
Unused	30 byte	n/a	n/a	

1. A bad received frame has a preamble timeout and no valid packets.
2. Must be <= 7 otherwise it is a fault.
3. Values for Master initial implant listen duration and Total Polling duration for Scheduled Transmission (**Table 124 (SLAVE PARAMETERS FROM HOST)**) should be the same.
4. All channels will be accessed when the "CCA stop on threshold value" is zero.
5. The time to scan all channels is shortened when the open uplink packet count is smaller (~1.7 seconds when the count is five and the non-communication rate is 48 Kbps; ~1.0 seconds when the count is two at 48 Kbps). This can speed up unspecified channel recovery. Additionally it shortens the minimum power inhibit de-assertion duration.

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## 7.14 SUMMARY OF FIRMWARE FAULTS

**TABLE 130: SUMMARY OF FIRMWARE FAULTS**

FIRMWARE FAULT RESET CODE	DESCRIPTION
0x10	Emergency service request size too large for block copy (failed service response should have occurred). Possible memory leak.
0x11	Bad external service request when cancelling a service request (possible memory leak)
0x12	Unused
0x13	Unused
0x14	Discover invalid indication status (possible memory leak)
0x15	Invalid master indication type (possible memory leak)
0x16	Invalid master pending indication type (possible memory leak)
0x17	Invalid subtype for master network data service request (failed service response should have occurred). Possible memory leak.
0x18	Unused
0x19	Unused
0x1a	Attempting to send a master indication bigger than 512 bytes on buffer 1 (possible memory leak)
0x1b	Attempting to send a master indication bigger than 512 bytes on buffer 2 (possible memory leak)
0x1c	Attempting to send a master indication bigger than 512 bytes on buffer 3 (possible memory leak)
0x1d	Attempting to save a master service request bigger than 512 bytes (possible memory leak)
0x1e	Unused
0x1f	Unused
0x20	Indication buffer 1 “busy” when not expected (attempting to give discover name indication). Development error.
0x21	Indication buffer 1 “busy” when not expected (attempting to give network summary indication to the master host). Development error.
0x22 - 0x2f	Unused
0x30	Invalid state for firmware clear channel assessment algorithm. Possible memory leak.
0x31	Attempting to set master RF channel to an illegal value. Possible memory leak.
0x32	Invalid clear channel assessment band (not MICS, MEDS, or both). Bad parameter from host initialize requestor memory leak.
0x33-0x3f	Unused
0x40	Unused
0x41	Invalid receive packet type when checking station ID (packet should have been ignored further upstream). Possible memory leak.
0x42	Invalid receive packet with good MAC. This error is only enabled during development (not in final product since MAC is not foolproof; noise could be detected with good MAC). Detects development errors.

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**TABLE 130: SUMMARY OF FIRMWARE FAULTS**

FIRMWARE FAULT RESET CODE	DESCRIPTION
0x43	Invalid master pending transfer mode. Possible memory leak.
0x46	Receive packet response timeout (telemetry M, RF). The hardware should unconditionally give a receive complete interrupt when next frame is receive.
0x47	Receive packet response timeout (telemetry C, beyond first synch cycle). The hardware should unconditionally generate a receive complete interrupt in this case.
0x48	Invalid master power inhibit mode. Possible memory leak.
0x49-0x4f	Unused
0x50	Master receive packet response timeout in the communication state. The hardware should unconditionally give a receive complete interrupt
0x51-0x5f	Unused
0x60	Bad master packet when determining uplink packet count. Possible memory leak.
0x61-0x7f	Unused
0x80	Illegal state machine event detected. Development error or memory leak.
0x81	Too many events for the state machine queue. Development error.
0x82	AES block busy for too long (waiting to start session key computation). Hardware interface error.
0x83	AES block busy for too long (waiting to complete session key computation). Hardware interface error.
0x84	AES block busy for too long (waiting to complete random number computation, step 1). Hardware interface error. Also see 0x88.
0x85	AES block busy for too long (waiting to start random number computation, step 2). Hardware interface error.
0x86	AES block busy for too long (waiting to complete random number computation). Hardware interface error.
0x87	Invalid channel in received wakeup packet. This fault will not occur in the field. It is enabled only during development.
0x88	AES block busy for too long (waiting to start random number computation, step 1). Hardware interface error.
0x89	CPU error bit set when waiting for AES computation to complete. Hardware interface error.
0x8a	Neither CPU error nor CPU done set when waiting for AES computation to complete. Hardware interface error.
0x8b	AES block busy for too long (waiting to start secure wakeup MAC computation). Hardware interface error.
0x8c	AES block busy for too long (waiting to start keystream computation to encrypt/ decrypt secure wakeup user data). Hardware interface error.
0x8d	AES block busy for too long (waiting to complete secure wakeup MAC computation). Hardware interface error.
0x8e	AES block busy for too long (waiting to start keystream computation to encrypt/ decrypt secure wakeup user data). Hardware interface error.

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**TABLE 130: SUMMARY OF FIRMWARE FAULTS**

FIRMWARE FAULT RESET CODE	DESCRIPTION
0x8f-0x91	Unused
0x92	Memory test failure (RAMware).
0x93	Parameter corruption
0x94	Power inhibit asserted by master (telemetry C or telemetry M). This code is also used for power inhibit asserted by a slave configured for telemetry C.
0x95	Power inhibit deasserted by master (telemetry C or telemetry M). This code is also used for power inhibit deasserted by a slave configured for telemetry C.
0x96-0x97	Unused
0x98	RF channel out of range. Possible memory leak.
0x99-0xb0	Unused
0xb1	Indication buffer 1 “busy” when not expected (attempting to give network indication to the slave host). Development error.
0xb2-0xdf	Unused
0xe0	Illegal opcode.
0xe1	Software interrupt.
0xe2	Unused
0xe3	Trap when ramware is disabled.
0xe4	Indication0 queue overflow. Host not keeping up.
0xe5	Unexpected non-maskable interrupt.
0xe6	Indication4 queue overflow. Host not keeping up.
0xe7	Read burnin for EEPROM failed.
0xe8	Interlock condition (attempting to turn off two volt supply when wakeup not disabled by host)



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## Extracted Requirements

### TLMC\_MS\_001 - PACKET CONTROL BYTES

**Fig. 17 (Packet Control Bytes)** defines the fields within the control bytes of a master packet.

### TLMC\_MS\_003 - PACKET TYPES

**Table 4 (PACKET TYPES)** defines the permissible types of Telemetry M packet.

### TLMM\_MS\_406 - EEPROM - NON-VOLATILE REGISTERS

When the CPU is enabled and the EEPROM is read successfully, the Mozart module shall update the non-volatile always on registers. Upon a reset, the Mozart module shall update the volatile registers.

[The data read from the EEPROM is copied to a specific location into the RAM **TABLE 122: STRUCTURES IN EEPROM**]

### TLMM\_MS\_407 - EEPROM - LOAD RAMWARE APPLICATION

The Mozart module will load the RAMWARE application (if one exists) into RAM if there are no unrecoverable error reading the RAMWARE section of the EEPROM. Additionally it will begin executing the RAMWARE application.

### TLMM\_S\_408 - EEPROM - WAKEUP DURING EEPROM READ

When CPU is enabled via wakeup then wakeup indication will be generated to the host upon the successful read of the EEPROM. For wakeup indication see **TABLE 93: WAKEUP INDICATION (SLAVE)**

### TLMM\_MS\_262- READY INDICATION - INDICATION TO UPPER LAYER

The Ready indication will be generated to the Upper Layer when Data link layer is enabled by Host, or via Reset and the EEPROM has been successfully read. See **Table 5 (READY INDICATION (MASTER OR SLAVE))**

### TLMM\_MS\_409 - EEPROM - FAILURE INDICATION

When the CPU is enabled (host dummy write or wakeup) data will be read from the EEPROM. The Mozart module will send an EEPROM read failure indication to the host if there are unrecoverable errors encountered while reading any of the following:

- p\_hdw1 & p\_hdw2 - mirror of non-volatile always on registers
- p\_wakeup - mirror of non-volatile always on registers, and mirror of volatile always on registers, and firmware operating parameters
- p\_config - firmware operating parameters
- p\_ramware\_control and RAMWARE code

See **Table 6 (EEPROM READ FAILED INDICATION (MASTER OR SLAVE))**.

[ROM defaults will be used if (a) - (c) do not survive intact.

The content read from the EEPROM is listed in appendix section 7.7]

### TLMM\_MS\_410 - POWER INHIBIT DURING EEPROM OPERATION

During the EEPROM operation if power inhibit is invoked then EEPROM operation will be suspended.

[During an EEPROM operation if power inhibit is invoked by the host data link layer will complete the on going EEPROM structure operation. The operation on the remaining structure will resume upon the termination of power inhibit.

A timeout indication will be generated to the Upper Layer if the total duration of the EEPROM read operation lasts longer than 10 seconds. Upon a successful read of the EEPROM transition will be made to DISABLE CPU ON state where disable ON timer will be started, power inhibit interrupts will be unmasked. Wakeup indication "Wakeup Complete", containing the wakeup packet contents, shall be sent to the upper layer. (see **Table 93 (WAKEUP INDICATION (SLAVE))**) if slave is waiting for the "last packet last block" wakeup packet (after the "first packet last block" wakeup packet has enabled the CPU).

EEPROM write operation will occur in Standby state. For detail about the EEPROM write operation, see **7.6.2 Mozart module Memory Read and Write**. A timeout indication (if EEPROM write command from Master) or response (if EEPROM write command from slave host) will be generated to the Upper Layer if the total duration of the EEPROM write operation lasts longer than Standby Timer because Power Inhibit takes too long ( For "standby timer" see **Table 129 (PARAMETERS FROM EEPROM)**).

Power monitor bit shall only be set during EEPROM operation.]

### TLMC\_MS\_004 - STATION ID

The ID is a 6-byte identifier which uniquely identifies each station. A valid ID shall have non-zero value.

### TLMM\_MS\_426 - DEFAULT NATIVE MODE RATE

The master and slave shall transmit and receive native mode packets using a default rate before two way communication is established.

[See "default downlink native mode rate" and "default uplink native mode rate" in the p\_config block of the EEPROM. Note that the open downlink packet will communicate the downlink and uplink rate for two way communication

Note that the slave's default data rates come from EEPROM until a wakeup packet is received.]

### TLMC\_MS\_006 - EXTERNAL SERVICE REQUEST PROCESSING

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External service requests will be accepted in a serialized manner, with one exception: Emergency can interrupt any service in progress.

#### **TLMC\_M\_237 - SERVICE DURATION TOLERANCE**

All service requests are issued with a service duration. The tolerance for all service durations (measured at the application) is [-1 second, +1 second].

#### **TLMM\_MS\_404 - FAULT INDICATION - INDICATION TO UPPER LAYER**

The Fault indication will be generated to the Upper Layer when a fault reset occurs. See **Table 12 (FAULT INDICATION (MASTER OR SLAVE))**

#### **TLMM\_S\_263 - SHUTDOWN INDICATION - INDICATION TO UPPER LAYER**

When the standby timer, ephemeral BAN key timer, and security (key exchange authorization) timer have all expired, a shutdown indication will be generated to the upper layer, a transition will be made to the disable state. See **Table 13 (SHUTDOWN INDICATION (SLAVE, MASTER))**

[Then the slave will return to synchronous receptor wakeup operation. If the wakeup disable bit is set to 1 in the initialization request firmware does not set the wakeup enable bit bp\_wakeup\_en bit in REG\_BP\_WU\_CTRL0 register. See requirement **TLMM\_S\_402 - WIRELESS WAKEUP - DISABLE WAKEUP**.

Finally, the slave will wait for “Timer between Shutdown Indication and Turn off 2V” duration and then turn off the 2 volt supply. See **Table 129 (PARAMETERS FROM EEPROM)** for “Timer between Shutdown Indication and Turn off 2V”.]

#### **TLMM\_MS\_413 - SHUTDOWN INDICATION - DISABLE TIMER EXPIRES**

Upon the expiration of the disable ON timer shutdown indication will be generated to the upper layer and 2 volt supply will be turned off.

[A shutdown indication can occur when Mozart is enabled via reset, host dummy write or wakeup and the host does not send a subsequent initialize request.

Note that the 2 volt supply is not turned off until the “Timer between Shutdown Indication and Turn off 2V” (see **Table 129 (PARAMETERS FROM EEPROM)**) expires after the expiration of the disable ON timer. In addition, during the “Timer between Shutdown Indication and Turn off 2V” that follows the disable ON timer expiration, the mozart will not respond to wake-ups.]

#### **TLMM\_MS\_428 - INITIALIZE - UPPER LAYER TO DATA LINK LAYER PARAMETERS**

When invoking the Initialize service request, the Upper Layer will provide information as specified in **Table 14 (INITIALIZE SERVICE REQUEST (MASTER OR SLAVE))**.

#### **TLMM\_MS\_265 - INITIALIZE ADDRESS WITH VALUES**

Upon receiving the initialization data, firmware will copy each value to the specified address up to, but not including, an address value of 0. Format for master see **Table 123 (Master parameters from host)** and for slave see **Table 124 (SLAVE PARAMETERS FROM HOST)**.

[Initialization data are address-data pairs contained in the parameters received from the host. This could be used to write any value to the specified address.]

#### **TLMM\_M\_266 - MASTER INITIALIZE SERVICE REQUEST FROM UPPER LAYER**

When invoking an Initialize service request, the Upper Layer in the master will provide information contained in the configuration file (see **Table 123 (Master parameters from host)**).

#### **TLMM\_M\_267 - MASTER INITIALIZE SERVICE RESPONSE TO UPPER LAYER**

An Initialize service response will be generated to the Upper Layer after the initialize service request is processed.

[The content of the response to the Upper Layer is specified in **Table 15 (INITIALIZE SERVICE RESPONSE (MASTER))**.]

#### **TLMC\_S\_008 - SLAVE INITIALIZE SERVICE REQUEST FROM UPPER LAYER**

When invoking an initialize service request, the Upper Layer in the slave will provide information as specified in **Table 124 (SLAVE PARAMETERS FROM HOST)**

#### **TLMC\_S\_009 - INITIALIZE SERVICE RESPONSE TO UPPER LAYER.**

An initialize service response will be generated to the Upper layer after the initialize service request is processed, and a standby timer is started.

[The content of the response to the Upper Layer is specified in **Table 16 (INITIALIZE SERVICE RESPONSE (SLAVE))**.]

#### **TLMM\_S\_241 - POLLING ENABLING CRITERIA**

If the polling feature is enabled then it will be activated:

1. Pre-session – when a polling service request is received from the upper layer (i.e., valid wakeup packet received),
2. Post-session – when channel recovery is terminated unsuccessfully and the patient name service request is received from the upper layer.

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### 3. Post-session – when a close request packet is received and the patient name service request is received from the upper layer.

The slave will use the polling duration in the open packet

[If session is not opened then default polling time value from the initialization data provided by the host will be used.]

#### **TLMM\_S\_035 - POLLING - SERVICE REQUEST FROM UPPER LAYER**

When invoking a Polling service request before a session has been established, use the Total Initial Polling Duration time provided by the host as part of initialization data when initialization service request is invoked.

[The polling timer can also be programmed as via Open master packet (see **5.2.10 OPEN SESSION**), this timer value specifies the duration of the polling period.]

#### **TLMM\_S\_256 - POLLING - SERVICE RESPONSE TO UPPER LAYER**

When poll request is received, the Data Link Layer will validate the Poll service request.

[The content of the response to the Upper Layer is specified in **Table 18 (POLLING SERVICE RESPONSE (SLAVE))**]

#### **TLMM\_S\_432 - POLLING - HOST REQUIRES SECURE BUT LOCAL WAKEUP PACKET DOES NOT INCLUDE SECURITY**

If slave's "authorized to talk unsecurely" parameter is false as provided by the host, and a valid local wakeup packet with "security user data/network packet" set false is received, when polling request (upon Tel M) is received, slave will send an invalid polling response to upper layer.

[Host authorizes Tel M to talk secure/unsecure as part of initialization.]

#### **TLMM\_S\_240 - POLLING INITIATION**

Once the polling feature (scanning off) is activated Pre-session the slave will start the polling timer, start the native mode timer and start listening for a native mode packet. The native mode listen channel will come from the recently received wakeup packet.

Once the polling feature (scanning off) is activated Post-session the slave will start the polling timer and start listening for wakeup packets.

When the polling feature (scanning on) is activated (pre or post session) the slave will start the polling timer, start the channel listening timer and start listening for a native mode packet on a channel.

[For the polling (scanning off) case, if no wakeup packet has been received (i.e. Poll upon POR), the listen channel will be chosen randomly.

For the polling (scanning on, pre session) case, if Unicast wakeup packet has been received, the first listen channel will be the channel number indicated in the Unicast wakeup packet; if Global wakeup packet has been received, the first listen channel will be a randomly selected channel number.

For the polling (scanning on, post session) case, the first listen channel will be the channel number used in the last session.

Note that the slave's polling mode (scanning on or scanning off) comes from EEPROM until a wakeup packet is received.]

#### **TLMC\_S\_252 - POLLING - RESTART NATIVE MODE TIMER OR CHANNEL LISTEN TIMER**

The slave will do the following upon the receipt of a valid discover ID, or discover name packet:

1. Restart the native mode timer for the polling (scanning off) case. Restart the channel listen timer for the polling (scanning on) case.
2. Restart the polling timer using the "last polling" value for the polling. "Last polling" is the latest polling duration via the initialize service or polling duration via downlink open packet.

#### **TLMC\_S\_037 - POLLING - NATIVE MODE TIMEOUT/ CHANNEL LISTEN TIMEOUT**

The slave will do the following upon a native mode timeout/ channel listening timeout for the scanning off/ scanning on cases respectively:

1. Begin listening for wakeup for the scanning off case. Utilize continual asynchronous receptor wakeup listens to do this. It will continue to listen for wakeup until a valid wakeup packet is received, or the polling timer expires.
2. Select a new channel for (native mode) listening for the scanning on case. Note that this is done using two phases:
  - a. Phase 1 - random channel listening - the slave will randomly select a channel and will restart the channel listening time and listen for a valid packet from the master. If no valid open packet has been received and the service duration timer is still active, the slave will switch to the phase 2 approach.
  - b. Phase 2 - sequential channel listening - the slave will sequentially select the next channel and will restart the channel listening time and listen for a valid packet from the master. When every channel has been selected once the slave will switch to the Phase 1 approach.

[Note that the slave will scan on the bands specified in **Table 124 (SLAVE PARAMETERS FROM HOST)**. See the parameter called "telemetry scheme and waveform setup".]

#### **TLMM\_S\_268 - POLLING - VALID WAKEUP PACKET**

The slave will start the native mode timer and begin listening for a valid native mode packet if a valid wakeup packet is received



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during polling (scanning off).

#### **TLMC\_S\_038 - POLLING - TERMINATION**

The polling will terminate when Polling duration timer expires, or when a valid Open request is received. The slave shall discard all the master IDs stored during the polling operation. The slave will maintain the ID of the master with which communication is established.

#### **TLMC\_S\_039 - POLLING INDICATION TO UPPER LAYER**

A polling timeout event indication to the Upper Layer will be generated when the polling timer expires. See **TABLE 19: POLLING INDICATION (SLAVE)**.

#### **TLMC\_M\_010 - DISCOVER SERVICE REQUEST FROM UPPER LAYER**

When invoking a Discover service request, the Upper Layer will provide information as specified in **Table 20 (DISCOVER SERVICE REQUEST (MASTER))**.

#### **TLMC\_M\_011 - VALID SLAVE ID**

The valid slave IDs with wild card specification are defined in **Table 21 (VALID SLAVE ID WITH WILD CARD)**.

#### **TLMC\_M\_024 - DISCOVER FULL - RESPONSE TO UPPER LAYER**

A Discover service response to the Upper Layer will be generated when a Discover Full service request is received.

[The content of the response to the Upper Layer is specified in **Table 22 (DISCOVER SERVICE RESPONSE (MASTER))**.]

#### **TLMC\_MS\_012 - DISCOVER FULL - DISCOVER ID PACKET FORMAT**

The Discover ID request packet has the layout indicated in **Fig. 30 (Discover ID Request Packet)**.

#### **TLMC\_M\_013 - DISCOVER FULL - DISCOVER ID REQUEST PACKET**

When Discover service request is invoked by the Upper Layer, start a service duration timer and transmit a Discover ID request packet.

[A service duration timer will be started; select the least interfered channel (takes approximately 275 +/- 50 msec); start the Listen Before Talk (LBT) timer; perform instigator wireless wakeup, send a "first request packet sent" indication to the Upper Layer (see **Table 23**); start the native mode timer (if the slave does not scan during polling), transmit a discover ID request packet. Note the 'first request packet sent' indication is configurable. See the parameter called 'transmit notification enabled' in

#### **Table 123 (Master parameters from host)**

Also note that the master will perform clear channel assessment before and after transmitting wakeup (if the slave scans during polling). The master will restart the Listen Before Talk (LBT) timer after the second clear channel assessment. This minimizes the interaction between the time it takes the slave to scan all channels and the time before the master starts transmitting wakeup again.]

#### **TLMM\_M\_269 - DISCOVER FULL - DISCOVER ID RESPONSE WINDOW**

The master shall continue listening for more slave responses upon hearing any response (valid or not) provided the device ID response window is not complete.

#### **TLMM\_M\_270 - DISCOVER FULL - RESTART NATIVE MODE TIMER**

The master will restart the native mode timer whenever it receives a valid discover ID (or discover name) packet from the slave (if the slave does not scan during polling).

[Note that a channel is selected and instigator wakeup is performed when the native mode timer expires. Once instigator wakeup is complete, discover ID is transmitted again. See **Fig. 31 (Simplified master discover full state machine)**

Note that the native mode timer is not used when the slave scans during polling.]

#### **TLMC\_M\_014 - DISCOVER FULL - RETRY DISCOVER ID REQUEST**

If no valid Discover ID slave response packet is received within the discover ID response window, the master shall transmit another Discover ID request packet. The Discover ID retry will continue until:

1. A valid Discover ID response packet is received, or
2. The service duration timer expires, or
3. The native mode timer expires, or
4. The listen before talk timer expires.

[In order to retransmit the Discover ID request due to no slave response from a previous discover ID request data link layer will switch to a different antenna and will retransmit the discover ID request.]

#### **TLMC\_S\_015 - DISCOVER FULL - DISCOVER ID RESPONSE**

Upon receiving a valid Discover ID request packet the slave will perform as follows:

1. If the master packet contains a master ID which the slave received previously from a valid Discover Name request packet, then slave response will not be generated.
2. If the master packet contains a master ID which the slave has not received previously from a valid Discover Name request packet, the slave will transmit a Discover ID response packet in the first slave timeslot. It will transmit a second Discover

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ID response packet in slave timeslot 2, 3,..., or 7. This timeslot will be randomly chosen (to reduce collisions). Note that the second response is not used if the slave scans during polling.

The slave will restart the native mode timer to allow the receipt of another master packet if the slave does not scan during polling.

#### **TLMC\_M\_016 - DISCOVER FULL - LBT OR NATIVE MODE TIMEOUT**

While the service duration timer is active and LBT timer expires or the native mode timer expires, the master will reselect the least interfered channel, toggle the antenna, perform instigator wireless wakeup, and transmit a discover ID packet.

[Note that the master will perform clear channel assessment before and after transmitting wakeup (if the slave scans during polling). The master will restart the Listen Before Talk (LBT) timer after the second clear channel assessment. This minimizes the interaction between the time it takes the slave to scan all channels and the time before the master starts transmitting wakeup again.]

#### **TLMC\_MS\_017 - DISCOVER FULL - DISCOVER ID RESPONSE PACKET FORMAT**

The Discover ID response packet has the layout indicated in **Fig. 32 (Discover ID Response Packet)**.

#### **TLMC\_MS\_018 - DISCOVER FULL - DISCOVER NAME REQUEST PACKET FORMAT**

The Discover Name request packet has the following layout indicated in **Fig. 33 (Discover Name Request Packet)**.

#### **TLMC\_M\_019 - DISCOVER FULL - DISCOVER NAME REQUEST PACKET**

After the receipt of a valid Discover ID response, the master will transmit a Discover Name request packet.

[The master will keep track of all the unique slave IDs, the discover name request will be transmitted on the same antenna as was used for Discover ID.

If multiple slave respond during the discover ID response window, the master will sequentially transmit a name request (and wait for a name response) to each slave.]

#### **TLMC\_M\_020 - DISCOVER FULL - RETRY DISCOVER NAME REQUEST**

If no valid slave Discover Name response is received, the master will retry the Discover Name request packet until the discover name retry timer expires. Note that this timer was started when the initial discover name downlink was sent. Once the timer expires, the master will continue the Discover service by transmitting a new Discover ID request packet.

[The retry attempt of the discover name request will use the same antenna as was used for the first discover name request. If no response is received from the retry attempts then discover ID will be transmitted using a different antenna.]

#### **TLMC\_S\_021 - DISCOVER FULL - DISCOVER NAME RESPONSE**

After the receipt of a valid master Discover Name request packet, the slave shall do the following:

1. Transmit the Discover Name response packet(s). see **Table 112 (DISCOVER NAME SLAVE RESPONSE FORMAT)** for details. The proximity status shall be the byte immediately following the slave ID see **Fig. 35 (Proximity status type byte)**.
2. The slave shall store the master station ID from the Discover Name packet for the collision avoidance duration indicated in the Discover Name request packet. The slave shall not transmit any Discover ID response for the subsequent Discover ID request from this master for the duration of the collision avoidance timer.
3. Send a discover name indication (sub-type of 0x01) to the host (see **Table 24 (DISCOVER INDICATION (SLAVE))**). This is an implicit security indication. The indication to the host will not be sent more than once a second.

[The slave shall update its current remaining Scan duration with that from the Discover Name request packet (discover ID collision avoidance duration) if the current remaining Scan duration is shorter. Also extend the listen time by 50ms if the remaining listen time is less than 50ms. The size of the collision avoidance buffer is ten, a circular buffer is used to keep track of number of masters issuing Discover full]

#### **TLMM\_S\_271 - DISCOVER FULL - CANCEL COLLISION AVOIDANCE TIMER**

The collision avoidance timer will be canceled upon receiving of an “authorize BAN key exchange service request or update proximity status service request”.

#### **TLMC\_MS\_022 - DISCOVER FULL - DISCOVER NAME RESPONSE PACKET FORMATS**

During the slave response of Discover Name the slave will use one or more of the packet formats as shown in **Fig. 34 (Discover Name Response Packet)**.

#### **TLMM\_M\_272 - DISCOVER FULL - SUCCESSFUL NAME**

The master will send a discover indication to the upper layer (with a status of success) if it successfully obtains the slave’s name.

The format of the indication is shown below:

#### **TLMC\_S\_023 - DISCOVER FULL - RESPONSE PARTITIONING**

The slave will partition the Discover Name response packet(s) using **Table 26 (DISCOVER NAME RESPONSE FRAGMENTATION)**.

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[Note that if a Discover Name (ensuing, not full) packet is needed, it must be the last packet of the transaction.]

#### **TLMM\_M\_273 - DISCOVER FULL - TIMEOUT INDICATION**

The master will send a discover indication (with a status of timeout) when the discover full service duration expires. See **Table 25 (DISCOVER INDICATION (MASTER))**.

#### **TLMM\_M\_274 - DISCOVER FULL - STOP**

The master will stop the discover full service and send a service response if it receives a stop discover full service request. Additionally it will send a discover indication (status of cancelled). See **Table 25 (DISCOVER INDICATION (MASTER))**.

#### **TLMC\_M\_040 - OPEN - UPPER LAYER PARAMETERS**

When invoking an Open service request, the Upper Layer will provide information as specified in **Table 27 (OPEN SERVICE REQUEST (MASTER))**.

#### **TLMM\_MS\_281 - OPEN - REQUEST PACKET FORMAT**

The open request packet has the format indicated in **Fig. 40 (Open Secure/Unsecure Request Packet)**

The “normal values” for the slave’s unspecified channel recovery (UCR) duration and slave’s polling duration will come from the initialize service request from the master host (**Table 123 (Master parameters from host)**).

#### **TLMM\_MS\_282 - OPEN - RESPONSE PACKET FORMAT**

The open response packet has the format indicated in **Fig. 42 (Open Secure/Unsecure Response Packet)**

[Nominal packet count and Max. throughput packet count in the open response packet is to support verification testing when Protocol Analyzer is used.]

#### **TLMM\_M\_283 - OPEN - TRANSMIT MASTER PACKET**

Upon receiving an open service request, the master will start a service duration timer and transmit the open request packet.

[Start the service duration timer; select the least interfered channel (takes approximately 275 +/- 50 msec); start the Listen Before Talk (LBT) timer; perform instigator wireless wakeup (including unsecured or secured user data if any exists); transmit the open request packet (including the 8 byte random number used to compute a session key); send a “first request packet sent” event indication to the Upper Layer (see **Table 23 (FIRST REQUEST PACKET SENT INDICATION (MASTER))**).

Note that instigator wireless wakeup is suppressed if the master knows the slave is scanning. Time now, time of last uplink, and remaining polling duration at the time of the last uplink are used to determine this.

Also note that the master will perform clear channel assessment before and after transmitting wakeup (if the wakeup is not suppressed and the slave scans during polling). The master will restart the Listen Before Talk (LBT) timer after the second clear channel assessment. This minimizes the interaction between the time it takes the slave to scan all channels and the time before the master starts transmitting wakeup again.]

[The algorithm for generating a random number is described in the appendix (see section **7.3 Pseudo Random Number Generation**). Note that the master random number (Rm) can be re-used for the entire open secure service. When communication is established and subsequently lost, a new random number (Rm) must be generated during open and session recovery.]

#### **TLMM\_M\_284 - OPEN - NO VALID SLAVE RESPONSE RETRY REQUEST**

If no response is received, the master will resend the open request till the Service Duration timer is expired.

[If no valid open response packet is received, the master will perform the following:

1. Transmit an open request packet on the alternate antenna.

This process shall be continued until a valid open response packet is received, a Service Duration Timeout occurs, or a Listen Before Talk timer expires.]

#### **TLMM\_M\_285 - OPEN - LISTEN BEFORE TALK TIMER OPERATIONS**

If the listen before talk timer expires during an open service, the master will transition to unspecified channel recovery.

[As part of unspecified channel recovery following actions are performed: Re-select the least interfered channel for communication, Start the Listen Before Talk timer, toggle the antenna, perform instigator wireless wakeup, and transmit an open request. Also note that the master will perform clear channel assessment before and after transmitting wakeup (if the slave scans during polling). The master will restart the Listen Before Talk (LBT) timer after the second clear channel assessment. This minimizes the interaction between the time it takes the slave to scan all channels and the time before the master starts transmitting wakeup again.]

#### **TLMC\_S\_286 - OPEN - RESPONSE TO A VALID OPEN REQUEST**

Upon receiving a valid open request packet, during polling operation, the slave will fill up the transmit frame with N open response packets (“N” = open uplink packet count in **Table 129 (PARAMETERS FROM EEPROM)**). Slave will update the unspecified channel recovery duration and polling duration using the values in the open request packet.

Upon completion of uplinking all the open response packets, the slave will terminate the polling operation; It will then transition to the Comm State. An open indication will be sent to the upper layer (see indication **Table 28 (OPEN INDICATION**

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(SLAVE))). Additionally the slave will transition to the desired downlink rate and uplink rate specified in the open downlink packet. Finally the slave will reset (to zero) the waveform sequence number.

[Note that the open response packets will include the actual UCR duration and actual polling duration and an 8 byte slave random number (Rs).

Slave will restart the native mode time, channel listen time or the medical event transmit time if the timer (native mode time, channel listen time or the medical event transmit time) times out during the uplinking of the open response packets.]

#### **TLMM\_S\_287 - OPEN - NO RESPONSE TO A VALID OPEN REQUEST**

When slave's "authorized to talk unsecurely" parameter is false as provided by the host, and a valid open "unsecure" request is received then slave will not transmit any response packets.

[When this happens, slave will continue polling.]

[Host authorizes Tel M to open and/or unsecure session as part of initialization]

#### **TLMM\_S\_288 - OPEN - RESPONSE TO A VALID OPEN UNSECURE REQUEST**

When slave is authorized to open an "unsecure" session by the host, and a valid open "secure or unsecure" request is received then slave will accordingly transmit the response packets.

[Host authorizes Tel M to open secure and/or unsecure session as part of initialization]

#### **TLMM\_S\_289 - OPEN - SESSION KEY COMPUTATION UPON VALID OPEN REQUEST**

Upon the receipt of a valid open request the slave will compute a session key using the eight byte master random number (Rm), the eight byte slave random number (Rs) and one of the K values using the block cipher: the BAN key (KBAN), ephemeral BAN key (KEBAN), a fixed known token value (Ktoken). See **Fig. 44 (Computing a session key)**.

[The eight byte master random number (Rm), slave random number (Rs) and BAN Key (KBAN) or Ephemeral KEBAN will be loaded into the appropriate registers of the AES hardware block to generate the Session Key K<sub>Sess</sub>. For an unsecure session - A fixed known token value (KToken) is loaded to the AES hardware block instead of the KBAN or KEBAN key(s)]

#### **TLMM\_S\_290 - OPEN - RESPONSE SUCCESSFUL**

Open successful status will be transmitted in the open response packet if:

1. Slave has the appropriate Ban Key as request by the master, or
2. Slave is authorized to communication unsecurely and open request is for unsecure open.

#### **TLMM\_S\_292 - OPEN - ENABLE SECURITY BLOCK**

Upon transmitting the open response the slave will enable the hardware's security block (security register to on). The slave will start the block cipher for message integrity, privacy, and freshness checking. This will be done by writing the session key to the block cipher key register. Additionally, the slave will initialize the block cipher nonce counter using the lower 5 bytes of the master random number (Rm). The most significant byte of the nonce counter is set to zero to allow a very long session because once the nonce reaches its max value it stops.

[Slave enables the hardware security block even if an unsecured session is opened - See **Fig. 45 (Open - block cipher initialization)**.]

[Note: An open indication is sent to the upper layer indicating that a session is opened; continue the Synchronous Mode operation and wait for a valid master packet. The algorithm for generating a random number is described in the appendix (see section **7.3 Pseudo Random Number Generation**).]

#### **TLMM\_S\_293 - OPEN - UNSUCCESSFUL - MISSING KEY**

The slave will send an unsuccessful open response if the following occurs:

1. The slave receives a valid open request and the open type is secured, and
2. The slave does not have the KBAN or KEBAN filled that was specified in the open type byte (See **Fig. 41 (Open type byte (Request))**)

The slave will set the open response type byte to unsuccessful. See **Fig. 42 (Open Secure/Unsecure Response Packet)**.

#### **TLMM\_M\_294 - OPEN - A VALID SLAVE RESPONSE**

If a valid open response packet is received, the master will perform the following:

1. Return a successful open service response to the Upper Layer.
2. Transition to the Comm State.
3. Compute a session key using the eight byte master random number (Rm), the eight byte slave random number (Rs) and the BAN key (KBAN) using the block cipher. See **Fig. 44 (Computing a session key)**.
4. Transition to the desired downlink rate and uplink rate. Note that these originally came from **Table 123 (Master parameters from host)**.
5. Enable the hardware's security block (security register to on).
6. Start the block cipher for message integrity, privacy and freshness checking. This is done by writing the block cipher key register with the session key. Additionally, the nonce counter is initialized using the lower 5 bytes of the master random

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number (Rm). The most significant byte of the nonce counter is set to zero to allow a very long session because once the nonce reaches its max value it stops. See **Fig. 45 (Open - block cipher initialization)**.

7. Clear the wakeup internal service user data buffer to prevent retransmission of stale user data.
8. Reset (to zero) the expected waveform sequence number.

[Note that the recently exchanged ephemeral BAN key will be used (to calculate a session key) if the ephemeral key is still valid. The ephemeral BAN key is valid until the ephemeral BAN key timer expires. Note: if open type is unsecure, Ktoken is used.]

#### **TLMM\_M\_295 - OPEN - RESPONSE WITHOUT KBAN OR KEBAN**

If a valid open secure response packets is received with unsuccessful status, then master will stop transmitting open requests. [The master will transition to the standby state if the open uplink indicates the slave lacks the appropriate key.]

#### **TLMM\_M\_296 - OPEN - RESPONSE TO UPPER LAYER**

An open service response will be generated to the Upper Layer when the open service is completed.

[The content of the response to the Upper Layer is specified in **Table 29 (OPEN SERVICE RESPONSE (MASTER))**.]

#### **TLMC\_MS\_049 - DATA - UPPER LAYER TO DATA LINK LAYER PARAMETERS**

When invoking the Data service request, the master Upper Layer will provide information as specified in **Table 30 (DATA SERVICE REQUEST (MASTER OR SLAVE))**.

#### **TLMC\_MS\_050 - DATA - MASTER REQUEST PACKET FORMAT(S)**

The master data request has the format shown in **Fig. 50 (Master data packet formats)**

#### **TLMC\_M\_051 - DATA - TRANSMISSION OF MASTER DATA PACKET**

When the Data service request is invoked, the master will start the reply timer, format the user data into data fragment(s)/packet(s) and transmit the data packet(s).

[Initiate the Internal Service Reset if the reset parameter is True, Add the master ID in the first fragment, transmit the packet(s), send a first request packet sent event indication to the Upper Layer after sending the first data packet (see **Table 23**)]

#### **TLMC\_S\_052 - DATA - ACKNOWLEDGEMENT OF MASTER DATA PACKET**

The slave shall set the ACK bit in the slave packet(s) when it receives a master packet with good message authentication code (MAC). The ACK bit in the slave packet(s) will not be set if the master packet was received with a bad MAC.

[Note: A packet with a bad sequence number will also be ACKed and the data will be ignored.]

[See requirement **TLMC\_S\_055 - DATA - MASTER PACKETS WITH DUPLICATE SEQUENCE NUMBERS**.]

#### **TLMC\_M\_053 - DATA - PACKETIZATION OF THE MASTER DATA**

The master will fragment the user data into packets per **Table 31 (PACKETIZATION OF MASTER DATA)**.

[Note that if a data (ensuing, not full) packet is needed, it must be transmitted as the last packet of the transaction.]

[For example, if the size of the user data is 53 bytes, the transaction is fragmented as follows:

- a. One data (first, full) packet - 30 bytes (6 bytes master ID, and 24 bytes of user data)
- c. One data (ensuing, not full) packet - 29 bytes of user data]

#### **TLMC\_M\_054 - DATA - RETRANSMISSION OF MASTER PACKET - NO ACK RECEIVED**

After transmitting a data packet, if no slave packet with the ACK bit set is received, that master data packet shall be retransmitted. Only after an slave packet with the ACK bit set is received, the next data packet shall be transmitted.

[The master data service uses the Stop and Wait algorithm.]

#### **TLMC\_S\_055 - DATA - MASTER PACKETS WITH DUPLICATE SEQUENCE NUMBERS**

If the master data request packet has the same sequence number as the previous master data request packet, the slave will toss the data packet and retransmit unacknowledged Memory Data packets, if any exist.

#### **TLMC\_S\_056 - DATA - VALIDATION OF MASTER DATA REQUEST**

The slave shall process the master data packet if it is valid per **Table 10 (MASTER PACKET VALIDATION)**.

#### **TLMC\_S\_057 - DATA - MASTER PACKETS INTO TRANSACTION**

The master data packets are assembled into a transaction and are passed on to the slave's upper layer (application).

[The data indication to the slave Upper Layer will be generated by the slave data link layer, after it successfully receives and assembles all the data packets of a given transaction. The content of the Indication to the Upper layer is defined in **Table 32 (DATA INDICATION (MASTER/SLAVE))**]

#### **TLMC\_M\_058 - DATA - RESPONSE TO UPPER LAYER**

When slave's upper layer response is completely received or a reply timeout occurs then a data service response to the master upper layer will be generated. No slave upper layer response is expected when the master transaction is not final. In this case the data service response is generated when all the master data packets have been acknowledged by the slave.

[The content of the response to the Upper Layer is defined in **Table 33 (MASTER DATA SERVICE RESPONSE)**.]

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#### **TLMM\_M\_297 - DATA - WAIT FOR INDICATION**

The master will send a data indication to the Upper Layer when the data transaction completes.

- For the (master) Memory Data service, when all the data packets are acknowledge by the slave (and the master transaction was the message's final transaction) the master will wait for slave data packet(s). It will re-assemble these packets into complete transactions (indications). It will forward these indications (in-order) to the Upper Layer. It will cancel the reply timer if it forwards the final slave indication to the Upper Layer;
- For the (slave) Unrequested Data (or Waveform) service, the master will reassemble all the slave data packets into a complete indication and forward it to the Upper Layer.

[The content of the Indication to the Upper layer is defined in **Table 32 (DATA INDICATION (MASTER/SLAVE))**].

If the reply timer expires while waiting for the final indication an (unsuccessful) data response will be sent to the Upper Layer.]

#### **TLMM\_M\_298 - DATA - RECOVERY**

The master will "suspend" the data service request if channel recovery is triggered. If channel recovery is successful (and the reply timer is still active), the master will retry the data service request.

#### **TLMM\_M\_299 - DATA - REPLY TIMEOUT**

The master will send an (unsuccessful) data service response to the upper layer if the reply timer expires during the data service request.

[The Upper Layer should consider the data "message" service unsuccessful if it receives a failed data service response.]

#### **TLMM\_M\_300 - DATA - FIRST INDICATION**

The master will set the first indication bit in the slave upper layer header byte before it forwards the first indication to the upper layer.

[Note: upper layer may receive multiple "first" data indications. This can occur during retry. The upper layer should restart the re-assembly of the response message each time it receives a "first" data indication.]

#### **TLMC\_S\_059 - DATA - SLAVE UPPER LAYER PARAMETERS**

When invoking the Data service request, the slave Upper Layer will provide information as specified in **Table 30 (DATA SERVICE REQUEST (MASTER OR SLAVE))**.

#### **TLMC\_S\_058 - DATA - RESPONSE TO UPPER LAYER**

When Data request is received, the Data Link Layer will validate the Data service request and will send the response to the upper layer.

[The content of the response to the Upper Layer is defined in **Table 34 (SLAVE DATA SERVICE RESPONSE)**].

#### **TLMC\_S\_060 - DATA - SLAVE TRANSMISSION OF DATA PACKETS**

When the Data service request is invoked the data link layer will fragment the user data into slave packet(s) which then will be transmitted. The first fragment of the user data will contain the slave ID.

Note that if bit "Enable WF in Recovery" (see **Table 124 (SLAVE PARAMETERS FROM HOST)**) is set to "1", Data service requests (sub-type Waveform data) received during recovery state will be transmitted when the channel recovery is successful.

[The data link layer will fragment the user data and format them into slave packets, add slave ID in the first fragment, format the packet control byte according the Data type specified, transmit the packets via Synchronous Mode operation.]

#### **TLMC\_S\_061 - DATA - SLAVE DATA PACKET FORMAT(S)**

The slave will use one or more of the slave packet(s) formats shown in **Fig. 53 (Slave Data Packet(s) Format)**.

#### **TLMC\_S\_062 - DATA - PACKETIZATION OF SLAVE DATA**

The slave will packetize the user data into slave packets per **Table 35 (DATA PACKET RECEPTION VALIDATION)**.

[Note: If a data (ensuing, not full) packet is needed, it must be the last packet of the transaction.]

#### **TLMC\_M\_063 - DATA - RECEIPT OF AN INVALID SLAVE PACKET**

The master shall use the ARQ algorithm to acknowledge or request the retransmission of invalid or not received Memory Data packets See **Table 11 (SLAVE PACKET VALIDATION)**.

[A packet with an invalid sequence number is ignored.]

#### **TLMC\_M\_066 - DIAGNOSTIC SERVICE REQUEST FROM UPPER LAYER**

When the Upper Layer invokes the diagnostic service it will provide information as specified in **Table 36 (DIAGNOSTIC SERVICE REQUEST (MASTER))**.

#### **TLMC\_M\_067 - REMOTE DIAGNOSTIC - MASTER PACKET FORMAT**

When a remote diagnostic service request is invoked by the Upper Layer, the master will:

1. Start the service duration timer.
2. Transmit a diagnostic packet as defined by **Fig. 55 (Master diagnostic (request) packet)**. The diagnostic packet sub-type bit (in master control byte 2) should be set to one (request packet, not filler packet).

[Send a "first request packet sent" event indication to the Upper Layer (see **Table 23**).]

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### **TLMC\_S\_068 - REMOTE DIAGNOSTIC - SLAVE PACKET FORMAT**

The slave will respond to a valid Diagnostic request packet with one or more diagnostic response packet. The diagnostic packet sub-type bit (in the diagnostic status byte) should be set to one (response packet, not filler packet). The format of the slave Diagnostic packet is indicated in **Fig. 56 (Slave diagnostic packet)**.

### **TLMC\_S\_069 - REMOTE DIAGNOSTIC - STATUS BYTE FORMAT**

Upon receipt of a diagnostic request packet, the slave will update the diagnostic status byte. If the diagnostic data address (in the request packet) is valid, the slave will set the request address bit to valid, and the diagnostic sub-type bit to response. If the diagnostic data address (in the request packet) is invalid, the slave will set the request address bit to invalid, and the diagnostic sub-type bit to filler. The format of the diagnostic status byte is shown in **Fig. 57 (Slave diagnostic status byte)**

### **TLMC\_S\_070 - REMOTE DIAGNOSTIC - SLAVE RESPONSE PACKET**

The diagnostic response will be transmitted when there is available room in the frame, based on the slave packet priorities. The diagnostic response is cancelled if Channel Recovery is triggered.

The contents of this transaction are shown in **Table 106 (DIAGNOSTIC SERVICE RESPONSE — IMPLANT DATA)**.

A diagnostic response transaction will utilize these bytes as follows:

1. Diagnostic data byte 1 = content of diagnostic (request) address
2. Diagnostic data byte 2 = content of diagnostic (request) address+1
3. .
4. .
5. Diagnostic data byte n = content of diagnostic (request) address + (n-1)

[A diagnostic transaction shall be limited in size to (240 bytes - size of (slave station ID))]

### **TLMC\_M\_071 - REMOTE DIAGNOSTIC - MASTER REQUEST RETRANSMISSION**

The master will continue to transmit the diagnostic request packet until it is ACKed, service duration timeout, channel recovery, or interrupted by emergency. Once ACKed, the master will wait for the slave diagnostic (response) transaction. The master will transmit filler packets while waiting for the slave transaction. Transmission of diagnostic filler packets continues until successful, service duration timeout, channel recovery, or interrupted by emergency.

### **TLMC\_M\_072 - REMOTE DIAGNOSTIC - RESPONSE TO UPPER LAYER**

A Remote Diagnostic service response to the Upper Layer will be generated at the completion of the Remote Diagnostic service.

[The content of the response is shown in **Table 37 (REMOTE DIAGNOSTIC SERVICE RESPONSE (MASTER))**. Note that a service response status of 0x26 occurs if the service is interrupted by a PLL lock error (and a subsequent successful trim).]

### **TLMC\_M\_073 - LOCAL DIAGNOSTIC - RESPONSE TO UPPER LAYER**

The local diagnostic service response to the Upper Layer will be generated immediately.

[The content of the response is shown in **Table 38 (LOCAL DIAGNOSTIC SERVICE RESPONSE (MASTER))**.]

### **TLMC\_M\_074 - MAPPING DIAGNOSTIC - RESPONSE TO UPPER LAYER**

When the master's Upper Layer invokes the Mapping Diagnostic service, the Data Link Layer will initiate diagnostic mapping. When complete, the Data Link Layer responds back to the Upper Layer.

[The content of the response is shown in **Table 39 (MAPPING DIAGNOSTIC SERVICE RESPONSE (MASTER))**. Note that a service response status of 0x26 occurs if the service is interrupted by a PLL lock error (and a subsequent successful trim).]

### **TLMC\_M\_075 - DIAGNOSTIC FILLER - MASTER FILLER PACKETS**

When the master does not have any other packets to transmit it will transmit diagnostic filler packet(s) as follows:

1. The diagnostic sub-type bit (in master control byte 2) will be cleared to a zero.
2. The filler packet will be transmitted to the slave during the absence of user data (and an ARQ packet).
3. The filler packet format will be as indicated in **Fig. 60 (Master diagnostic (filler) packet)**.

### **TLMC\_S\_076 - DIAGNOSTIC FILLER - SLAVE FILLER PACKETS**

The slave will transmit filler transactions when there is no Data Packet to transmit.

See **Fig. 56 (Slave diagnostic packet)** for the packet format. The diagnostic sub-type bit (in the status byte) will be set to a zero (filler packet, not response packet). The contents of this transaction are shown in **Table 106 (DIAGNOSTIC SERVICE RESPONSE — IMPLANT DATA)**.

A diagnostic response transaction will utilize these bytes as follows:

1. Diagnostic data byte 1 = content of diagnostic (default) address
2. Diagnostic data byte 2 = content of diagnostic (default) address+1
- .
- .
- n. Diagnostic data byte n = content of diagnostic (default) address + (n-1)

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[The slave does not respond with a filler packet each time it receives a filler packet from the master. The diagnostic filler packets are not transmitted during the low energy transfer mode.]

#### **TLMC\_M\_077 - EMERGENCY - UPPER LAYER PARAMETERS**

When invoking the Emergency service request, the master Upper Layer will provide information as specified in **Table 40 (EMERGENCY SERVICE REQUEST (MASTER))**.

#### **TLMC\_M\_078 - EMERGENCY - TRANSMISSION OF EMERGENCY REQUEST**

When the Emergency service request is invoked, the master shall:

1. Stop the service request in progress (if there is one in progress)
2. Generate a “cancelled” response to the Upper Layer for the cancelled service (if any)
3. Start the reply duration timer
4. Format the user data into a data packet
5. Set the Reset bit to 1 in control byte1 of the data packet
6. Set the sequence number to 0 in control byte2 of the data packet
7. Transmit the packet to the slave

#### **TLMC\_M\_079 - EMERGENCY - MASTER REQUEST NOT ACKNOWLEDGED**

The master Emergency service request is considered not successful if the Emergency request is not acknowledged by the slave within the reply duration.

#### **TLMC\_M\_081 - EMERGENCY - STATUS RESPONSE TO UPPER LAYER**

An Emergency service response to the master’s Upper Layer will be generated. When the slave’s upper layer response is completely received or a reply timeout occurs.

[The content of the response to the Upper Layer is defined in **Table 41 (EMERGENCY SERVICE RESPONSE (MASTER))**.]

#### **TLMM\_M\_301 - EMERGENCY - WAIT FOR INDICATION**

The master will wait for slave packets when all emergency request packets are acknowledged by the slave (and the master transaction was the message’s final transaction). It will re-assemble these packets into complete transactions (indications). It will forward these indications (in-order) to the Upper Layer. It will cancel the reply timer if it forwards the final slave indication to the Upper Layer.

[The content of the Indication to the Upper layer is defined in **Table 42 (EMERGENCY INDICATION (MASTER))**.]

#### **TLMM\_M\_302 - EMERGENCY - RECOVERY**

The master will “suspend” the emergency service request - if channel recovery is triggered. If channel recovery is successful (and the reply timer is still active), the master will retry the emergency service request.

#### **TLMM\_M\_303 - EMERGENCY - REPLY TIMEOUT**

The master will send an (unsuccessful) emergency service response to the upper layer if the reply timer expires during the emergency service request.

[The Upper Layer should consider the data “message” service unsuccessful if it receives a failed emergency service response.]

#### **TLMC\_M\_304 - EMERGENCY DURING CLOSE**

The data link layer will send an unsuccessful emergency service response if the emergency service request is received while processing a close service request. The emergency service response status is Request invalid in current state (state is recovery; slave scanning).

#### **TLMC\_M\_305 - EMERGENCY - SECOND EMERGENCY REQUEST WHILE PROCESSING FIRST**

The master will do the following if it receives an Emergency service request (if an emergency service request is already in progress):

1. Send the (unsuccessful) Emergency service response to the upper layer.

[The response status will be “Emergency already in progress”.]

#### **TLMC\_M\_082 - RAW MODE - UPPER LAYER RAW MODE PARAMETERS**

When the Upper Layer invokes the Raw Mode service it will provide information as specified in **Table 43 (RAW MODE SERVICE REQUEST (MASTER))**.

#### **TLMC\_M\_083 - RAW MODE - MASTER PACKET ATTACHED OPERATION**

When a valid Raw Mode (Master Packet Attached) service is invoked, the master shall:

1. Start the service duration timer (comes from **Table 129 (PARAMETERS FROM EEPROM)**)
2. Transmit the raw packet
3. Send the Raw Mode service response to the Upper Layer (status of successful)

[Note that the service is complete after the master packet is sent. This service does not wait for positive acknowledgement from the slave.]



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#### **TLMC\_M\_084 - RAW MODE - MASTER PACKET ATTACHED RESPONSE**

The Raw Mode (Master Packet Attached) service response to the Upper Layer will be generated at the completion of the service. [The content of the response is shown in **Table 44 (RAW MODE SERVICE RESPONSE (MASTER))**.]

#### **TLMC\_M\_089 - CLOSE - UPPER LAYER CLOSE PARAMETERS**

When invoking a Close service request, the Upper Layer will provide information as specified in **Table 45 (CLOSE SERVICE REQUEST (MASTER))**.

#### **TLMC\_MS\_090 - CLOSE - MASTER PACKET FORMAT**

The Close Request packets have the layout indicated in **Fig. 64 (Master Close Request Packet)**.

#### **TLMC\_MS\_091 - CLOSE - SLAVE PACKET FORMAT**

The Close Response packets have the layout in **Fig. 65 (Slave Close Response Packet)**.

#### **TLMC\_M\_092 - CLOSE - MASTER REQUEST**

The actions performed upon receiving the Close service request when the state is Comm:

1. Start the service duration timer.
2. Transmit Close Request Packet and wait for the Close Response Packet.

[Send a "first request packet sent" event indication to the Upper Layer (see **Table 23**).]

#### **TLMC\_M\_093 - CLOSE - RETRANSMISSION OF MASTER REQUEST**

If no valid Close Response Packet is received from the slave, the Data Link Layer shall retransmit the Close Request packet. The master shall continue this until a valid Close Response packet is received or a Service Duration Timeout occurs or until recovery is triggered. Note that recovery is not initiated (if triggered).

#### **TLMC\_S\_094 - CLOSE - RECEIPT OF A VALID CLOSE REQUEST**

Upon receiving a valid master Close Request packet, the slave will transmit a close response packet and will stop the transmission of data packets.

[The security hardware will be disabled if slave starts to poll again upon polling request or sniff when standby timer times out.]

#### **TLMC\_S\_095 - CLOSE - INDICATION TO SLAVE UPPER LAYER**

The Close service indication will be generated to the Upper Layer when a successful Close response packet is transmitted.

[The indication to the Upper Layer may consist of Polling ON or Polling OFF based on the value of the Total Polling Duration Time in the open request (i.e., Zero meaning Polling OFF, otherwise Polling ON).]

#### **TLMC\_M\_096 - CLOSE - RECEIPT OF A VALID RESPONSE**

Upon receiving a valid Close Response Packet from the slave, or if a Close Service Duration Timeout occurs, the master will return a successful close service response to the Upper layer.

#### **TLMC\_M\_097 - CLOSE - IMPLICITLY SUCCESSFUL**

Upon receiving a valid close service request from the Upper Layer when the state is Channel Recovery or Standby or Inactive or Medical Event, the master will disable the security hardware and return a successful close service response to the Upper layer.

[Terminate physical layer communication, return a successful Close service response to the Upper Layer, transition to Standby State - Note: Close packet is not transmitted. The Close service is implicitly successful.]

#### **TLMC\_M\_098 - CLOSE - RESPONSE TO UPPER LAYER**

The security hardware will be disabled and a close service response will be generated after the close service is complete. The content of the response to the Upper Layer is specified in **Table 47 (CLOSE SERVICE RESPONSE (MASTER))**.

#### **TLMC\_M\_099 - CLOSE - RECOVERY DURING CLOSE**

If channel recovery is triggered during the close service, the service is implicitly successful. The master will disable the security hardware and return successful to the Upper layer.

[Terminate physical layer communication, return success to upper layer, transition to Standby.]

#### **TLMC\_S\_414 - MEDICAL EVENT - SLAVE PACKET FORMAT**

The slave Medical Event response packet has the format is indicated in **Fig. 67 (Medical Event Packet)**

#### **TLMC\_S\_229 - MEDICAL EVENT - REQUEST**

When medical event request is received, the Upper Layer will provide information as specified in **Table 48 (MEDICAL EVENT SERVICE REQUEST (SLAVE))**.

#### **TLMC\_S\_307 - MEDICAL EVENT - CHANNEL TRANSMIT TIMOUT**

The slave will restart native mode (transmit first) operation and re-send the Medical Event packet upon medical event channel transmit timeout. It will re-send this packet on a new channel.

[Slave will send Medical Event packet at a regular intervals as defined in **Table 124 (SLAVE PARAMETERS FROM HOST)**]

#### **TLMC\_S\_416 - MEDICAL EVENT - INVALID OPEN REQUEST**

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The slave will restart native mode (transmit first) operation and re-send the Medical Event packet if it receives an Invalid Open packet.

If a valid Discover ID packet is received, Slave shall send a Discover Indication (i.e., Discover ID received while uplink medical events) to the host. See **Table 24 (DISCOVER INDICATION (SLAVE))**.

[An Invalid Open packet includes Open with mismatched slave ID, a packet other than Open, and packet with MAC error. Receipt of an invalid open packet causes the slave to transmit another medical event packet (and listen for an open packet). It will resend this packet on a new channel.]

#### **TLMM\_S\_440 - MEDICAL EVENT - POLL UPON TELM REQUEST**

If a poll upon Tel M request is received while uplink medical events, slave will stop uplink medical event, send polling response to host, and then slave shall start polling.

[See **TLMM\_S\_035 - POLLING - SERVICE REQUEST FROM UPPER LAYER**,

**TLMM\_S\_256 - POLLING - SERVICE RESPONSE TO UPPER LAYER** and

**TLMM\_S\_241 - POLLING ENABLING CRITERIA** for details]

#### **TLMC\_S\_417 - MEDICAL EVENT - SERVICE DURATION**

The slave will send Medical Event packets (and listen for open packets) until the Medical Event service duration timer expires.

#### **TLMC\_S\_418 - MEDICAL EVENT - RESPONSE**

When medical event request is received, the Data Link Layer will validate the medical event service request. A medical event service response will be sent to the host (see **TABLE 49: MEDICAL EVENT SERVICE RESPONSE (SLAVE)**). If the service status is successful, the slave will start the Medical Event Service Duration timer, and send a medical event packet.

#### **TLMC\_S\_257 - MEDICAL EVENT - INDICATION TO UPPER LAYER**

A medical event service will be stopped under the following conditions:

1. **Medical event service duration timer expires medical event timeout indication will be generated to the upper layer Table 50 (MEDICAL EVENT INDICATION (SLAVE)).**
2. **A valid open packet is received an open successful indication will be generated to the upper layer. Table 28 (OPEN INDICATION (SLAVE))**

#### **TLMC\_M\_230 - MEDICAL EVENT - HOST PARAMETERS**

When invoking a Medical Event service request, host will provide information as specified in **Table 51 (MEDICAL EVENT SERVICE REQUEST (Master))**

#### **TLMC\_M\_231 - MEDICAL EVENT - RESPONSE TO HOST**

A Medical Event response will be generated when the Medical Event service is initiated.

[The content of the response is shown in **Table 52 (MEDICAL EVENT SERVICE RESPONSE (Master))**].

#### **TLMC\_M\_232 - MEDICAL EVENT - MEDICAL EVENT PACKET**

If the master receives a valid medical event packet it will send a medical event indication to the host as specified in **Table 53 (MEDICAL EVENT INDICATION (Master))**

[The indication will be generated to the host no more frequently than one/second]

#### **TLMC\_S\_258 - PATIENT NAME REQUEST**

When Patient name request is invoked host will provide the patient name information.

[In the case of CRM this information resides in the device-specific system parameters database.]

#### **TLMC\_S\_259 - PATIENT NAME SERVICE RESPONSE TO UPPER LAYER**

When patient name request is received the Data Link Layer will validate the Patient Name service request (see **Table 54 (PATIENT NAME SERVICE REQUEST (SLAVE))**) and will generate an appropriate response (see **Table 55 (PATIENT NAME SERVICE RESPONSE (SLAVE))**).

#### **TLMM\_MS\_309 - CONFIGURE NETWORK - UPPER LAYER PARAMETERS**

When invoking a configure network service request, the Upper Layer shall provide information as specified in **Table 57 (CONFIGURE NETWORK SERVICE REQUEST)**.

#### **TLMM\_MS\_310 - CONFIGURE NETWORK - RESPONSE TO UPPER LAYER**

Upon the receipt of the network configuration table data link layer will generate a response to upper layer as specified in **Table 58 (CONFIGURE NETWORK SERVICE RESPONSE)**.

#### **TLMM\_M\_311 - NETWORK DATA - UPPER LAYER PARAMETERS**

When invoking a network data service request, the upper layer shall provide information as specified in **Table 59 (NETWORK DATA SERVICE REQUEST(MASTER))**.

#### **TLMM\_M\_312 - NETWORK DATA - REQUEST AND RESPONSE PACKET FORMAT**

The network data request and response packet shall have the format shown in **Fig. 73 (Network data Request packet)** and **Fig. 74 (Network data Response packet)**. In the request packet the source network table index shall be the index of the master.

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Master shall echo the slave's random numbers received in the network filler packets. In the response packet the source network table index shall be the index of a slave. The network ID shall be the station ID of the coordinator.

#### **TLMM\_S\_313 - NETWORK DATA - FILLER PACKET FORMAT**

The network filler packet shall be used by the slave to transmit its own random number to the master as well as respond to the network data request before the slave host responds to the network data request.

[The filler packet is to occupy the channel format of this packet is shown in **Fig. 79 (Network Filler Packet)**].

#### **TLMM\_M\_314 - NETWORK DATA - TRANSMITTING REQUEST PACKETS**

Upon receiving a network data service request from the upper layer master will:

1. Start the service duration timer.
2. Select the least interfered channel (takes 275 +/- 50 msec)
3. Start LBT timer.
4. Perform instigator wireless wakeup. See parameters in **Table 123 (Master parameters from host)** for Wakeup user data present, secure wakeup and user data.
5. Transmit the network data request packet.

#### **TLMM\_M\_315 - NETWORK DATA - UPPER LAYER RESPONSE (MESSAGE LEVEL RESPONSE)**

The network data request packet shall be transmitted until any one of the timers expires (the service duration timer or the LBT timer). When any of the timers expire a network complete indication will be sent to the host. See **Table 60 (NETWORK COMPLETE INDICATION (MASTER))**

[See **Fig. 70 (Network data (with message level acknowledgement) diagram)** for an example.

The upper layer sets "application reply requested" bit in the ULH byte to request upper layer (message level) response from the slave.

The antenna will be toggled each time a network packet is transmitted.]

#### **TLMM\_M\_316 - NETWORK DATA - DATA LINK LAYER RESPONSE (PACKET LEVEL RESPONSE)**

The network data request packet shall be transmitted until any one of the timers expires (the service duration or the LBT timer). When any of the timers expire a network complete indication will be sent to the host. See **Table 60 (NETWORK COMPLETE INDICATION (MASTER))**.

[See **Fig. 71 (Network data (with data link acknowledgement) diagram)** for an example.

The upper layer sets the "Expect response" field in the network data service request and clears the "application reply requested" bit in the ULH byte to request data link layer (packet level) response from the slave.

The data link layer will set the "Expect response" bit in control bytes of the network data request packet accordingly.

The antenna will be toggled each time a network packet is transmitted.]

#### **TLMM\_M\_317 - NETWORK DATA - NO ACK**

The network data request packet shall be transmitted until any one of the timer expires (the service duration or the LBT timer), if no response is required from the slave(s). When any of the timers expire a network complete indication will be sent to the host. See **Table 60 (NETWORK COMPLETE INDICATION (MASTER))**.

[The upper layer clears "Expect response" field in the network data service request and clears the "application reply requested" bit in the ULH byte to suppress any response from the slave(s).

The data link layer will clear the "Expect response" bit in the control bytes of the network data request packet accordingly.

The antenna will be toggled each time a network packet is transmitted.]

#### **TLMM\_M\_318 - NETWORK DATA - SUCCESSFUL RESPONSE TO UPPER LAYER**

Upon receiving a valid network data service request, the data link layer shall send a successful network data service response to the upper layer. See **Table 61 (NETWORK DATA SERVICE RESPONSE (MaSter))**

[The data link layer checks CRC and the parameters of the service request.]

#### **TLMM\_M\_319 - NETWORK DATA - UNSUCCESSFUL RESPONSE TO UPPER LAYER**

Upon receiving an invalid network data service request, the data link layer shall send an unsuccessful network data service response to the upper layer. **Table 61 (NETWORK DATA SERVICE RESPONSE (MaSter))**

[The data link layer checks CRC and the parameters of the service request.]

#### **TLMM\_M\_320 - NETWORK DATA - INDICATION TO UPPER LAYER**

A network summary indication shall be sent to the upper layer if any one of the timers expires (the service duration and the LBT timer). See **Table 62 (NETWORK SUMMARY INDICATION (MASTER))**

#### **TLMM\_M\_321 - NETWORK DATA - RESPONSE COMPLETE AT MASTER**

Upon receiving the response from all slaves a network summary indication will be sent to the host (see **Table 62 (NETWORK**

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**SUMMARY INDICATION (MASTER))**). The final acknowledgement shall be re-sent until any one of the timers expires (the service duration timer or the LBT timer).

[This is done for the case that a slave does not receive the final acknowledgement and it is still listening in the native mode.

Note, the slaves will not respond to the master's final acknowledgement either it receives it or it does not receive it.]

#### **TLMM\_M\_431 - NETWORK DATA - TRANSMIT SECURED NETWORK DATA PACKET**

When the "security user data/network packet" bit is set in the local wake up packet, master should do the following before the transmission of every network data packet:

1. Start the block cipher for message integrity, privacy and freshness checking. The block cipher's key input is set to AES\_out[127:64] concatenated with KBAN[63:0]. The block cipher's nonce counter is initialized using master random number (CTR<sub>i</sub>) See **Fig. 81 (Wakeup security - block cipher initialization (to secure native mode packets))**..
2. Enable the hardware's security block (security register to on).

[For AES\_out[127:64] and master Random number (CTR<sub>i</sub>), see **Fig. 116 (Calculate AES\_out for wakeup security)**. In case there is no user data, a known pattern (0x00,0x00,0x00,0x00) will be used.]

[An idle immediate is performed before 1) and 2)]

[When the "security user data/network packet" bit is cleared, only idle immediate is performed]

#### **TLMM\_S\_434 - NETWORK DATA - PROCESSING POLLING REQUEST**

After enabled by a valid local wakeup, if a polling request (upon TEI M) is processed, slave shall start to poll, i.e., listen on the channel with the data rate provided by the local wakeup packet.

[Both the channel and transmit/receive data rate are from local wakeup packet.

"SlaveScansDuringPolling" bit does not apply in this case. There are no channel change in native mode and no async sniffing. Slave will generate and save 3 bytes of random number. The 3bytes random number will be transmitted in the following Network Filler packets and also used to verify the Network Data Request packets]

#### **TLMM\_S\_322 - NETWORK DATA - NO ACK OF INVALID REQUEST PACKET**

No response packet shall be transmitted to the master if the invalid network data request packet is received.

[Then idle immediate is performed and the slave starts to listen in native mode again.]

#### **TLMM\_S\_323 - NETWORK DATA - NO ACK OF REQUEST PACKET**

No response packet shall be transmitted to the master if the received network data request packet has the "Expect response" bit set to zero in the control bytes.

[The master shall be the transmission-only device. The slave shall go to the disable state after processing the network data request packet.]

#### **TLMM\_S\_324 - NETWORK DATA - ACK OF REQUEST PACKET**

Upon receiving a valid network data request packet with the "expect response" bit set in control bytes or with the "application response requested" bit set in ULH, a network filler packet shall be transmitted with its own random number. If the random number in the received network data request packet matches to its own random number, the master's bit in the ack bit map of the network filler response packet shall be set accordingly.

[Note: A network data response packet will be sent in lieu of a network filler packet (if a network service request occurs before the slave has had a chance to transmit a network filler packet).]

#### **TLMM\_S\_325 - NETWORK DATA - SERVICE INDICATION TO THE UPPER LAYER**

For Network Data Request packet "with no acknowledgement", Network Data indication shall be sent to the upper layer upon receiving a valid network data request packet.

For Network Data Request packet "with message level acknowledgement" or "with data link acknowledgement", upon receiving a valid network data request packet, slave shall also compare its own random number with the random number in the received Network Data Request packet. If they match, Network Data indication shall be sent to the upper layer.

[For Network Data Request packet "with no acknowledgement", there is no random number comparison as slave does not transmit at all.

The content of the indication is defined **Table 63 (NETWORK Data INDICATION (SLAVE))**.

It is the host's responsibility to check the network table CRC of the instigator with the network table CRC of its own. It is also host's decision on what to do if the two network tables' CRCs do not match. From a system's point of view it is probably best if the slave host ignores the network data from a therapy point of view. Additionally it is probably best if the slave attempts to respond to the instigator with some application failed status. The master can recognize the network table CRCs are mismatched and correct the slave table. If the slave host did not respond, the instigator wouldn't know if the tables were mismatched or if the instigator and slave were out of telemetry range.]

#### **TLMM\_S\_326 -NETWORK DATA- ENABLE SECURITY BLOCK**

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1. Upon receipt of a poll service request or whenever network data response or network filler packet is transmitted, if the “security user data/network packet” bit is set in the local wakeup packet, the hardware’s security block will be enabled (security register to on).
2. At that time, the block cipher will be started for message integrity, privacy and freshness checking. The block cipher’s key input is set to AES\_out[127:64] concatenated with KBAN[63:0]. The block cipher’s nonce counter is initialized using CTRi (see **Fig. 81 (Wakeup security - block cipher initialization (to secure native mode packets))**)

[When the “security user data/network packet” bit is cleared, only idle immediate is performed]

#### **TLMM\_S\_327 - NETWORK DATA - NETWORK DATA RESPONSE**

Upon receiving a valid network data request from the upper layer, the data link layer shall transmit a network data response packet to the master. See **Table 64 (NETWORK DATA SERVICE REQUEST (SLAVE))**

The slave will retransmit the network data packet if it receives a network data packet with “this slave’s” ack bit not set.

[Note that a network data response packet will be sent in lieu of a network filler packet (if a network service request occurs before the slave has had a chance to transmit a network filler packet).]

#### **TLMM\_S\_328 - NETWORK DATA - RESPONSE TIME SLOT**

The network data filler packets or the network data response packets shall be transmitted to the sender in the designated time slot. The slave’s designated time slot shall be obtained using the equation below:

#### **TLMM\_S\_329 - NETWORK DATA - SEQUENCE NUMBER**

The slave shall ignore a duplicate network data request packet.

[A master shall transmit the same network data request packet multiple times to all designated slaves if it does not receive expected the response from any one of the slaves. A master will always transmit the network data request packet with a sequence number of zero. The slave will ignore duplicate network data request. The slave will only process one network data packet and send one Network data indication to host after it receives a valid wakeup packet.]

#### **TLMM\_S\_330 - NETWORK DATA - INVALID RESPONSE TO INDICATION**

The slave data link layer will send an immediate unsuccessful service response to the upper layer if the slave data link layer receives a network data service request when the master does not expect an application response (see **Fig. 48 (Master’s ULH byte) - application reply requested bit**). See **Table 65 (NETWORK DATA SERVICE RESPONSE (SLAVE))**.

[Note that the slave host uses a network data service request to send an application response to the master host. This requirement describes the case where the master host does not want an application response, yet the slave host is trying to provide one.]

#### **TLMM\_S\_331 - NETWORK DATA - SERVICE SUCCESSFUL AT SLAVE**

Once acknowledge is received from the master:

For packet level response slave will terminate polling.

For message lever response a successful service response will be sent to the upper layer and polling will be terminated. See **Table 65 (NETWORK DATA SERVICE RESPONSE (SLAVE))**.

[The slave shall stop native mode listening, cancel all timers and return to the standby state.]

#### **TLMM\_S\_332 - NETWORK DATA - SERVICE UNSUCCESSFUL AT SLAVE**

When the polling timer expires while a network data service request has been received but the service response has not been generated, an unsuccessful network service response will be generated to the upper layer. See **Table 65 (NETWORK DATA SERVICE RESPONSE (SLAVE))**.

Slave will also generate polling timeout indication to the upper layer.

[The slave shall stop native mode listening, cancel all timers and return to the standby state.]

#### **TLMM\_MS\_403 - SECURITY - UPPER LAYER PARAMETERS**

When invoking a Security service request, the Upper Layer will provide information as specified in **Table 66 (SECURITY SERVICE REQUEST (MASTER OR SLAVE))**. If the service type is correct but the sub-type is not equal to any of the values specified for the master and slave respectively, the status of “invalid security sub-type” will be returned in the service response. [The service response is generated per **Table 67 (SECURITY SERVICE RESPONSE (MASTER))** and **Table 68 (SECURITY SERVICE RESPONSE (SLAVE))**.]

#### **TLMM\_MS\_334 - SECURITY - CREATE BAN KEY/EPHEMERAL BAN KEY LOCAL**

The master or slave will do the following upon the receipt of a create BAN key or ephemeral BAN key service request:

1. Create pseudo random number. See the appendix, section **7.3 Pseudo Random Number Generation**.
2. Save the pseudo random number as the new BAN key or ephemeral BAN key.
3. Send a successful create BAN key or ephemeral BAN key service response to the upper layer.
4. The EBAN key duration timer will also be started on the slave when an EBAN key is created on the slave due to this service request.

[The slave service response is generated per **Table 68 (SECURITY SERVICE RESPONSE (SLAVE))** and the master service

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response is generated per **Table 67 (SECURITY SERVICE RESPONSE (MASTER))**]

#### **TLMM\_MS\_335 - SECURITY - ASSERT BAN KEY/EPHEMERAL BAN KEY LOCAL**

The master or slave will do the following upon the receipt of an Assert BAN key or ephemeral BAN key service request:

1. Save the BAN key or ephemeral BAN key contained in the service request as the new BAN key or ephemeral BAN key.
2. Send a successful assert BAN key or ephemeral BAN key service response to the upper layer.
3. The EBAN key duration timer will also be started on the slave when an EBAN key is asserted to the slave.

[The slave service response is generated per **Table 68 (SECURITY SERVICE RESPONSE (SLAVE))** and the master service response is generated per **Table 67 (SECURITY SERVICE RESPONSE (MASTER))**]

#### **TLMM\_MS\_336 - SECURITY - REQUEST BAN KEY OR EPHEMERAL BAN KEY LOCAL**

The master or slave will do the following upon the receipt of a Request BAN key service request:

1. Read the BAN key or ephemeral BAN key from the memory;
2. Return the BAN key or ephemeral BAN key to its upper layer via a service response.

[The service response is generated per **Table 67 (SECURITY SERVICE RESPONSE (MASTER))** and **Table 68 (SECURITY SERVICE RESPONSE (SLAVE))**]

#### **TLMM\_MS\_401 - SECURITY - MASTER/SLAVE REJECTS KEY REQUEST IF IT HAS NO BAN/EBAN KEY**

The slave/master will send an unsuccessful request BAN/EBAN key local response if the slave/master has no corresponding permanent BAN key or EBAN key as requested.

[This will occur if the host has never created or asserted a permanent BAN key or EBAN key since the last reset]

#### **TLMM\_M\_337 - SECURITY - PROXIMITY SECURITY REQUEST PACKET FORMAT**

The proximity security request packet has the format indicated in **Fig. 86 (Proximity Security Request Packet)**

#### **TLMM\_S\_338 - SECURITY - PROXIMITY RESPONSE PACKET FORMAT**

The proximity security response packet has the format indicated in **Fig. 87 (Proximity Security Response Packet)**.

#### **TLMM\_M\_339 - SECURITY - REQUEST BAN/EBAN key VIA PROXIMITY SWITCH REQUEST PACKET FORMAT**

The request BAN/EBAN key via proximity switch request packet has the format indicated in **Fig. 88 (Request BAN/EBAN key via proximity switch request packet)**.

#### **TLMM\_S\_340 - SECURITY - REQUEST BAN/EBAN key VIA PROXIMITY SWITCH RESPONSE PACKET FORMAT**

The request BAN/EBAN key via proximity switch response packet has the format indicated in **Fig. 90 (Request BAN/EBAN key via proximity switch response packet)**.

[Note that if the remaining polling duration is greater than 255 seconds, this field will be set to 255 seconds. Also note that the “slave EBAN key exists” bit is only set when the EBAN key duration timer is running.]

#### **TLMM\_M\_341 - SECURITY - TRANSMIT PROXIMITY SECURITY REQUEST PACKET**

Upon receiving a request BAN key via proximity switch service request, the master will start a service duration timer and transmit the proximity switch security request packet.

[Start the service duration timer; select the least interfered channel (takes approximately 275 +/- 50 msec); start the Listen Before Talk (LBT) timer; perform instigator wireless wakeup, transmit the proximity switch security request packet, send a “first request packet sent” event indication to the Upper Layer (see **Table 23 (FIRST REQUEST PACKET SENT INDICATION (MASTER))**).

Note that instigator wireless wakeup is suppressed if the master knows the slave is scanning. Time now, time of last uplink, and remaining polling duration at the time of last uplink are used to determine this.

Also note that the master will perform clear channel assessment before and after transmitting wakeup (if the wakeup is not suppressed and the slave scans during polling). The master will restart the Listen Before Talk (LBT) timer after the second clear channel assessment. This minimizes the interaction between the time it takes the slave to scan all channels and the time before the master starts transmitting wakeup again.]

#### **TLMM\_M\_342 - SECURITY - NO RESPONSE TO PROXIMITY SECURITY REQUEST**

If no response is received, the master will resend the proximity switch security request until the Service Duration timer is expired.

[If no valid proximity switch security response packet is received, the master will re-transmit the proximity switch security request packet on the alternate antenna.

This process shall be continued until a valid proximity switch security response packet is received, a Service Duration Timeout occurs, or a Listen Before Talk timer expires.]

#### **TLMM\_M\_343 - SECURITY - VALID RESPONSE TO PROXIMITY SECURITY REQUEST**

If a valid proximity security response packet is received, the master will transmit a request BAN/EBAN key packet to the slave.

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#### **TLMM\_M\_344 - SECURITY - NO RESPONSE OR REJECTION TO REQUEST BAN/EBAN KEY VIA PROXIMITY SWITCH**

If no response is received or if the BAN/EBAN key request is rejected (because the proximity switch is not yet open), the master will resend the request BAN/EBAN key packet until successful or until the Service Duration timer is expired.

[The master will re-transmit the request BAN/EBAN key packet on the alternate antenna if no valid BAN/EBAN key response packet is received. The master will re-transmit the request BAN/EBAN key packet on the same antenna if the BAN/EBAN key request is rejected (since the proximity switch is not yet open).

This process shall be continued until a valid BAN/EBAN key response packet is received, a Service Duration Timeout occurs, or a Listen Before Talk timer expires.]

#### **TLMM\_M\_346 - SECURITY - REQUEST BAN/EBAN key VIA PROXIMITY SWITCH - RESPONSE TO UPPER LAYER**

A request BAN/EBAN key via proximity switch service response will be generated to the Upper Layer when the service is completed.

[The content of the response to the Upper Layer is specified in **Table 67 (SECURITY SERVICE RESPONSE (MASTER))**.]

#### **TLMM\_M\_347 - SECURITY - LBT TIMEOUT DURING REQUEST BAN/EBAN KEY EXCHANGE VIA PROXIMITY SWITCH SERVICE**

If the listen before talk (LBT) timer expires during a request BAN/EBAN key via proximity switch service, the master will do the following:

1. Re-select the least interfered channel for communication,
2. Start the Listen Before Talk timer when a good channel is found,
3. Toggle the antenna,
4. Transmit a wakeup packet,
5. Transmit a proximity security request.

[Note that “transmit wakeup packet” is suppressed if the master knows the slave is scanning. Time now, time of last uplink, and remaining polling duration at the time of last uplink are used to determine this.

Also note that the master will perform clear channel assessment before and after transmitting wakeup (if the wakeup is not suppressed and the slave scans during polling). The master will restart the Listen Before Talk (LBT) timer after the second clear channel assessment. This minimizes the interaction between the time it takes the slave to scan all channels and the time before the master starts transmitting wakeup again.]

#### **TLMM\_S\_348 - SECURITY - SLAVE RESPONSE TO A VALID PROXIMITY SWITCH SECURITY REQUEST PACKET**

The slave will send a proximity switch security response packet upon receiving a valid proximity switch security request packet. Additionally the slave will send a proximity security indication to the slave’s upper layer (host). The indication to the upper layer (host) will not be generated more than once a second. See **Table 69 (PROXIMITY SECURITY INDICATION (SLAVE))**

[Upon receipt of the proximity security indication, the slave’s upper layer should do the following:

1. Power up the proximity switch circuitry
2. Determine if the user has “opened the proximity switch”. This may be polling a reed switch, etc. The proximity switch is short range. This ensures that the proximity switch is not opened anonymously.
3. Send an authorize (proximity switch) BAN/EBAN key delivery to the data link layer
4. Power down the proximity switch circuitry]

#### **TLMM\_S\_349 - SECURITY - SLAVE REJECTS A VALID REQUEST BAN/EBAN KEY VIA PROXIMITY SWITCH REQUEST**

The slave will send an (unsuccessful) request BAN/EBAN key (via proximity switch) response packet under the following conditions:

1. The slave receives a request BAN/EBAN key (via proximity switch) request packet, and
2. The slave is not authorized to deliver the BAN/EBAN key to the master. Specifically, the security (authorize key delivery) service duration timer is not active.

#### **TLMM\_S\_350 - SECURITY - SLAVE ACCEPTS A VALID REQUEST BAN/EBAN key VIA PROXIMITY SWITCH REQUEST**

The slave will generate a EBAN key, for EBAN key requested, and will send a (successful) request BAN/EBAN key (via proximity switch) response packet under the following conditions:

1. Attenuate the transmit power according to the settings in slave configuration table. Once the transmitting process of response is finished original transmission power should be restored.

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2. The slave receives a request BAN/EBAN key (via proximity switch) request packet, and
3. The slave is authorized to deliver the BAN/EBAN key to the master (it has “recently” received an authorize BAN/EBAN key delivery service request from the upper layer (host)).

When delivering the BAN/EBAN key the transmit power should be attenuated according to the settings in slave configuration **Table 124 (SLAVE PARAMETERS FROM HOST)**, once the transmitting process of response is finished original transmission power should be restored. BAN/EBAN key delivery is authorized upon receipt of the authorize BAN/EBAN key delivery (via proximity switch) service request. A service request timer is started upon receipt of the service request. BAN/EBAN key delivery is no longer authorized when the service duration timer expires.

[The EBAN key is generated when slave is entering the Acquire state and delivered when sending the request (EBAN) key response packet.]

#### **TLMM\_S\_351 - SECURITY - AUTHORIZATION TO GIVE BAN/EBAN KEY SERVICE RESPONSE**

When authorize BAN/EBAN key delivery request is received then response will be generated See **Table 66 (SECURITY SERVICE REQUEST (MASTER OR SLAVE))**.

[The content of the response to the Upper Layer is specified in **Table 68 (SECURITY SERVICE RESPONSE (SLAVE))**. The security service duration will be started upon the receipt of a authorize key delivery service request. The security service duration timer will be re-started upon the receipt of an authorize key delivery service request if the security service duration timer is already running (from a previous update proximity status service request.) When the key delivery is authorized, the slave will set the “unidentified proximity transmitter near” bit and the “specific proximity transmitter near” bit. See **Fig. 35 (Proximity status type byte)** for the bit definition.

Also note that the EBAN key duration timer will be restarted on the slave upon the delivery of the EBAN Key to the master.]

#### **TLMM\_S\_352 - SECURITY - USAGE OF EPHEMERAL BAN KEY**

The use of ephemeral BAN key is limited by the ephemeral BAN key duration parameter. Once this timer expires a secure session may not be opened (via the ephemeral BAN key). If a secure session is opened before the timer expires, the timer is cancelled. The ephemeral BAN timer is restarted upon a close session or channel recovery timeout. If the timer expires, the ephemeral BAN key is no longer valid. Note that the timer is cancelled if a new session is successfully started using the ephemeral BAN key. The ephemeral BAN key timer also expires when the slave receives a Shut Down request from its host.

[The ephemeral BAN key timer value is received from Master as part of proximity switch request packet. The EBAN key duration timer can also be updated via assert EBAN duration service request]

#### **TLMM\_S\_405 - SECURITY - ASSERT EBAN KEY DURATION**

The EBAN key duration will be updated upon the receipt of an assert EBAN key duration service request. If the EBAN key duration timer is running, the new value will take effect immediately. A service response will also be sent to the upper layer.

[Note: The EBAN key duration should be greater than the channel recovery duration by the host. When the existing EBAN key duration timer is running and new values is provided via assert EBAN key duration service request the new value will take effect immediately - the expiration of the running timer will be based on the new value. Also note that because the EBAN key duration timer has a resolution of one second, it may take up to one second for it to expire if the newly asserted EBAN key duration implies the timer should expire immediately.

The content of the response to the Upper Layer is specified in **Table 68 (SECURITY SERVICE RESPONSE (SLAVE))**.]

#### **TLMM\_S\_419 - SECURITY - UPDATE PROXIMITY STATUS**

The slave will do the following upon receipt of an update proximity status service request:

1. Start the security service duration timer
2. Update the proximity status byte (set the “unidentified proximity transmitter near” bit). See **Fig. 35 (Proximity status type byte)**.
3. Send an update proximity service response to the upper layer

[The content of the response to the Upper Layer is specified in **Table 68 (SECURITY SERVICE RESPONSE (SLAVE))**.]

Also note that the discover collision avoidance timer is cancelled upon the receipt of the update proximity status service request]

#### **TLMM\_S\_420 - SECURITY - SERVICE DURATION TIMEOUT**

The slave will do the following when the security service duration timer expires:

1. Clear the proximity status byte (clear the “unidentified proximity transmitter near” bit and the “specific proximity transmitter near” bit). See **Fig. 35 (Proximity status type byte)**.

[The content of the response to the Upper Layer is specified in **Table 68 (SECURITY SERVICE RESPONSE (SLAVE))**.]

Also note that the security key delivery is no longer allowed once this timer expires.]

#### **TLMM\_M\_422 - POWER INHIBIT - CHANNEL RECOVERY THRESHOLD**

The master data link layer will set its (the master’s) channel recovery threshold (number of consecutive frames without a valid packet) using the received power inhibit bits (control byte 5, bits 5 and 6 from the slave). See **Table 71 (POWER INHIBIT**



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## MODES)

[Note that the original recovery thresholds come from the master initialization request. The power inhibit mode is just selecting threshold 1, threshold 2 or threshold 3.]

### **TLMM\_S\_264 - POWER INHIBIT - UPPER LAYER TO DATA LINK LAYER PARAMETERS**

When invoking the power inhibit service request, the Upper Layer will provide information as specified in **TABLE 72: POWER INHIBIT SERVICE REQUEST (SLAVE)**.

### **TLMM\_S\_421 - POWER INHIBIT - TRANSMIT PACKET**

The slave data link layer will do the following upon the receipt of a power inhibit service request:

1. Communicate the power inhibit sub-type to the master by setting the power inhibit bits on every transmit packet (see control byte 5)

[The slave transmit packet's control byte 5, bits 5 and 6 shall mirror the power inhibit service request sub-type.]

### **TLMM\_S\_427 - POWER INHIBIT SERVICE RESPONSE TO UPPER LAYER**

A power inhibit service response will be generated to the Upper Layer after the power inhibit service request is complete.

[The content of the response to the Upper Layer is specified in **Table 73 (POWER INHIBIT SERVICE RESPONSE (SLAVE))**].

### **TLMM\_S\_423 - POWER INHIBIT IDLE IMMEDIATE - ASSERTED**

If the power inhibit interrupt is asserted (while power inhibit mode is idle immediate),

1. While slave is in communication state, Slave will start same channel recovery immediately. (see **TLMC\_S\_130 - CH RECOVERY - START SAME CHANNEL RECOVERY**).
2. While slave is not in communication state. Slave will stop sniffing if sniffing is enabled or perform idle immediate if transmission or receiving is progress.

[For #1, note that the only difference from **TLMC\_S\_130 - CH RECOVERY - START SAME CHANNEL RECOVERY** is slave will not restart sync mode.]

### **TLMM\_S\_424 - POWER INHIBIT IDLE IMMEDIATE - DEASSERTED**

If the power inhibit is deasserted (while power inhibit mode is Idle immediate),

1. While the same channel recovery time is active, slave will attempt to recover the communication session on the same channel.
2. While the unspecified channel recovery time is active, slave will attempt to recover the communication session following the unspecified channel recovery algorithm (see **5.3.3 Channel Recovery**).
3. While the polling duration is active, slave will restart to listen in native mode or sniffing. (see **5.2.8 Polling**).
4. While the disable ON timer is active, slave will restart the sync sniffing.
5. While the medical service duration is active, slave will restart to uplink medical event packet.(see **5.2.16 Medical Event**)

[For #1, the slave will restart sync mode when power inhibit is deasserted.]

### **TLMM\_S\_425 - POWER INHIBIT - RESPONSE**

The slave data link layer will set its (the slave's) channel recovery threshold (number of consecutive frames without a valid packet) using the last power inhibit service request from the slave host. Additionally it will mirror the power inhibit mode on all its subsequent transmit packets.

[The radio will be disabled when power inhibit is asserted. This will cause the slave to receive packets with MAC error. In order to avoid channel recovery, the slave host will use power inhibit roll through (mode 1, 2, or 3). The recovery threshold (paired with the roll through mode) should be chosen to be slightly longer than the power inhibit duration. Once power inhibit is deasserted, the slave should receive packets without MAC error.]

### **TLMM\_S\_442 - POWER INHIBIT - WAKEUP COMPLETE INDICATION DURING SYNC SNIFF**

If power inhibit interrupt is asserted while slave is synchronously sniffing and waiting for the "last packet last block" wakeup packet (after the "first packet last block" wakeup packet has already been received), a wakeup indication "Wakeup Complete", containing the wakeup packet contents, shall be sent to the upper layer. (see **Table 93 (WAKEUP INDICATION (SLAVE))**).

[After the "first packet last block" wakeup packet has already been received, Mozart hardware will turn the radio off and start a timer. When the timer expires, Mozart hardware will generate the "last packet last block" wakeup packet interrupt. If power inhibit is asserted, the timer will be turned off and no "last packet last block" wakeup packet interrupt will be generated by the hardware. Instead of waiting for the next synchronous sniffing window after power inhibit is deasserted, a wakeup indication "Wakeup Complete" is sent to the upper layer when the power inhibit is asserted.]

### **TLMM\_S\_447 - POWER INHIBIT - WAKEUP COMPLETE INDICATION DURING ASYNC SNIFF**

If power inhibit interrupt is asserted while slave is asynchronously sniffing and waiting for the "last packet last block" wakeup packet (after the "first packet last block" wakeup packet has already been received), a wakeup indication "Wakeup Complete", containing the wakeup packet contents, shall be sent to the upper layer. (see **Table 93 (WAKEUP INDICATION (SLAVE))**).

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[Slave will perform asynchronously sniffing during polling and unspecified channel recovery if Slave scans during polling = 0x00 (see **Table 123 (Master parameters from host)**).]

#### **TLMM\_S\_448 - POWER INHIBIT - CHANNEL LISTEN TIMER FOR SCAN DURING POLLING**

While slave is configured to do scan during polling, if power inhibit interrupt is asserted while slave is listening on one channel during polling or unspecified channel recovery, slave will stop the channel listen timer. Then when power inhibit interrupt is deasserted, slave will restart the channel listen timer and listen on the same channel.

[Slave will change the scan channel during polling or unspecified channel recovery only if the “channel listen timer” times out while power inhibit status is low (i.e., power inhibit has been deasserted or power inhibit has never been asserted.)]

#### **TLMM\_S\_449 - POWER INHIBIT - MEDICAL EVENT TRANSMIT TIME**

If power inhibit interrupt is asserted before the “medical event transmit time” timesout (while slave is uplinking medical event on one channel), slave will stop the medical event transmit timer. Then when power inhibit interrupt is deasserted, slave will uplink medical event on the same channel and restart “the medical event transmit time” .

[Slave will change the channel during uplinking medical event only if the “medical event transmit time” times out while power inhibit status is low (i.e., power inhibit has been deasserted or power inhibit has never been asserted.)]

#### **TLMM\_S\_450 - POWER INHIBIT - OPEN RESPONSE PACKETS**

If power inhibit interrupt is asserted while slave is uplinking open response packets,

- when slave is configured to do scan during polling - slave will perform idle immediate and stop the channel listen time. Then when power inhibit interrupt is deasserted, slave will listen on the same channel and restart the channel listen time;
- when slave is configured to do asynchronously sniffing/scan during polling - slave will perform idle immediate. Then when power inhibit interrupt is deasserted, slave will listen on the same channel.

[Note the native mode timer is not stopped and this is because native mode timer is much longer than power inhibited duration.]

- when slave is running the medical event service duration timer, slave will perform idle immediate and stop the medical event transmit time. Then when power inhibit interrupt is deasserted, slave will uplink medical event on the same channel and restart “the medical event transmit time”

#### **TLMM\_S\_451- CHARGE NOISE - USE NEW CHANNEL RECOVERY THRESHOLD**

When slave host sends the Power Inhibit Service Request with sub-type = 0x04 (see **Table 72 (POWER INHIBIT SERVICE REQUEST (SLAVE))**), then slave mozart will use the “New Channel Recovery Trigger Threshold For Nominal mode” and “New Channel Recovery Trigger Threshold For Max. Transmit Mode” from **Table 124 (SLAVE PARAMETERS FROM HOST)** to trigger the channel recovery.

[The slave transmit packet’s control byte 5, bits 5 and 6 shall NOT mirror the power inhibit service request sub-type when the sub-type = 0x04. Bits 5 and 6 will contain the last power inhibit mode uplinked prior to mode 4.]

#### **TLMM\_S\_453- CHARGE NOISE - SAME CHANNEL RECOVERY IMMINENT**

If the power inhibit mode is 4 and configured (i.e., Send Channel Recovery Imminent Indication to host = 1, see Parameter “Power Inhibit” in **Table 124 (SLAVE PARAMETERS FROM HOST)**), then slave mozart shall send Same Channel Recovery Imminent Indication (**Table 74 (SAME CHANNEL RECOVERY IMMINENT INDICATION (SLAVE))**) to slave host when “New Channel Recovery Imminent Threshold For Nominal mode” or “New Channel Recovery Imminent Threshold For Max. Transmit Mode” in **Table 124 (SLAVE PARAMETERS FROM HOST)** is reached.

#### **TLMM\_S\_454- CHARGE NOISE - SAME CHANNEL RECOVERY IMMINENT RESUMED**

If the power inhibit mode is 4 and configured (i.e., Send Channel Recovery Imminent Resumed Indication to host = 1, see Parameter “Power Inhibit” in **Table 124 (SLAVE PARAMETERS FROM HOST)**), and when the first packet is received with good MAC after Same Channel Recovery Imminent Indication has been sent, then slave mozart shall send Same Channel Recovery Imminent Resumed Indication (**Table 75 (SAME CHANNEL RECOVERY IMMINENT RESUMED INDICATION (SLAVE))**) to slave host.

#### **TLMM\_MS\_353 - SHUTDOWN - SERVICE REQUEST PARAMETERS**

When invoking a shutdown service request, upper layer will information as specified in **Table 76 (SHUTDOWN SERVICE REQUEST)**.

#### **TLMM\_MS\_354 - SHUTDOWN - RESPONSE TO UPPER LAYER**

Upon the receipt of the shutdown service request, data link will perform the following actions:

1. Terminate any data transmission and/or receive operations,
2. Start a disable timer and send a shutdown response to host

[Cancel all the timers, Transition to a disable state, configure the module to be in a receptor mode (per initialization parameters). Terminate physical layer communication, transition to disable state, send a successful response. Note that before turning off the 2 volt supply, the slave will return to synchronous receptor wakeup operation. If the wakeup disable bit is set to 1 in the initial-

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ization request firmware does not set the wakeup enable bit bp\_wakeup\_en bit in REG\_BP\_WU\_CTRL0 register. See requirement **TLMM\_S\_402 - WIRELESS WAKEUP - DISABLE WAKEUP**]

#### **TLMC\_M\_100 - ARQ - STOP AND WAIT MASTER ACKNOWLEDGMENT**

After transmitting the Memory Data master packet, check for the ACK bit in the slave packet(s) and perform as follows:

1. If the ACK bit is set in at least one valid slave packet, then transmit the next Memory Data master packet (if the previous packet was not the final packet).
2. If the ACK bit is not set in any of the received slave packet(s) or no valid slave packets are received, then retransmit the previous master packet in the next frame.

#### **TLMC\_MS\_101 - ARQ - MASTER ARQ PACKET FORMAT**

A master ARQ Request packet has the format indicated in **Fig. 102 (Master ARQ Request Packet)**.

#### **TLMC\_M\_102 - ARQ - UPDATING OF ARQ INFORMATION**

The master will update the ARQ information if it receives a memory packet (if the master packet was not Discover, Open, Network, or Security).

[The state is Comm when the master packet is not Discover, Open, Network nor Security.]

#### **TLMC\_M\_103 - ARQ - SLAVE MEMORY DATA PACKET ACKNOWLEDGMENT**

For each slave Memory Data packet that is received:

1. Verify the sequence number of the received packet to ensure it is within the sliding window limits. A received packet with a sequence number outside the sliding window limits will be ignored.
2. Adjust the SR-ARQ information based on the received packet. Update the FOP field with the sequence number of the First Outstanding Packet required to be retransmitted. In the bitmap, clear the bit for the packet received.
3. Transmit the ARQ packet to the slave in the next master frame.

[Note that the last bit of the bitmap is never used (always 1).]

#### **TLMC\_M\_104 - ARQ - SLAVE ACK NOT RECEIVED**

When no Memory Data packet is received in the slave frame then perform the following:

1. If the previous master packet was an ARQ packet and it is not acknowledged (ACK bit not set) in the slave frame, then retransmit the ARQ packet in the next master frame.
2. The ARQ packet will stop when ARQ packet is acknowledged via ACK bit set in at least one slave packet.

#### **TLMM\_M\_355 - ARQ - UPDATING THE EXPECTED WAVEFORM SEQUENCE NUMBER 1**

When “delay new waveform detection” is false, the transaction number of the most recently received waveform packet will be used to set the expected waveform sequence number:

- If all the fragments (packets) from the transaction has been received, the expected waveform sequence number will be the received transaction’s (last waveform sequence number+1) modulus 256.
- If any of the fragments (packets) from the transaction have not been received, the expected waveform sequence number will be the waveform sequence number of the first missing fragment (packet).

[The “delay new waveform detection” parameter is contained in the master initialization table (see **Table 123 (Master parameters from host)**).

The master communicates the “expected waveform sequence number” using control byte 4. See **Fig. 17 (Packet Control Bytes)**.)]

#### **TLMM\_M\_429 - ARQ - UPDATING THE EXPECTED WAVEFORM SEQUENCE NUMBER 2**

When “delay new waveform detection” is true, the expected waveform sequence number will set according to the table below:

Note that the second most recently received waveform transaction is discarded when the new waveform transaction number is any value other than  $(N+1) \% 8$ , where N is the transaction number of the second most recently received waveform transaction.

[For example, the master will continue to request retries from waveform transaction 1 until it receives a packet from waveform transaction 3 (actually any transaction other than transaction 2).

The “delay new waveform detection” parameter is contained in the master initialization table (see **Table 123 (Master parameters from host)**).

The master communicates the “expected waveform sequence number” using control byte 4. See **Fig. 17 (Packet Control Bytes)**.)]

#### **TLMC\_S\_106 - ARQ - STOP AND WAIT MASTER PACKETS**

A master packet received with a valid message authentication code (MAC) will be acknowledged by setting an ACK bit in all the slave packets of the next slave frame; otherwise, the ACK bit will not be set in any slave packet(s) of the slave frame.

[The slave frame may include the retransmitted packets.]

#### **TLMC\_S\_107 - ARQ - RECEIPT OF AN ARQ PACKET**

Upon the receipt of an ARQ packet the slave will perform as follows:

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1. Retransmit the unacknowledged Memory Data packets using the FOP and bitmap as follows:
  - FOP indicates the sequence number of the packet not received or may need to be retransmitted, followed by a bitmap status of the remaining packets.
  - A set bit “1” in the bitmap indicates the packet(s) is not received or may need to be retransmitted.
  - A cleared bit “0” in the bitmap indicates a packet was successfully received, therefore should not be retransmitted.

2. Adjust the lower and upper limits of the sliding windows based on the ARQ information.

#### **TLMC\_S\_108 - ARQ - MASTER ARQ PACKET NOT RECEIVED**

If the ARQ packet is not received then re-transmit the unacknowledged Memory Data packet(s) from the previous frame(s).

[If packet space is available in the slave frame.]

#### **TLMC\_S\_109 - ARQ - IMPLICIT ACK OF VALID SLAVE MEMORY DATA**

Once a slave packet is transmitted with a last fragment bit set, and the Memory Data request is received in the following master frame then the slave will perform as follows:

1. Memory data packets already transferred will be considered acknowledged.
2. The sliding window limits will be advanced accordingly. (New sequence #)

#### **TLMC\_S\_110 - ARQ - MEMORY DATA ACKNOWLEDGEMENT NOT RECEIVED**

If the slave does not receive acknowledgment for the transmitted Memory Data packets from the previous frame then the slave will retransmit the Memory Data packets from the previous frame if packet space is available and if the following apply:

1. No waveform packets to transmit.
2. No supplemental marker packets to transmit.

[For precedence rules, see 5.2.11 and 5.2.11.5 SLAVE DATA.]

#### **TLMM\_S\_356 - ARQ - RETRANSMIT WAVEFORM PACKET**

The Nth transmitted waveform request packets shall be retransmitted as follows:

- If there is no (N+2)th waveform request, then slave shall retransmit the saved waveform packets starting with the expected waveform sequence number.
- If there is (N+2)th waveform request, and if the “Delay sending new waveform” is true (See **TABLE 124: SLAVE PARAMETERS FROM HOST**) then slave shall retransmit the saved waveform packets starting with the expected waveform sequence number.
- Else if the “Delay sending new waveform” is false, then slave stops all the retransmission and transmission of the Nth waveform request and (N+1)th waveform request packets, slave shall transmit the (N+2)th waveform request packets.

[The master communicates the “expected waveform sequence number” using control byte 4. See **Fig. 17 (Packet Control Bytes)**.]

#### **TLMM\_M\_357 - CH MAPPING - SELECT CHANNEL**

Upon initiation of the channel mapping internal service, the master will perform the clear channel assessment on each channel/antenna pair (10 msec/pair) until all channels are assessed or a channel’s RSSI is below the stop-on-threshold value. The quietest channel is selected (the channel with the lowest RSSI).

Note that the listen before talk timer (LBT) is restarted each time a clear channel assessment is performed.

[Note that a channel’s RSSI value is set to the larger value of the RSSI on each antenna.]

[If ten channels are assessed it will take approximately 275 +/- 50 msec (10 msec per channel/antenna pair).]

#### **TLMM\_M\_358 - CH MAPPING - DIAGNOSTIC COLLECTION**

The master will collect twenty milliseconds of data during diagnostic mapping. The RSSI value of each channel assessed will be returned in the external service response.

#### **TLMC\_M\_120 - CH RECOVERY - TRIGGER CHANNEL RECOVERY**

The Channel Recovery algorithm is triggered when any of the following conditions is true:

1. No valid slave packet is received for N consecutive frames, where N is determined using the parameter “number of consecutive frames without a valid receive packet threshold 1, 2 or 3” and the power inhibit mode. See **Table 123 (Master parameters from host)** and **Table 71 (POWER INHIBIT MODES)** respectively.
2. An Open service request is unsuccessful.
3. A Data, Emergency, Open, or Remote Diagnostic service request is received in the Inactive State (in which case, unspecified channel recovery is initiated).
4. The slave ID in the first data transaction packet or diagnostic transaction packet does not match the slave ID in the last received open packet.
5. A slave packet’s ACK bit is true but its reset ACK bit is false when both are expected to be true. This can occur when noise is received with a good message authentication code (MAC).
6. When the master/slave bit is set to “1”, it means “this” master has just received a native mode packet from another master.

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“This” master was expecting a packet from a slave.

[Here, ‘**data transaction**’ is used generically for Memory Data, WF Data, and Unrequested Data. The ID appears in the first fragment of the transaction.]

#### **TLMC\_M\_121 - CH RECOVERY - START SAME CHANNEL RECOVERY**

When the Channel Recovery algorithm is triggered (when the session began with an Open service request), then disable the security hardware; terminate the processing of any external service in progress; change to a nominal data transfer mode; inform the upper layer with a channel recovery started indication (see **Table 80 (SAME CHANNEL RECOVERY STARTED INDICATION (MASTER OR SLAVE))**); and start channel recovery by transmitting Open requests. Open (unsecure) packets are transmitted if the original open service was open unsecure; otherwise open secure packets are transmitted. Note that if open secure packets are transmitted, a new random number (Rm) must be generated (see **Fig. 40 (Open Secure/Unsecure Request Packet)**). The same random number (Rm) can be used for the duration of same channel recovery. The algorithm for generating a random number is described in the appendix (see section **7.3 Pseudo Random Number Generation**).

[Note, it is not required to have a new random number generated when entering the Channel Recovery during an unsecured session. However, for implementation simplicity, it is acceptable if a new random number is generated as well when the Channel Recovery starts during an unsecured session.]

[Change to Channel Recovery State and start SCR timer, Inform the Upper Layer if an external service is aborted, inform the Upper Layer that Channel Recovery is started, Same channel recovery can’t be greater than 5 seconds.]

#### **TLMC\_M\_122 - CH RECOVERY - SAME CHANNEL RECOVERY OPEN MASTER PACKET**

While in same channel recovery transmit an open request packet and wait for an open response. Repeat this process if a valid open response is not received. Open (unsecure) packets are transmitted if the original open service was open unsecure; otherwise open secure packets are transmitted. Note that if open secure packets are transmitted, a new random number (Rm) must be generated (see **Fig. 40 (Open Secure/Unsecure Request Packet)**). The same random number (Rm) can be used for the duration of same channel recovery. The algorithm for generating a random number is described in the appendix (see section **7.3 Pseudo Random Number Generation**).

[During same channel recovery while SCR timer is active - Transmit an Open request, starting on an antenna and alternating on each retry, Restart the sync mode, Wait for an Open slave packet response. Repeat the above steps if a valid Open slave response is not received. Note: Open service is invoked locally. The actions performed for this Open service are the same as those described in **5.2 External Services**. The only exception is that upper layer is not notified of an Open request and the Open response.]

[Note, it is not required to have a new random number generated when entering the Channel Recovery during an unsecured session. However, for implementation simplicity, it is acceptable if a new random number is generated as well when the Channel Recovery starts during an unsecured session.]

#### **TLMC\_M\_123 - CH RECOVERY - SAME CHANNEL RECOVERY SUCCESSFUL**

If a valid slave Open packet is received while the SCR timer is active then transition to Comm State on successful response and send a channel recovery successful indication to the upper layer (see **Table 81 (CHANNEL RECOVERY SUCCESSFUL INDICATION (MASTER OR SLAVE))**). Additionally initialize the block cipher. See **Fig. 45 (Open - block cipher initialization)** for a secure/unsecure session initialization.

[Cancel the SCR timer; inform the Upper Layer that Channel Recovery is successful; initialize various parameters as done when Open service is processed prior to transitioning to the Comm State.]

#### **TLMC\_M\_124 - CH RECOVERY - SAME CHANNEL RECOVERY UNSUCCESSFUL**

If a valid slave Open response is NOT received within the same channel recovery time then:

1. Start a UCR timer.
2. Select a unspecified channel via Channel Mapping internal service.
3. Start the Listen Before Talk timer.
4. Transmit wakeup packet(s) per requirement **TLMM\_M\_359 - CH RECOVERY - WAKEUP TRANSMISSION**.
5. Transmit Open request (on the left antenna)
6. Send an unspecified channel recovery started indication to the Upper Layer. See **Table 82 (UNSPECIFIED CHANNEL RECOVERY STARTED INDICATION (MASTER OR SLAVE))**.

Open (unsecure) packets are transmitted if the original open service was open unsecure; otherwise open secure packets are transmitted. Note that if open secure packets are transmitted, a new random number (Rm) must be generated (see **Fig. 40 (Open Secure/Unsecure Request Packet)**). The same random number (Rm) can be used for the duration of unspecified channel recovery. The algorithm for generating a random number is described in the appendix (see section **7.3 Pseudo Random Number Generation**).

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[Note that the same channel duration cannot be greater than 5 seconds, otherwise the Channel Mapping algorithm will have to be initiated to reselect a channel (per the FCC).]

[Note, it is not required to have a new random number generated when entering the Unspecified Channel Recovery during an unsecured session. However, for implementation simplicity, it is acceptable if a new random number is generated as well when the Unspecified Channel Recovery starts during an unsecured session.]

### **TLMM\_M\_359 - CH RECOVERY - WAKEUP TRANSMISSION**

The master will send wakeup packets as follows:

1. Transmit no wakeup packets in the polling (scanning on) case if the slave is still polling: (timenow < timelast native packet from slave + slave recovery duration + remaining polling duration)
2. Transmit two wakeup packets in the polling (scanning off) case and the slave is still polling: (timenow < timelast native packet from slave + slave recovery duration + remaining polling duration)
3. Transmit N wakeup packets otherwise; where N is chosen to be slightly longer than the slave's wakeup period. "N" is the parameter transmit wakeup burst length async.

[transmit wakeup burst length async is received from master parameters from host - see **Table 123 (Master parameters from host)**. Note that the antenna is toggled before the start of each wakeup burst.

Also note that the master will perform clear channel assessment before and after transmitting wakeup (if the wakeup transmission is not suppressed and the slave scans during polling). The master will restart the Listen Before Talk (LBT) timer after the second clear channel assessment. This minimizes the interaction between the time it takes the slave to scan all channels and the time before the master starts transmitting wakeup again.]

### **TLMC\_M\_261 - CH RECOVERY - TOO MANY SAME CHANNEL RECOVERIES**

If too many same channel recoveries are initiated in too short of a time, then unspecified channel recovery will be initiated. More specifically, if N same channel recoveries are initiated within T seconds then:

1. Start a UCR timer.
2. Disable the security hardware.
3. Select an unspecified channel via Channel Mapping internal service.
4. Start the listen before talk timer.
5. Transmit wakeup packet(s) per requirement **TLMM\_M\_359 - CH RECOVERY - WAKEUP TRANSMISSION**
6. Transmit open request (on the left antenna).
7. Send an unspecified channel recovery started indication to the Upper Layer. See **Table 82 (UNSPECIFIED CHANNEL RECOVERY STARTED INDICATION (MASTER OR SLAVE))**.

Open (unsecure) packets are transmitted if the original open service was open unsecure; otherwise open secure packets are transmitted. Note that if open secure packets are transmitted, a new random number (Rm) must be generated (see **Fig. 40 (Open Secure/Unsecure Request Packet)**). The same random number (Rm) can be used for the duration of unspecified channel recovery. The algorithm for generating a random number is described in the appendix (see section **7.3 Pseudo Random Number Generation**).

[The values of "N" and of "T" (above) come from **Table 129 (PARAMETERS FROM EEPROM)**. They are called "too many recoveries threshold" and "too many recoveries duration" respectively.]

[Note, it is not required to have a new random number generated when entering the Unspecified Channel Recovery during an unsecured session. However, for implementation simplicity, it is acceptable if a new random number is generated as well when the Unspecified Channel Recovery starts during an unsecured session.]

### **TLMC\_M\_125 - CH RECOVERY - START UNSPECIFIED CHANNEL RECOVERY**

While the UCR timer is active, then:

1. Transmit an Open request packet, starting on one of the two antennas, and alternating the antenna on each retry.
2. Wait for a valid Open response packet.

Open (unsecure) packets are transmitted if the original open service was open unsecure; otherwise open secure packets are transmitted. Note that if open secure packets are transmitted, a new random number (Rm) must be generated (see **Fig. 40 (Open Secure/Unsecure Request Packet)**). The same random number (Rm) can be used for the duration of unspecified channel recovery. The algorithm for generating a random number is described in the appendix (see section **7.3 Pseudo Random Number Generation**).

[Before Wait..., restart the sync mode.]

If there is no Open response, transmit Open on the other antenna. Continue until success, Listen Before Talk timeout, or UCR timeout.

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[Note: Open service is invoked locally. The actions performed for this Open service are the same as those described in **5.2 External Services**. There are two exceptions. The first exception is that the upper layer is not notified of an Open request packet and the Open response packet. The second exception is that a “slave polling” timer is started (to interleave wakeup bursts with native mode open packets if the timer expires).]

[Note, it is not required to have a new random number generated when entering the Unspecified Channel Recovery during an unsecured session. However, for implementation simplicity, it is acceptable if a new random number is generated as well when the Unspecified Channel Recovery starts during an unsecured session.]

#### **TLMC\_M\_126 - REMAP CHANNEL - UNSPECIFIED CHANNEL RECOVERY TIMER EXPIRATION**

If no Open response at expiration of Listen Before Talk timeout:

1. Reselect best channel.
2. Restart Listen Before Talk timeout.
3. Transmit wakeup packet(s) per requirement **TLMM\_M\_359 - CH RECOVERY - WAKEUP TRANSMISSION**
4. Transmit an open request packet.
5. Wait for a valid Open response packet.

Open (unsecure) packets are transmitted if the original open service was open unsecure; otherwise open secure packets are transmitted.

Synchronous communication is reestablished on a different channel if an Open session response is received from a slave prior to the expiration of the UCR timer. The UCR timer is canceled and synchronous communication is resumed by transition to the Comm State.

#### **TLMC\_M\_127 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY SUCCESSFUL**

If a valid Open response packet is received while the UCR timer is active then transition to Comm State and send a channel recovery successful indication to the upper layer (see **Table 81 (CHANNEL RECOVERY SUCCESSFUL INDICATION (MASTER OR SLAVE))**). See **Fig. 45 (Open - block cipher initialization)** for a secure/unsecure session initialization.

[Cancel the UCR timer; inform the Upper Layer that Channel Recovery is successful; initialize various parameters as when Open service is processed prior to transitioning to the Comm State. Note: Open service is invoked locally. The actions performed for this Open service are the same as described in **5.2 External Services**. The only exception is that the upper layer is not notified of an Open request packet and the Open response packet.]

#### **TLMM\_M\_360 - CH RECOVERY - NATIVE TIMEOUT**

The master will continue to send open packets for the native mode timeout duration see **Table 129 (PARAMETERS FROM EEPROM)**. If this timer expires it will send wakeup packets per requirement **TLMM\_M\_359 - CH RECOVERY - WAKEUP TRANSMISSION**.

[Note that the native mode timer is not used if the slave scans during polling. In this case a transition back to wakeup occurs upon an LBT timeout.]

#### **TLMC\_M\_128 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY UNSUCCESSFUL**

A channel recovery failure indication will be sent to the upper layer if:

- a. No open response packet is received prior to the expiration of the UCR timer, or
- b. An open response packet with a status of “no BAN key” is received.

See **Table 83 (CHANNEL RECOVERY FAILED INDICATION (MASTER))**

[Transition to Inactive State, inform the Upper Layer of Channel Recovery failure, Note: Transition to Inactive State means that physical layer will be transferred to an idle state.]

#### **TLMC\_S\_129 - CH RECOVERY - TRIGGER CHANNEL RECOVERY**

The Channel Recovery algorithm is triggered when

1. No valid master packet is received for N consecutive frames, where N is determined using the parameter “number of consecutive frames without a valid receive packet threshold 1, 2 or 3” and the power inhibit mode. See **Table 123 (Master parameters from host)** and **Table 71 (POWER INHIBIT MODES)** respectively.

[The following bit in **Table 108 (Channel Recovery Reason)** will be set:

0x0F0A : Bit3 - Received Master Packet Error Exceeded.]

2. The master ID in the master data transaction, master ARQ packet, or master Diagnostic packet does not match the master ID in the last received Open request packet; or

[The following bit in **Table 108 (Channel Recovery Reason)** will be set:

0x0F0A :Bit4 -Received Master Type is ARQ and Master ID Mismatched,

0x0F0A: Bit5 - Received Master Type is Diagnostic and Master ID Mismatched, or

0x0F0A: Bit6 - Received Master Type is Memory Data and Master ID Mismatched.

Also Note that the master ID appears in data transaction’s first fragment.]

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3. No valid packet is received from the master after a secured open.

[The following bit in **Table 108 (Channel Recovery Reason)** will be set:

0x0F0A : Bit0 - First Received packet is Invalid Secured packet after open session, or

0x0F0B: Bit0 - No packet is received after open session.]

4. The master/slave bit is set to “0” it means “this” slave has just received a native mode packet from another slave. “This” slave was expecting a packet from a master.

[The following bit in **Table 108 (Channel Recovery Reason)** will be set:

0x0F0B : Bit5 - Received Slave Packet while in Communication State.]

5. Power inhibit is asserted and the power inhibit mode is idle immediate. Note that for this case the slave will not begin listening in native mode until power inhibit is deasserted.

[The following bit in **Table 108 (Channel Recovery Reason)** will be set:

0x0F0A : Bit7 -Power Inhibit triggered channel recovery.]

Once Channel recovery is triggered, the security hardware will be disabled.

The model ID and serial number information of the instrument with which the communication was successfully opened will be maintained until a different channel recovery fails.

#### **TLMC\_S\_130 - CH RECOVERY - START SAME CHANNEL RECOVERY**

When the Channel Recovery algorithm is triggered, transition to Channel Recovery State, start the SCR timer and send a channel recovery started indication to the upper layer. (see **Table 80 (SAME CHANNEL RECOVERY STARTED INDICATION (MASTER OR SLAVE))**)).

Note that the channel recovery started indication will be sent to the upper layer only if bit “Send channel recovery indication to host” is set to “1”. (See **Table 124 (SLAVE PARAMETERS FROM HOST)** for bit “Send channel recovery indication to host” )

[Terminate the processing of any external service in progress, stop slave transmission, and restart sync mode; change to nominal data transfer mode; inform the upper layer that Channel Recovery is started.]

#### **TLMC\_S\_131 - CH RECOVERY - SAME CHANNEL RECOVERY INVOKE SCAN**

While the SCR timer is active listen for a valid Open request packet from the master with which the session was opened.

[If any packet other than Open is received, then restart the sync mode and no slave response is transmitted.]

#### **TLMC\_S\_132 - CH RECOVERY - SAME CHANNEL RECOVERY SUCCESSFUL**

While in Channel Recovery State, if the SCR timer is active and a valid Open request packet is received, then:

Transmit N open response packets (“N” = open uplink packet count in **Table 129 (PARAMETERS FROM EEPROM)**). Note that a new random number (Rs) for the open response packet (see **Fig. 42 (Open Secure/Unsecure Response Packet)**) is generated when entering the same channel recovery and will be used for the entire (same and unspecified) channel recovery process. This is allowed because this random number (Rs) will not be used in transmitting valid information during channel recovery. The algorithm for generating a random number is described in the appendix (see section **7.3 Pseudo Random Number Generation**).

1. Initialize the block cipher. See **Fig. 45 (Open - block cipher initialization)** for a secure/unsecure session initialization.

2. Transition to the Comm State.

3. Send a channel recovery successful indication to the upper layer. See **Table 81 (CHANNEL RECOVERY SUCCESSFUL INDICATION (MASTER OR SLAVE))**). Note that the channel recovery successful indication will be sent to the upper layer only if bit “Send channel recovery indication to host” is set to “1”. (See **Table 124 (SLAVE PARAMETERS FROM HOST)** for bit “Send channel recovery indication to host” )

[When a valid open request packet is received followed by a diagnostic or data packet, cancel the SCR timer; inform the upper layer of successful Channel Recovery status; initialize various parameters as done when Open service is processed.]

[Note, it is not required to have a new random number generated when entering the Channel Recovery during an unsecured session. However, for implementation simplicity, it is acceptable if a new random number is generated as well when the Channel Recovery starts during an unsecured session.]

#### **TLMC\_S\_133 - CH RECOVERY - SAME CHANNEL RECOVERY UNSUCCESSFUL**

While in Channel Recovery State, if the SCR timer expires and a valid Open request packet is NOT received, then start UCR timer and send an unspecified channel recovery started indication to the upper layer (see **Table 82 (UNSPECIFIED CHANNEL RECOVERY STARTED INDICATION (MASTER OR SLAVE))**).

Note that the unspecified channel recovery started indication will be sent to the upper layer only if bit “Send channel recovery indication to host” is set to “1”. (See **Table 124 (SLAVE PARAMETERS FROM HOST)** for bit “Send channel recovery indication to host” )

[Restart sync mode; report the Channel Recovery status to the application layer.]



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#### **TLMC\_S\_134 - CH RECOVERY - START UNSPECIFIED CHANNEL RECOVERY**

While performing channel recovery, if the SCR timer expires and a valid open request packet is not received start the UCR timer. Additionally the slave will do the following:

1. Scanning off case
  - a. Phase 1: listen for wakeup. The slave will continuously restart asynchronous receptor wakeup if it receives no valid wakeup
  - b. Phase 2: listen for native mode open. The slave will listen for a native mode open packet if a valid wakeup is heard (and start a native mode timer). It will listen for an open packet until a valid open is received or a native mode timeout occurs (~200 msec). If a native mode timeout occurs, the slave will transition to phase 1.
2. Scanning on case
  - a. Phase 1 - random channel listening - the slave will randomly select a channel and will restart the channel listening time and listen for a valid packet from the master. If no valid open packet has been received and the service duration timer is still active, the slave will switch to the phase 2 approach.
  - b. Phase 2 - sequential channel listening - the slave will sequentially select the next channel and will restart the channel listening time and listen for a valid packet from the master. When every channel has been selected once the slave will switch to the Phase 1 approach.

#### **TLMC\_S\_135 - CH RECOVERY - UCR TIMER ACTIVE NON OPEN MASTER PACKET**

While UCR timer is active, if a master packet other than Open is received, the slave will not transmit a slave response.

#### **TLMC\_S\_136 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY SUCCESSFUL**

While the UCR timer is active and a valid Open request packet from the same master is received, then:

Transmit N open response packets (“N” = open uplink packet count in **Table 129 (PARAMETERS FROM EEPROM)**). Note that the random number (Rs) used in the open response packet (see **Fig. 43 (Open status byte (Response))**) was generated when entering the (same) channel recovery. This is allowed because this random number (Rs) has not been used in transmitting valid information.

1. Initialize various parameters as when an Open service is processed.
2. Initialize the block cipher. See **Fig. 45 (Open - block cipher initialization)** for a secure/unsecure session initialization.
3. Transition to the Comm State.
4. Send a channel recovery successful indication to the upper layer (see **Table 81 (CHANNEL RECOVERY SUCCESSFUL INDICATION (MASTER OR SLAVE))**). Note that the channel recovery successful indication will be sent to the upper layer only if bit “Send channel recovery indication to host” is set to “1”. (See **Table 124 (SLAVE PARAMETERS FROM HOST)** for bit “Send channel recovery indication to host” )

[When a valid open request packet is received followed by a diagnostic or data master packet, cancel the UCR timers; inform the upper layer of successful Channel Recovery status; various parameters like seq number are initialized prior to transitioning to the communication state.]

[Note, it is not required to have a new random number generated when entering the Channel Recovery during an unsecured session. However, for implementation simplicity, it is acceptable if a new random number is generated as well when the Channel Recovery starts during an unsecured session.]

#### **TLMM\_S\_361 - CH RECOVERY - UNSPECIFIED CHANNEL RECOVERY UNSUCCESSFUL**

While in Channel Recovery State if the UCR timer expires then transition to the Standby State and send a channel recovery failed indication to the upper layer. See **Table 84 (CHANNEL RECOVERY FAILED INDICATION (SLAVE))**.

Note that the channel recovery failed indication will be sent to the upper layer whether the bit “Send channel recovery indication to host” is set to “1” or not. (See **Table 124 (SLAVE PARAMETERS FROM HOST)** for bit “Send channel recovery indication to host” )

[Cancel the Scan listen timer; report the unsuccessful Channel Recovery status to the upper layer.]

[The indication to the Upper Layer will consist of Polling ON or Polling OFF based on the value of the Total Polling Duration Time in the open request packet (i.e., Zero meaning Polling OFF, otherwise Polling ON.)

#### **TLMC\_M\_139 - DATA TRANSFER MODE - MODE TRANSITIONS**

The data transfer mode will be selected according to **Table 86 (DATA TRANSFER MODE TRANSITIONS)**.

[The value of “N” above comes from **Table 129 (PARAMETERS FROM EEPROM)**. It is called “low energy threshold (consecutive filler master packets)”.]

#### **TLMC\_M\_140 - DATA TRANSFER MODE - NOMINAL TO LOW ENERGY MODE TRANSITIONS.**

When low energy mode is enabled and if the consecutive filler packet count is greater than or equal to the low energy threshold value, then data transfer mode transition is made from nominal to low energy.

[See **Table 129 (PARAMETERS FROM EEPROM)**.]

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#### **TLMC\_M\_141 - DATA TRANSFER MODE - NEGATIVE PREAMBLE RATIO IN LOW ENERGY MODE**

The master will use a negative correlation preamble on  $N - 1$  of  $N$  packets when the master and the slave are both in the low energy mode unless noted below. The  $N$ th master packet will use a positive correlation .

Exception to the  $N-1$  of  $N$  downlinks include the following:

- The parameter "frequent waveform expected" is true, or
- There is a new downlink sequence number for the go back  $N$  waveform acknowledgement and the parameter "frequent waveform expected" is false, or
- The ack bit is set to false in any uplink packet received with a good MAC and the parameter "frequent waveform expected" is false, or
- The uplink frame contains no packets with good MAC and the parameter "frequent waveform expected" is false

[Note: The “ $N$ ” Correlate Negative Ratio value is defined in **Table 129 (PARAMETERS FROM EEPROM).**]

#### **TLMC\_M\_142 - DATA TRANSFER MODE - LOW ENERGY TO NOMINAL TRANSITION**

A transition from low energy to nominal mode will be made if the present master packet is a non-filler packet and the previous master packet was a filler packet in a low energy mode.

#### **TLMC\_M\_143 - DATA TRANSFER MODE - TRANSITION TO NEW MODE ON MASTER PACKET**

If the new data transfer mode packet is successfully received by the slave, then the master transitions to the new data transfer mode. Note the master will transition immediately when the nominal packet count is one packet.

[Note that channel recovery will be triggered if the first  $N1-1$  slave packets are corrupted upon nominal to max slave throughput or max slave throughput to nominal transitions. This occurs since one station has its slave packet count set to  $N1$  (see parameter ‘packet count for nominal mode’ in **Table 123 (Master parameters from host)**) and the other has its packet count set to  $N2$  (see parameter ‘packet count for max throughput mode’ in **Table 123 (Master parameters from host)**). Physical layer timing cannot be maintained in this scenario.]

[The current transfer mode is set to the pending transfer mode when the slave packet indicates the slave has changed.]

#### **TLMC\_S\_144 - DATA TRANSFER MODE - VALIDATE TRANSFER MODE AND RESPONSE**

Upon receipt of a valid master packet, the slave will check the telemetry data transfer mode, and will perform as follows:

1. If the current data transfer mode matches the transfer mode in the master packet then the slave data transfer mode will not change.
2. If the current data transfer mode does not match the transfer mode of the master packet then the slave will transition to the data transfer mode as specified in the master packet.
3. The slave packet will contain the slave’s data transfer mode indication.
4. When in low energy mode slave will always uplink a filler packet when there is no data to be transmitted.

#### **TLMM\_M\_362 - RESET SERVICE - INVOKE SERVICE 1**

The master will invoke the reset internal service upon receipt of an emergency service request.

#### **TLMM\_M\_363 - RESET SERVICE - INVOKE SERVICE 2**

The master will invoke the reset internal service upon receipt of a data service request when the most recent data or emergency service request failed.

#### **TLMC\_M\_145 - RESET SERVICE - MASTER PACKET WITH RESET BIT**

The master will do the following when the reset internal service is invoked:

1. Discard pending master data packet
2. Reset the master data packet sequence number
3. Set the reset bit to 1 in the master upper layer header byte. See **5.2.11.2**.
4. Set the Reset bit to 1 in the control byte of the next master packet.

The master then will wait for an slave packet with Reset ACK bit set in the Control Byte.

[An emergency service may result in discarded data packets. (Emergency interrupts a data service in progress. A data service will not result in discarded data packets since a data service cannot interrupt an “in-progress” service.)]

#### **TLMC\_M\_146 - RESET SERVICE - MASTER RESET REQUEST RETRANSMISSION**

If no valid slave packet with Reset ACK bit set is received from the remote station in the next slave frame, the Data Link Layer shall continue to retransmit the packet with the Reset bit set. The master shall continue this until a valid slave packet with Reset ACK bit set is received or the reply duration timeout occurs.

#### **TLMC\_S\_147 - RESET SERVICE - RESET REQUEST VALIDATION**

Upon receiving a valid master packet with the Reset bit set, the slave shall do the following:

1. Discard pending slave data packets.
2. Reset parameters for the ARQ algorithm, including the master data packet sequence number, the slave Memory Data sequence number, transaction number, fragment number; and the ARQ sliding window.

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3. Set the Reset ACK bit in the slave packets.

#### **TLMC\_M\_148 - RESET SERVICE - OPERATION SUCCESSFUL**

Upon receiving a valid slave packet with the Reset ACK bit set, the master shall do the following:

1. Discard pending data slave packets.
2. Reset parameters for the ARQ algorithm, including the slave Memory Data sequence number, transaction number, fragment number, and the ARQ sliding window.

#### **TLMM\_M\_364 - WIRELESS WAKEUP - INITIATE INSTIGATOR WAKEUP**

A telemetry M instigator node, by initiating a external service: discover, open, security, or network shall invoke the wakeup internal service. Channel recovery shall also invoke the wakeup internal service. See **TLMM\_M\_359 - CH RECOVERY - WAKEUP TRANSMISSION**

[Information pertaining to wakeup, provided from the external service, will be transferred to the wakeup internal service.

See **Table 87 (INSTIGATOR WAKEUP VS. SERVICE)**]

#### **TLMM\_MS\_365 - WIRELESS WAKEUP - WAKEUP PACKET**

The wakeup packet shall be defined as the following: see **Fig. 112 (Wakeup Packet)**

[For more information on how the individual wakeup packet bytes are defined see the following requirements:

- TLMM\_MS\_366 - WIRELESS WAKEUP - WAKEUP HEADER BYTE,
- TLMM\_MS\_367 - WIRELESS WAKEUP - WAKEUP SEQUENCE NUMBER BYTES,
- TLMM\_MS\_368 - WIRELESS WAKEUP - WAKEUP STATION ID BYTES,
- TLMM\_MS\_369 - WIRELESS WAKEUP - WAKEUP RECEPTOR BIT MAP BYTE,
- TLMM\_MS\_370 - WIRELESS WAKEUP - WAKEUP CONFIGURATION BYTES,
- TLMM\_MS\_371 - WIRELESS WAKEUP - WAKEUP USER DATA BYTES]

#### **TLMM\_MS\_366 - WIRELESS WAKEUP -WAKEUP HEADER BYTE**

The wakeup packet header byte shall have the following format:

1. Wakeup type - see **Table 89 (WAKEUP TYPES VALUES)**
2. Instigator network table index - see **Table 90 (WAKEUP NETWORK ID INDEX VALUES)**
3. Wakeup user data/network packet security enable - a value of one enables user data or network data security; a value of zero disables user data and network security [See **Table 91 (SECURE USER DATA/NETWORK PACKET)**
4. Last wakeup block - a value of one means this is the final block of wakeup packets; a value of zero means there will be more
5. Synchronize wakeup interval timer - a value of one means synchronize; the value is zero otherwise

[See **TLMM\_MS\_371 - WIRELESS WAKEUP -WAKEUP USER DATA BYTES** and **TLMM\_M\_372 - WIRELESS WAKEUP- SECURE WAKEUP USER DATA INSTIGATOR**]

#### **TLMM\_MS\_367 - WIRELESS WAKEUP -WAKEUP SEQUENCE NUMBER BYTES**

The wakeup packet sequence bytes shall have the following format:

1. Wakeup packet sequence number - The instigator data link layer shall write the baseband hardware's starting sequence number and ending sequence number (where start > end)

[The baseband hardware shall fill in the sequence number, in the wakeup packet, send the wakeup packet, then decrements the fourteen bit sequence number and then shall send another wakeup packet until the end sequence number has been sent.]

#### **TLMM\_MS\_368 - WIRELESS WAKEUP -WAKEUP STATION ID BYTES**

The wakeup packet shall have six station id bytes having the following format:

1. station ID = network ID for the local broadcast wakeup type
2. station ID = receptor ID for the unicast wakeup type
3. station ID = for the non-local broadcast wakeup type, the three most significant bytes are the receptor model and sub-model which can be all wildcard (zero). The three least significant bytes are the instigator model and sub-model.
4. station ID = for the global broadcast wakeup type, the three most significant bytes are the receptor model and sub-model which can be all wildcard (zero). The three least significant bytes are the instigator model and sub-model.

#### **TLMM\_MS\_369 - WIRELESS WAKEUP -WAKEUP RECEPTOR BIT MAP BYTE**

The wakeup packet shall have a receptor map byte of the following format:

1. Each bit shall represent a node (child) in the network
2. A value of one in a given bit shall indicate the node (child) shall be woken up
3. A value of zero in a given bit shall indicate the node (child) shall not be woken up see **Fig. 111 (Receptor bit map)**

#### **TLMM\_MS\_370 - WIRELESS WAKEUP -WAKEUP CONFIGURATION BYTES**

The wakeup packet shall have two wakeup configuration bytes having the following format:

1. User data - a value of one indicates that user data exists; a value of zero indicates that no user data exists
2. Channel number - channel number of 1 to 30 to be used in native mode

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3. Slave scans during polling - a value of one means the slave should scan during polling, a value of zero means the slave should alternate between native mode listening and consecutive asynchronous receptor wakeup
4. Instigator native mode transmit modulation - see **Table 92 (TX/RX DEFAULT DATA RATE TABLE)**
5. Instigator default transmit data rate - see **Table 92 (TX/RX DEFAULT DATA RATE TABLE)**, used outside of the session.
6. Instigator native mode receive modulation - see **Table 92 (TX/RX DEFAULT DATA RATE TABLE)**
7. Instigator default receive data rate - see **Table 92 (TX/RX DEFAULT DATA RATE TABLE)**, used outside of the session.

#### **TLMM\_MS\_371 - WIRELESS WAKEUP -WAKEUP USER DATA BYTES**

The wakeup packet shall have 10 bytes of user data, these bytes will be provide as part of initialization data from the host. When wakeup user data security is enabled only 4 bytes shall be available for user data. The remaining 6 bytes shall be used for a 3 byte security counter and for a 3 byte security MAC.

[When security is enabled, the first 4 bytes are used for the user data bytes. Bytes 5,6 and 7 are used for the security counter. Bytes 8,9, and 10 are used for the security MAC.]

#### **TLMM\_M\_372 - WIRELESS WAKEUP- SECURE WAKEUP USER DATA INSTIGATOR**

The instigator will perform the following to secure the wakeup user data bytes when the Wakeup security byte is enabled:

1. Generate a random number and use 3 bytes as the instigator's secure wakeup counter (CTRI).
2. Calculate the AES\_out using the block cipher using the instigator's secure wakeup counter (CTRI), instigator's station ID (IDi) the four user data bytes and the receptor bit map for the data input, and the BAN key (KBAN) for the key input.
3. Encrypt the 4 bytes of user data by calculating the key stream using the block cipher shown:
4. Complete the user data encryption by performing an exclusive or of the user data with the key stream. created in step 3.

The 10 bytes of user data will contain the following bytes: four bytes encrypted user data, three byte of instigator secure wakeup counter (CTRI), and three byte of MAC (AES\_out[23:0]).

#### **TLMM\_M\_373 - WIRELESS WAKEUP -WAKEUP INTERVAL SYNC START TIME**

To determine when the wakeup packets transmissions should start, the instigator shall set the wakeup interval sync start time. [This defines the amount of time the wakeup transmission should start before the receptor's sniff interval starts. This is needed to compensate for clock drift between the instigator and receptor(s). The wakeup interval sync start time is also needed to account for the CCAs that will occur before the next sync interval.

To achieve a successful synchronous wakeup transmission, the instigator's sniff interval should match the receptor's sniff interval. The instigator's sniff interval is not in the EEPROM nor the parameters from host. This should be set with a local data service request or via the (address, value) pairs of the master initialize service.]

#### **TLMM\_M\_374 - WIRELESS WAKEUP -WAKEUP INITIAL CCA**

The instigator shall perform a clear channel assessment (CCA) before the start of wakeup packet transmission.

[The above requirement applies to both synchronous instigator wakeup and asynchronous receptor wakeup.]

#### **TLMM\_M\_441 - WIRELESS WAKEUP - CCA AFTER WAKEUP**

If instigator is configured to do "CCA before and after wakeup = 1" and "slave scan during polling =1" (see **Table 123 (Master parameters from host)**), the instigator shall perform a clear channel assessment (CCA) after the last block wakeup packets have been transmitted.

[The above requirement applies to both synchronous instigator wakeup and asynchronous receptor wakeup. But it does not apply to the network service]

#### **TLMM\_M\_375 - WIRELESS WAKEUP -WAKEUP WITH CCA BREAKS**

The instigator shall perform a clear channel assessment (CCA) every five seconds. This means that a wakeup burst duration longer than five seconds will be separated by a CCA. See **Fig. 119 (Wakeup with CCA breaks)**

[The above requirement applies to asynchronous receptor wakeup. It also applies to synchronous receptor wakeup, although synchronous receptor wakeup should rarely use a long wakeup burst (greater than 5 seconds). Note the data link layer will be notified, by the baseband hardware, when all of the wakeup packets have been sent. The data link layer will then take the next action of the discover service, open service, network service, medical event service, or channel recovery internal service (or more wakeup packets if necessary).]

#### **TLMM\_S\_377 - WIRELESS WAKEUP - WAKEUP SNIFF FREQUENCY RANGE**

The slave (receptor) shall be configurable to sniff channels in the following ways:

1. MICS only or
2. MEDS only or
3. Both MICS and MEDS

[Wakeup sniff list is defined in EEPROM, see wu\_sniff\_list in **A44088, Telemetry M RF Module EEPROM Specification** .

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The sniff list can be overwritten by slave host via initialization request, see **Table 124 (SLAVE PARAMETERS FROM HOST)]**

#### **TLMM\_S\_378 - WIRELESS WAKEUP - SNIFF INTERVAL**

Upon initialization the node will setup the sniff interval timer to periodically wakeup the baseband hardware to sniff for a wakeup packet.

[Wakeup sniff interval is provided by slave host via initialization request, see **Table 124 (SLAVE PARAMETERS FROM HOST)]**

#### **TLMM\_S\_402 - WIRELESS WAKEUP - DISABLE WAKEUP**

If the wakeup disable bit in the initialization request is set to 1, the slave will not sniff for wakeup packets.

[The wakeup disable bit is provided by slave host via initialization request, see **Table 124 (SLAVE PARAMETERS FROM HOST)**.

If the wakeup disable bit is cleared, the slave hardware should sniff when the standby timer or the disable timer expires.

If wakeup disable bit is set, the slave hardware wakeup state machine is disabled and the module will not sniff for any wakeup packets.]

#### **TLMM\_S\_379 - WIRELESS WAKEUP- SECURE WAKEUP USER DATA RECEPTOR**

The receptor will perform the following upon receipt of a wakeup packet containing secure user data (wakeup user data security bit set to enabled):

1. Use the received instigator's secure wakeup counter (CTR<sub>i</sub> contained in the wakeup packet).
2. Calculate the key stream using the block cipher. See **Fig. 117 (Calculate keystream to encrypt/ decrypt user data in a wakeup packet)**.
3. Decrypt the user data by performing an exclusive or of the user data with the key stream produced in bullet 3 above. See **Fig. 118 (Encrypt/ decrypt the wakeup data)**.
4. Calculate the AES<sub>out</sub> using the block cipher using the instigator's secure wakeup counter (CTR<sub>i</sub>), instigator's station ID (ID<sub>i</sub>) and the four user data bytes, and the BAN key (KBAN) for the key input. See **Fig. 116 (Calculate AES<sub>out</sub> for wakeup security)**.
5. If the calculated MAC (AES<sub>out</sub>[23:0]) is equal to the received user data (bytes 8, 9, and 10 of the user data), the user data is valid and wakeup indication will be sent to the host.(see **Table 93 (WAKEUP INDICATION (SLAVE))**); else, the user data is invalid and and wakeup indication with invalid MAC will be sent to the host.(see **Table 93 (WAKEUP INDICATION (SLAVE))**);

#### **TLMM\_S\_380 - WIRELESS WAKEUP - WAKEUP COMPLETE INDICATION**

A wakeup indication "Wakeup Complete", containing the wakeup packet contents, shall be sent to the upper layer when the "last packet last block" wakeup packet is received (see **Table 93 (WAKEUP INDICATION (SLAVE))**).

[Note, user data may be present in the "Wakeup Complete" wakeup packet contents. Upon receiving a "Wakeup Complete", the host will normally issue a initialize service request

Also note, an implicit wakeup indication (the same indication as described above) will be sent to the upper layer under the following conditions:

- a. A wakeup packet (non last block) is heard, and
- b. No subsequent wakeup packet (last block) is heard when performing asynchronous sniff. This asynchronous sniff is designed to occur during the last block. The subsequent wakeup packet (last block) is less likely to be heard if the last wakeup block is short.]

#### **TLMM\_S\_381 - WIRELESS WAKEUP - WAKEUP IN PROGRESS USER DATA AVAILABLE INDICATION**

When valid user data is present, in the wakeup packets, a wakeup indication "Wakeup In Progress User Data Available" containing the wakeup packet contents shall be sent to the upper layer upon receipt of the first valid wakeup packet containing user data (see **Table 93 (WAKEUP INDICATION (SLAVE))**).

[When invalid user data is present, in the first valid wakeup packet, no wakeup indication shall be sent to the upper layer.]

#### **TLMM\_S\_382 - WIRELESS WAKEUP - WAKEUP COMPLETE INDICATION ONLY**

If the first valid wakeup packet, containing valid user data, is also the "last packet last block" wakeup packet; then only the "Wakeup Complete" indication shall be sent to the host.

If the first valid wakeup packet, containing invalid user data, is also the "last packet last block" wakeup packet; then only the "Wakeup Complete with Invalid user data" indication shall be sent to the host.

(see **Table 93 (WAKEUP INDICATION (SLAVE))**)

[Note that if the first wakeup packet is also the last wakeup packet and it has user data, two wakeup indications will be sent to the host. The first will be sent before reading EEPROM. The second will be sent after reading EEPROM. This is done in case

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the EEPROM read is delayed due to power inhibit. An initialization request while reading EEPROM will be rejected (if initialization sent after the first wakeup indication). Initialization after the second wakeup indication should be successful.]

#### **TLMM\_S\_383 - WIRELESS WAKEUP - INDICATIONS**

The received wakeup packet shall be assembled into an indication message and passed onto the host. The indication message shall have a format defined in **Table 93 (WAKEUP INDICATION (SLAVE))**.

#### **TLMM\_M\_386 - ANTENNA SELECTION - TRANSMIT**

The master will toggle the transmit antenna (vs. the previous transmit antenna) if any of the following conditions are met:

1. The previous master packet was received with a MAC error by the slave (provided the master packet was not sent with negative correlation preamble). The master knows the slave received its packet in error if the slave's ACK bit is false. Note that only the first N-1 packets are checked. In the event that N is equal to one, the single uplink packet is checked.
2. Each of the first (N-1) uplink packets are received with MAC error (or the single uplink packet has a MAC error in the event that N is equal to one.

["N" can be either of the "slave xmit packet count for nominal mode" or "slave xmit packet count for max throughput mode" as determined by the preceding master packet's transfer mode. See **Table 123 (Master parameters from host)** for the "packet count" parameters.]

#### **TLMC\_M\_156 - SIGNAL - STRENGTH INDICATOR**

The master shall set the signal strength indicator to give feedback to the user about the link quality.

[signal strength indicator = min(SSl', last SSI-1) if SSl' < last SSI  
= max(SSl', last SSI+1) if SSl' >= last SSI

where,

SSl' = min(SSl'', signal strength input limit) if no waveform packet in the slave frame  
= SSl'' otherwise

and

SSl'' is determined from **Table 94 (SIGNAL STRENGTH INDICATOR)**

Note that "signal strength input limit" is found in **Table 123 (Master parameters from host)**. A value of "7" will disable the input limiting. Hosts without periodic waveform (or infrequent waveform relative to the "superframe interval") should consider disabling input limiting. Hosts with frequent waveform (i.e., telemetry C Concerto) may set this value to "3".]

#### **TLMM\_M\_387 - SIGNAL STRENGTH INDICATOR SETUP**

The master will setup the hardware to take periodic signal measurements:

1. Enable power bar measurements
2. Set CCA dwell time to a value smaller than the duration of a slave packet (so the "signal" contains no portion of an inactive packet)

#### **TLMM\_MS\_391 - PLL LOCK ERROR**

Upon receiving the PLL lock error data link layer will:

1. Perform idle immediate and turn off wakeup,
2. Start the trim process by initiating a coarse trim and then a fine trim on all 30 channels.

[The trim process will stop if a trim failure occurs.]

#### **TLMM\_M\_392 - MASTER TRIM SUCCESS**

The master will perform the following if the data link layer initiated trim is successful:

- a. Perform clear channel assessment (see note below)
- b. Transmit wakeup (see note below)
- c. Transmit discover or open (discover if the discover service was interrupted by the PLL lock error, open otherwise)

Note that channel assessment is skipped if trim success occurs during communication (same channel recovery initiated). Also note that the wakeup packets are suppressed if same channel recovery is initiated, or if the master knows the slave is scanning (see **TLMM\_M\_359 - CH RECOVERY - WAKEUP TRANSMISSION**).

[The remote diagnostic service and the mapping diagnostic service is cancelled if interrupted by a PLL lock error (and a subsequent trim success). The service response status will be 0x26.]

#### **TLMM\_S\_393 - SLAVE TRIM SUCCESS**

The slave will perform the following if the data link layer initiated trim is successful:

Listen for Tel M native mode, listen for TelC packets, listen for asynchronous wakeup, or reconfigure for synchronous sniff (whichever was in progress when PLL lock error occurred).

[That is slave will resume the actions (if possible) before the PLL lock error is occurred:

- 1) Turn 2Volt off if slave is enabled by PLL lock error, or
- 2) Perform synchronous sniff if slave is sniffing during Disable CPU ON state when PLL lock error is occurred, or

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- 3)Start same channel recovery if PLL lock error is occurred during communication state,or
- 4)Restart to listen for native mode in the same channel recovery if PLL lock error is occurred during same channel recovery state,or
- 5)Restart to listen (for native mode or asynchronous sniffing) in the unspecified channel recovery if PLL lock error is occurred during unspecified channel recovery state,or
- 6)Restart to listen for native mode or asynchronous sniffing in the acquire state if PLL lock error is occurred while polling in acquire state,or
- 7)Restart to uplink medical event if PLL lock error is occurred during uplinking medical events, or
- 8)Restart to listen for network packet if PLL lock error is occurred during network service.]

#### **TLMM\_M\_394 - MASTER TRIM FAIL**

The master will perform the following if the data link layer initiated trim fails:

- a. Transition to the standby state (stop downlinking to the slave)
- b. Send an external service response (failure) to the host if a service was in progress (see the requirement note below)
- c. Send a telemetry ceased indication to the host

[Note that a discover cancelled indication is used for a trim failure during discover since a successful service response is sent when the service is initiated. All other service requests utilize a cancelled service response (failure code 0x1d).]

#### **TLMM\_S\_395 - SLAVE TRIM FAIL**

The slave will perform the following if the data link layer initiated trim fails:

- a. Transition to the standby state if not in the disable state (momentarily stop listening to the master)
- b. Send a telemetry ceased indication to the host if not in the disable state
- c. Start the standby timer if not in the disable state. Note the disable timer is utilized in the disable state.

[Note that if the standby timer expires (or the disable timer expires) the slave will return to synchronous receptor wakeup operation. If the wakeup disable bit is set to 1 in the initialization request firmware does not set the wakeup enable bit bp\_wakeup\_en bit in REG\_BP\_WU\_CTRL0 register. See requirement **TLMM\_S\_402 - WIRELESS WAKEUP - DISABLE WAKEUP**]

#### **TLMM\_MS\_396 - TELEMETRY CEASED INDICATION**

The data link layer will send telemetry ceased indication to the host if the following conditions are true:

- a. A PLL lock error occurs, and
- b. The coarse trim or the fine trim procedure fails, and
- c. The state is not disable

[This indication could be generated when PLL lock error is encountered during either the coarse or fine trim when not in the disable state. This could happen during the acquire, communication and channel recovery states.]

#### **TLMM\_MS\_397 - TRIM FAILURE INDICATION**

The data link layer will send a trim failed indication to the host if the following conditions are true:

- a. A PLL lock error occurs, and
- b. The coarse trim or the fine trim procedure fails, and
- c. The "trim failed indication to host" flag is set

[Trim failed indication flag is a configuration parameter - it can be set or cleared by the host]

#### **TLMM\_S\_398 - PARAMETER CRC UPDATE**

The CRC of all the Parameters in **Table 97 (PARAMETER CRC LIST)** will be calculated and stored

[The CRC is stored at always on RH area 0x05A1-0x05A2.

“Slave Checks Always On CRC” parameter is located at always on RH area, 0x0005A0 (bit0).

The CRC is updated only when “Slave Checks always on CRC” parameter is set to TRUE.

“Slave Checks Always On CRC” parameter is cleared when slave is booted via reset by Hardware; “Slave Checks Always On CRC” is set to the same value as “slave shall calculate and check Always On parameters” (see **Table 124 (SLAVE PARAMETERS FROM HOST)** when slave processes an Initialize Service Request.]

#### **TLMM\_S\_399 - PARAMETER CRC CHECK**

The CRC of all the Parameters in **Table 97 (PARAMETER CRC LIST)** will be calculated and checked against the stored CRC under the following cases:

1. On every boot (except any Resets), or
2. Before turn 2V off.

[Note the CRC will also be calculated and checked against the stored CRC before any of the parameters are changed.

The CRC is checked only when “Slave Checks always on CRC” parameter is set to TRUE.

Note the following:

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1. The wrap up interrupt will not be processed until the disable timer expires if the interrupt occurs while the CPU is enabled. This negates any potential latency associated with this interrupt.
2. The wrap up interval is typically equal to the sniff interval times the wrap up count. However, the first wrap up interrupt will be one sniff interval shorter than all the remaining interrupts. For example if the sniff interval is two seconds and the wrap up count is five, the first wrap up interrupt will occur 8 seconds later. The remainder will occur every 10 seconds.
3. After initialization, the sniff interval is re-loaded but the wrap up count is not. The wrap up count is reloaded once the old one is complete.]

#### **TLMM\_S\_400- PARAMETER CORRUPTION INDICATION**

If the two CRCs compared in the **PARAMETER CRC CHECK** are not identical, a Parameter corruption indication will be sent to the Host.

#### **TLMM\_MS\_415 - MEMORY TEST - RAM STRUCTURES**

A memory test will be conducted once every second on a RAM structure. If any of the CRC check fails then memory test indication will be generated to the host. If all the structures pass the CRC check firmware will restart the process.

[Note: CRC values are stored at a fixed location of 0x38C0. Every second firmware will check the CRC for one of the structures in the RAM in the following order: Ramware code area 1, area2, ... area43, ramware enable and jump table, hardware1, hardware2, wakeup and firmware operation parameter structure. If any of the CRC check failed, the memory test failed indication will be sent to the host. If the check passed, the crc of the next structure will be checked on the next second. After the last parameter structure CRC is checked and passed, firmware will start from the first structure (i.e., ramware code area 1) CRC check again on the following second. If there is no ramware it will be skipped.]

#### **TLMM\_S\_412 - RAMWARE RESTRICTIONS**

The slave shall reject a **RAMWARE** request (data service request destined for slave Mozart) under the following conditions:

- a. The session was started using Telemetry C, or
- b. Telemetry M session is not secure, or
- c. Telemetry M session was started with an EBAN key

[Ramware request from master host to slave mozart must be done using a secure telemetry M session started with a permanent BAN key. Telemetry C must use a master host to slave host data service request followed by a slave host to slave Mozart data request.

Additionally note that the master host should send the slave host a message to stop using service request buffer 1 before down-linking any ramware. The slave RFM uses the service request buffer when responding to a ramware downlink. If the slave host continues to use the buffer as well, unpredictable results will occur. The Slave Received Mozart Data Indication attempts to do the same thing, but a host to host downlink provides better protection. It prevents the race condition of the host sending a request on buffer 1 at the "same time" it is receiving a Slave Received Mozart Data Indication.]

#### **TLMM\_S\_430 - MOZART DATA REQUEST INDICATION**

The slave shall send Slave Received Mozart Data Indication (**TABLE 115: SLAVE RECEIVED MOZART DATA INDICATION**) to host when slave receives **RAMWARE** request (data service request destined for slave Mozart) from master during communication state.

#### **TLMM\_MS\_388 - MOZART MODULE MEMORY READ**

The host will use the Mozart module memory read command to retrieve the content of telemetry RAM using the specified memory read record.

- The command code identifies the record as a Mozart module memory read record.
- The second, third, and fourth bytes of the record define the address of memory from which to start the read response.
- The fifth and sixth bytes define the number of memory bytes which are to be read. The number of memory bytes shall never be zero.

[The following are valid memory read addresses:

- \* 0x0000 - 0x3eff (fixed RAM - bank 0)
- \* 0x4000 - 0x7fff (non-fixed RAM - bank 1)
- \* 0x8000 - 0xbfff (non-fixed RAM - bank 2)

Other addresses are invalid.]

#### **TLMM\_MS\_389 - MOZART MODULE MEMORY WRITE**

The host will use the Mozart module memory write command to write contiguous bytes of the Mozart module.

- The command code identify the record as a Mozart memory write record
- The second, third, and fourth bytes of the record define the first memory location which is to be updated.
- The fifth and sixth bytes define the number of bytes to update. The number of bytes shall never be zero

[The following are valid memory write addresses:



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- \* 0x0000 - 0x3eff (fixed RAM - bank 0)
- \* 0x4000 - 0x7fff (non-fixed RAM - bank 1)
- \* 0x8000 - 0xbfff (non-fixed RAM - bank 2)

Other addresses are invalid.]

**TLMM\_MS\_436 - MOZART MODULE WRITE TO EEPROM**

When a valid write to EEPROM special function command is received from upper layer, Mozart shall write the appropriate structure to EEPROM. See **TABLE 116: Special function commands** (values 0x01 - 0x05).

**TLMM\_S\_437 - MOZART MODULE WRITE TO EEPROM AFTER CLOSE WITHOUT POLLING INDICATION**

When a valid write to EEPROM special function command is received from master Mozart Master, the slave Mozart shall write the appropriate structure to EEPROM after close with out polling indication is generated. (i.e., after close request is received and the polling duration is zero). See **TABLE 116: Special function commands** (values 0x01 - 0x05).

**TLMM\_MS\_438 - MOZART MODULE ENABLE RAMWARE**

When a valid enable ramware special function command is received from upper layer, Mozart shall enable ramware.

**TLMM\_MS\_439 - MOZART MODULE CLEAR RAMWARE**

When a valid clear ramware special function command is received from upper layer, Mozart shall clear the ramware areas.