RES Laboratory Ltd. 503,83, V.O., Bolshoy, St.-Petersburg, Russia, 199106, Tel./Fax:+7(812)325-67-32 E-mail: res@mail.lanck.net

## **TEST REPORT N 02.11**

# Narrow Band Direct Printing Equipment (NBDP)

# SAILOR 6320 250 W MF/HF DSC Class A SAILOR 6006 Message Terminal

Equipment Under Test Trade mark	SAILOR 6006 Message Terminal	
Manufacture	Thrane & Thrane	
Type of test and normative references	ETS 300 067 Ed.1 (1990-11) ETS 300 067/A1 Ed.1 (1993-10) Rec. ITU-R M.625-3 (10/95) Rec. ITU-R M.476-5 (95) IMO Resolution A.806(19)	
Place of testing	Aalborg, Denmark	
Date of testing	June 2010 – January 2011	

Date: 04.02.2011	
Director of Test Laboratory:	
Technical director of RES Lab, Expert / I. Bukanov,	r
Construction of the second sec	



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

# Product

No.	The name of components	Serial number	Software version
1	SAILOR 6301 Control Unit Class A	0704040006	SW Version 1.03
2	SAILOR 6201 Handset		
3	SAILOR 6304 Splitter Box		
4	SAILOR 6363 250W MF/HF Class A Transceiver Unit		
5	SAILOR 6006 Message Terminal	80290671	SW Version 1.0
6	5083 29A Power Supply and Charger Black		
7	SAILOR H1252A USB/Parallel Printer		
8	Manual		

9-digital ID: 273000000

5-digital ID: 12333



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	



SAILOR 6301 Control Unit Class A



SAILOR 6363 250W MF/HF Class A Transceiver Unit



SAILOR 6006 Message Terminal SAILOR H1252A USB/Parallel Printer SAILOR 6201 Handset



5083 29A Power Supply and Charger Black (without case)



	.0	
Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

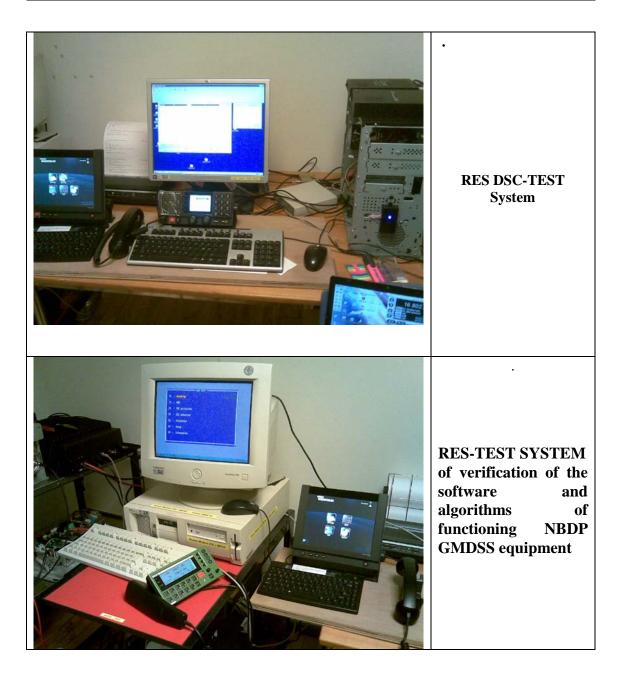
# Test equipment

No.	The name of components	Type, model	Serial number	Software version
1	RES DSC-TEST System Approved by: ROSSTANDARD N POCC RU.0001.21 MP 14 valid: 27.02.2011 Russian Maritime Register of Shipping N 07.01413.011 valid: 28.05.2012 MINTRANS RF (MARSAT): N AKP.07.09-16 PTH valid: 01.07.2014			Ver. 1.12
2	RES-TEST SYSTEM of verification of the software and algorithms of functioning NBDP GMDSS equipment Approved by: ROSSTANDARD N POCC RU.0001.21 MP 14 valid: 27.02.2011 Russian Maritime Register of Shipping N 07.01413.011 valid: 28.05.2012 MINTRANS RF (MARSAT): N AKP.07.09-16 PTH valid: 01.07.2014			Ver. 1.5





Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	



□ -		
Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

# Conclusions

The sample of the product NBDP SAILOR 6006 Message Terminal was found conform with the specifications ETS 300 067 Ed.1 (1990-11), ETS 300 067/A1 Ed.1 (1993-10), Rec. ITU-R M.625-3 (10/95), Rec. ITU-R M.476-5 (95) within the framework of the carried out tests.

The deviations to normative documents and numbered as from 1 to 15 have non-critical character and are recommended to remove by development of the next version of the software of a product.

The results of the tests as started in this report, are exclusively applicable to the product item as identified in the report.

The above conclusions have been verified by the following signatory.

Date:

04.02.2011

Name:

Dr. Bukanov Ivan

Function:

Signature:





Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

# List of tests with result of testing

Α	General requirements	
A.1	Construction	no
A.2	Controls and indicators	no
A.3	Operational facilities	yes
1	Selective calling mode (Mode A (ARQ)): Operational procedures	
1.1.	Master station	
1.1.1	Phasing procedure and automatic identification.	
1.1.1.1	General phasing procedure test for cases of 4-signal and 7-signal call identity	
1.1.1.2.	Call signal time format test	
1.1.1.3.	Emergency phasing exit test.	
1.1.1.4.	Automatic identification correctness test	
1.1.1.5.	The end-of- automatic identification test	no
1.1.1.6.	Called station identification test	yes
1.1.1.7.	Wrong check-sum signal reception test	yes
1.1.1.8.	1.8. Test for compatibility with equipment conforming to Recommendation 476	
1.1.1.9.	Test for normal automatic identification with mutilated check- sum signal reception	no



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

1.1.2.	Traffic flow procedure	
1.1.2.1.	General traffic flow test	no
1.1.2.2.	Change-over procedure test	yes
1.1.2.3.	Answer-back procedure test	yes
1.1.2.4.	End-of-communication procedure test	no
1.1.2.5.	The traffic flow with mutilated reception test.	yes
1.1.2.6.	Time-out procedure test	yes
1.1.3.	Rephasing procedure	
1.1.3.1.	General rephasing procedure test	no
1.1.3.2.	Testing for control signal 4	yes
1.1.3.3.	Rephasing signal time format test	yes
1.1.3.4.	Called station identification test	yes
1.1.3.5.	The wrong check-sum signal reception test	yes
1.1.3.6.	The mutilated signal reception in the automatic identification procedure test	no
1.1.3.7.	Test for control signal 3 with automatic identification in the rephasing procedure	yes
1.2.	Slave station	
1.2.1.	Phasing procedure and automatic identification.	
1.2.1.1.	General test for the phasing procedure with 4-signal and 7-signal call identity	yes
1.2.1.2.	Test for the end-of-communication procedure with automatic identification	yes
1.2.1.3.	Test for normal automatic identification procedure with mutilated reception	yes



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

1.2.2.	Traffic flow procedure	
1.2.2.1.	General traffic flow procedure test	no
1.2.2.2.	Change-over procedure test.	yes
1.2.2.3.	The answer-back procedure test	yes
1.2.2.4.	The end-of-communication procedure test	yes
1.2.2.5.	Testing the traffic flow with mutilations	yes
1.2.2.6.	The time-out procedure test	yes
1.2.3.	The rephasing procedure	
1.2.3.1.	General rephasing test	yes
1.2.3.2.	Test for the end-of-communication procedure in automatic identification	yes
1.2.3.3.	Test for mutilated signal reception in the automatic identification procedure	yes
2.	Collective FEC mode: Operational procedures	
2.1.	The sending station.	
2.1.1.	Phasing procedure	
2.1.1.1.	General phasing test	yes
2.1.2.	The traffic flow procedure	
2.1.2.1.	General traffic flow test	no
2.1.2.2.	Test for the phasing signal generation in the traffic flow	yes
2.1.3.	The end-of-transmission procedure.	
2.1.3.1.	The end-of-transmission test	yes



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

2.2.	The receiving station	
2.2.1.	The phasing procedure	
2.2.1.1.	General phasing test	no
2.2.1.2.	The end-of-phasing test	yes
2.2.2.	The traffic flow procedure	
2.2.2.1.	General traffic flow test	no
2.2.2.2.	Error-correcting code test	yes
2.2.2.3.	Interrupted phasing test	yes
2.2.2.4.	The rephasing capacity test	yes
2.2.3.	The end-of transmission procedure.	
2.2.3.1.	The end-of transmission procedure test	yes
3.	Selective FEC mode: Operational procedures	
3.1.	The sending station	
3.1.1.	Selective calling procedure	
3.1.1.1.	General phasing procedure test	yes
3.1.1.2.	The phasing sequence format test	yes
3.1.1.3.	The selective call sequence format test	yes
3.1.2.	The traffic flow procedure	
3.1.2.1.	General traffic flow test	no
3.1.3.	The end-of-transmission procedure	
3.1.3.1.	The end-of-transmission test	yes



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

3.2.	The receiving station	
3.2.1.	The phasing procedure and identification (Selecting calling procedure)	
3.2.1.1.	General phasing procedure test	no
3.2.1.2.	The mutilated call signals test	yes
3.2.1.3.	The end-of-phasing test	yes
3.2.2.	The traffic flow procedure	
 3.2.2.1.	General traffic flow test	no
3.2.2.2.	Interrupted phasing test	yes
3.2.2.3.	The of error-correcting code test	yes
3.2.3.	The end-of-transmission procedure	
3.2.3.1.	The end-of-transmission test	yes
4.	Station requirements	
4.1.	General	yes
4.2.	Maintenance of phasing	yes
4.3.	Time-to-answer a call	yes
4.4.	Station delay time	yes
4.5.	Scanning receivers	
4.5.1.	Channel dwell-time	N.T.
4.5.2.	Time for channel shift	N.T.



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

# The deviations to normative documents

Ν	Content	Sta- tus
1	EUT does not finish procedure of the automatic identification. Procedures of synchronization EUT demand correct reception of two consistently the following control signal CS4 while the report demands only reception of an once. [ITU-R M.625-3,Ann.1; 3.6.18]	No critical
2	On receipt of CS3 the EUT ends the identification cycle and starts the traffic flow with the over procedure. But the first control signal CS2 while it is required CS1. [Rec. ITU-R M.625-3, Annex 1, n.3.6.11, n.3.6.9]	No critical
3	EUT specifies on the display, that the automatic identification is completed («Connected to») after reception check-sum signal CK3 while should after reception control signal CS1. [ITU-R M.625-3,Ann.1; Figure 3]	No critical
4	Control "DIM" disconnects indication Power ON/OFF. [Resolution IMO A.694(17), Ann. n.3.2, n.3.3]	No critical
5	Visual indicators are not available to indicate that that the transmitter is delivering RF output power to the antenna. [ETS 300 067 (1990-11), n.2.2]	No critical
6	While the sending message from buffer (file) EUT has not the automatically scrolling function for display current transmission part of text. EUT shows only first part of text. To control of profress of sending operator must scrolling the window.	No critical
7	There is not the indication for failure to activate the associated transmitter.	No critical
8	EUT has not facilities to generate a continuous "B" and "Y" signal. [ETS 300 067, n.4.2]	No critical
9	There are no means for separate transfer of service symbols: Figure Shift, Letter shift, Line feed (LF), Carriage return (CR).	No critical
10	Reception of symbol Carriage return without Line Feed is incorrectly fulfilled. EUT adds to text symbol Line Feed automatically.	No critical





Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Content	Sta- tus
11	There is no possible to disable the rephasing procedure. [ITU-R M.625-3, Ann.1, n.3.8.1, NOTE 1]	No critical
12	End-of-Communication procedure is broken. EUT at reception of next control signal CS1/CS2 sends the block «EOC» once again. While EUT should pass in a condition "Stand-by" after reception of first correctly accepted control signal CS1/CS2. [ITU-R M.625-3,Ann.1; 3.7.13.2]	No critical
13	EUT passes from Stand-by in CBRS Broadcast FEC only after reception of symbols Carriage return or Line Feed while it is required after performance of procedure of synchronization. [ITU-R M.625-3,Ann.1, n.4.4.3]	No critical
14	EUT passes from Stand-by in SBRS sel. FEC only after reception of symbols Carriage return or Line Feed while it is required after performance of procedure of synchronization. [ITU-R M.625-3,Ann.1, n.4.5.4]	No critical
15	EUT does not finish procedure of the phasing. Procedures of re-phasing EUT demand correct reception of two consistently the following control signal CS5 while the report demands only reception of an once. [ITU-R M.625-3,Ann.1; 3.8.3]	No critical



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

# Cross-references to ITU-R M.625-3 and ETS 300 067

Test Rerport	ITU-R M.625-3, Annex 1	ETS 300 067
A.1		2.1
A.2		2.2
A.3		2.7
1.1.1.1	3.5.2.1; 3.6.19	12
1.1.1.2.	3.5.4	12
1.1.1.3.	3.5.7, .3.5.8	12
1.1.1.4.	3.6.19	12
1.1.1.5.	3.6.9; 3.6.10; 3.6.11	12
1.1.1.6.	3.6.12	12
1.1.1.7.	3.6.12	12
1.1.1.8.	3.5.6;	12
1.1.1.9.	3.6.18	12
1.1.2.1.	3.7	2.7; 12
1.1.2.2.	3.7.11.1; 3.7.11.2	2.7,a; 12
1.1.2.3.	3.7.13.1; 3.7.13.2	12
1.1.2.4.	3.7.14.1; 3.7.14.2; 3.7.14.3	12
1.1.2.5.	3.7.5; 3.7.6; 3.7.10; 3.7.12.1	12
1.1.2.6.	3.7.12.1	12



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Test Rerport	ITU-R M.625-3, Annex 1	ETS 300 067
1.1.3.1.	3.7.12.1	12
1.1.3.2.	3.8.4	12
1.1.3.3.	3.8.9	12
1.1.3.4.	3.8	12
1.1.3.5.	3.8	12
1.1.3.6.	3.8	12
1.1.3.7.	3.8	12
1.2.1.1.	3.5.2.1; 3.6.19	12
1.2.1.2.	3.6.17	12
1.2.1.3.	3.6.18	12
1.2.2.1.	3.7	2.7; 12
1.2.2.2.	3.7.11.1; 3.7.11.2	12
1.2.2.3.	3.7.13.1; 3.7.13.2	12
1.2.2.4.	3.7.14.1; .7.14.2; 3.7.14.3	12
1.2.2.5.	3.7.5; 3.7.6; 3.7.10; 3.7.12.1	12
1.2.2.6.	3.7.12.1	12
1.2.3.1.	3.7.12.1	12
1.2.3.2.	3.8.6	12
1.2.3.3.	3.8	12
2.1.1.1.	4.4.2	12
2.1.2.1.	4.6	12
2.1.2.2.	4.6.2	12
2.1.3.1.	4.6.7.1	12



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Test Rerport	ITU-R M.625-3, Annex 1	ETS 300 067
2.2.1.1.	4.4.3	12
2.2.1.2.	4.4.3; 4.6.4	12
2.2.2.1.	4.6	12
2.2.2.2.	4.3; 4.6.5	12
2.2.2.3.	4.6.6	12
2.2.2.4.	4.6.2	12
2.2.3.1.	4.6.7.2	12
3.1.1.1.	4.5	12
3.1.1.2.	4.4.2	12
3.1.1.3.	4.5.1; 4.5.3	12
3.1.2.1.	4.6	12
3.1.3.1.	4.6.7.1	12
3.2.1.1.	4.3	12
3.2.1.2.	4.5.4; 4.6.4	12
3.2.1.3.	4.5.4; 4.6.4	12
3.2.2.1.	4.6	12
3.2.2.2.	4.6.6	12
3.2.2.3.	4.3; 4.6.5	12
3.2.3.1	4.6.7.1	12



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Test Rerport	ITU-R M.625-3, Annex 1	ETS 300 067
4.1.		10.1
4.2.		10.2
4.3.		10.3
4.4.		10.4
4.5.1.		10.5.1
4.5.2.		10.5.2



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

# Normative references

1) ETS 300 067 (1990-11): Radio Equipment and Systems. Radiotelex equipment operating in the maritime MF/HF service. Technical characteristics and methods of measurement.

2) ETS 300 067/A1 (1993-10): Radio Equipment and Systems. Radiotelex equipment operating in the maritime MF/HF service. Technical characteristics and methods of measurement.

3) ITU-R Recommendation M.625-3 (1995): "Direct printing telegraph equipment employing automatic identification in the maritime mobile service".

4) ITU-R Recommendation M.491-1 (1986): "Translation between an identity number and identities for direct printing telegraphy in the maritime mobile service".

5) ITU-R Recommendation M.490 (1974): "The introduction of direct printing telegraph equipment in the maritime mobile service".

6) ITU-T Recommendation F.130 (1988): "Maritime Answer-back Codes".

7) ITU-T Recommendation E.161 (1988): "Arrangement of figures, letters and symbols on telephones and other devices that can be used for gaining access to a telephone network".

8) IMO Resolution A.806 (19): "Performance standards for shipborne MF/HF radio installations capable of voice communication, narrow-band direct printing and digital selective calling".



NBDP TEST
RES Laboratory
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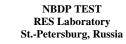
Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

# Abbreviations

ARQ	Mode A of operation NBDP
CS	Control Signal
DX	First transtission
ETSI EN	European standard
EUT	Equipment under test
FEC	Mode B of operation NBDP
GMDSS	Global maritime distress and safety system
IEC	International Electrotechnical Commission
IMO	International Maritime Organization
IRS	Information Receiving Station
ISS	Information Sending Station
ITU	International Telecommunication Union
ITU-R	ITU Radiocommunication sector (formerly CCIR)
ITU-T	ITU Standardization sector (formerly CCITT)
MMSI	Maritime mobile service identity
NBDP	Narrow Band Direct Printing
RR	Radio Regulations
RX	Second transmission
SOLAS	Safety of Life at Sea (International convention)
TE	Test Equipment

**n.a** - no applicable **N.T** – no test





Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

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# A. General requirements

[ETS 300 067 (1990-11), n.2]

## A. 1 Construction

[ETS 300 067 (1990-11), n.2.1]

## A.1.1. Definition

This test checks construction of NBDP.

## A.1.2. Method of measurement.

## A.1.3. Required results

Verify that:

			Result		ult Com-
N	Item	Value	ОК	NO	ment
1	All operational controls should permit normal adjustments to be easily performed and should be easy to identify from the position at which the equipment is normally operated.		X		
2	Controls not required for normal operation should not be readily accessible.		X		
3	The equipment should be so designed that the main units can be replaced readily, without elaborate recalibration or readjustment.		X		
4	Equipment intended to be installed on the bridge shall be provided with adequate illumination to enable identification of controls and facilitate reading of indicators at all times.		X		
5	Means shall be provided for dimming to extinct the output of any equipment light source.			x	(4)
6	Where a digital input panel with the digits "0" to "9" is provided, the digits shall, where practicable, be arranged to conform with CCITT Recommendation E 161/Q.11.		X		



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

			Result		Result		Com-
Ν	ltem	Value	ОК	NO	ment		
7	Where more than one keyboard/printer combination can be used, one shall have priority over the others.		X				
8	At each operating position, an indication shall be available to indicate that another operating position is in use.		X				
9	Incoming calls shall have priority over the local use of the teleprinter and/or display unit.		x				
10	Associated teleprinters or display units shall display 69 characters per line.		X				
11	The self-identification data of the radiotelex equipment shall be in conformity with ITU-R Recommendation 625 and shall be permanently stored in the equipment. It shall not be possible for the user to change this data.		X				

(4)

Control "DIM" may disconnect indication of incoming calls.

[Resolution IMO A.694(17), Ann. n.3.2, n.3.3]

The equipment meets the requirements (yes / no /n.a)	no
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RES Laboratory		
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### A. 2 Controls and indicators

[ETS 300 067 (1990-11), n.2.2]

## A.2.1. Definition

This test checks controls and indicators of NBDP.

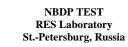
#### A.2.2. Method of measurement.

#### A.2.3. Required results

Verify that:

			Result		Com-
Ν	ltem	Value	ОК	NO	ment
1	Visual indicators shall be available to indicate that the supply voltage is connected (ON)		X		
2	Visual indicators shall be available to indicate that the terminal is ready for operation (STAND BY)		X		
3	Visual indicators shall be available to indicate that a call is detected (CALLED)		X		
4	Visual indicators shall be available to indicate that the transmitter has been inhibited from operation when a continuous B (SPACE) or Y (MARK) signal is generated.		N.T	N.T	
5	Visual indicators shall be available to indicate that that the transmitter is delivering RF output power to the antenna. Failure of the indicating circuit shall not interrupt the antenna circuit.			x	(5)
6	For integrated equipment, indication shall be given for failure to activate the associated transmitter.			x	(7)
7	An equipment on/off switch shall be provided.		X		
8	For type approval tests and maintenance purposes, the equipment shall have facilities not accessible to the operator to: - generate a continuous "B" or "Y" signal			x	(8)





Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

(5)

Visual indicators are not available to indicate that that the transmitter is delivering RF output power to the antenna.

[ETS 300 067 (1990-11), n.2.2]

#### (7)

There is not the indication for failure to activate the associated transmitter.

(8)

EUT has not facilities to generate a continuous "B" and "Y" signal.

[ETS 300 067, n.4.2]

The equipment meets the requirements (yes / no /n.a)	no
The equipment meets the requirements (yes / no /n.a)	110



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### A. 3 Operational facilities

[ETS 300 067 (1990-11), n.2.7]

#### A.3.1. Definition

This test checks operational facilities of NBDP.

#### A.3.2. Method of measurement.

#### A.3.3. Required results

Verify that:

		Result		Result Com-	Com-
N	ltem	Value	ОК	NO	ment
1	The operational facilities Activation of calling towards the corresponding radiotelex station (CALL).shall be available.		X		
2	The operational facilities Reversion of transmission direction (OVER) shall be available.		X		
3	The following operational facilities to compose and verify messages to be transmitted shall be available. It shall be possible to compose and verify messages of at least 4000 characters before transmission.		X		
4	A printing facility shall be provided.		X		Note 1
5	For scanning systems the following facilities shall also be available Selection of frequencies to be scanned.		x		
6	For scanning systems the following facilities shall also be available Printout or display of selected scanned frequencies.		X		
7	All functions mentioned above shall be controllable from a keyboard.		X		

Note 1. The message is printed by request of operator only.

The equipment meets the requirements (yes / no /n.a)

yes



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

# 1. Selective calling mode (Mode A (ARQ)) : Operational procedures

[ETS 300 067, n.12]

# 1.1. Master station

1.1.1 Phasing procedure and automatic identification.

# 1.1.1.1. General phasing procedure test for cases of 4-signal and 7-signal call identity

(TEST\_300). [Rec.ITU-R M.625-3,Ann.1; n.3.5.2.1] [Rec.ITU-R M.625-3,Ann.1; n.3.6.19]

## 1.1.1.1.1. Definition

The ability to perform phasing procedures with automatic selection of 4 - and 7 - signal call identity.

## 1.1.1.1.2. Method of measurement.

A 4-, 5- or 9-digit self-identity is alternately set on the test equipment (TE). The TE is set in the «stand-by» condition. For each of the cases, the phasing procedure is performed both on the Equipment under testing (EUT) and the TE.

## 1.1.1.1.3. Required results

The successful phasing procedure will indicate the capacity of handling both 4 - and 7 - signal call identity. The EUT called station self-identity should be accessible locally.

(The equipment should be capable of operating with both 4-signal and 7-signal identity procedures and automatically employing the appropriate procedure indicated by the composition of the «call signal» received from a calling station or by the number of digits (4,5 or 9) supplied to the equipment of a calling station to identify the station to be called.)

[Rec.625,Ann.1;3.5.2.1] (Each station should retain the identity of the other station for the duration of the connection and this information should be accessible locally, e.g. by means of display or on a separate output circuit for external use)

[Rec.625,Ann.1;3.6.19]



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Comment
		OK	NO	
1	The equipment should be capable of operating with 4-digit call identity	X		
2	The equipment should be capable of operating with 5-digit call identity	X		
3	The equipment should be capable of operating with 9-digit call identity	X		
4	The EUT should retain the identity of the other station for the duration of the connection	X		
5	The EUT called station self-identity should be accessible locally	X		

The equipment meets the requirements (yes / no /n.a)	yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

## 1.1.1.2. Call signal time format test

(TEST\_301). [Rec.ITU-R M.625-3, Ann.1; n.3.5.4]

### 1.1.1.2.1. Definition.

Time relationship in the phasing procedure.

### 1.1.1.2.2. Method of measurement.

The TE in the «stand-by» condition. A selective number other than TE self-identity is keyed in by the EUT. The EUT changes to the phasing mode.

### 1.1.1.2.3. Required results

The EUT should complete transmission of 128 call cycles (50 secs) and then change to the "stand-by" condition. A call attempt with the same identity cannot be retransmitted before completing at least 128 cycles.

(The station required to establish the circuit becomes the master station and sends the «call signal» until it receives an appropriate control signal; however, if the circuit has not been established within 128 cycles (128×450 ms), the station changes into the «stand-by» condition and waits for least 128 cycles before sending the same «call signal» again.)

[Rec.625,Ann.1; 3.5.4]



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

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Ν	Item	Result		Comment
		OK	NO	
1	The EUT should complete transmission of 128 call cycles (50 secs) and then change to the "stand-by" condition. (4-signal identity)	X		
2	If the circuit has not been established within 128 cycles (128×450 ms), the station changes into the «stand-by» condition and waits for least 128 cycles before sending the same «call signal» again (4-signal identity)	X		
3	The EUT should complete transmission of 128 call cycles (50 secs) and then change to the "stand-by" condition. (7-signal identity)	X		
4	If the circuit has not been established within 128 cycles (128×450 ms), the station changes into the «stand-by» condition and waits for least 128 cycles before sending the same «call signal» again (7-signal identity)	X		

The equipment meets the requirements (yes / no /n.a)	yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

### 1.1.1.3. Emergency phasing exit test.

(TEST 302). [Rec. ITU-R M.625-3, Ann.1; n.3.5.7] [Rec. ITU-R M.625-3, Ann.1; n.3.5.8]

### 1.1.1.3.1. Definition.

Emergency termination of the phasing procedure by called station signals .

## 1.1.1.3.2. Method of measurement..

The TE the «stand-by» condition. The EUT changes to the phasing mode with

- a) 4 signal identity;
- b) 7 signal identity.

During phasing, the TE generates a set of control signals:

- a) "CS3" for 4 signal identity;
- b) "CS5" for 7 signal identity.

### 1.1.1.3.3. Required results.

On receiving the relevant control signals, the EUT should

a) for 4 - signal identity, change to «stand-by» and thus remain for at least 128 cycles;

b) for 7 - signal identity, change to the «end-of-communication» procedure with subsequent shift to "stand-by".

(On receipt of «control signal 3» during the phase procedure, the calling station immediately changes to the «stand-by» condition, and waits for 128 cycles before sending the same «call signal» again.)

[Rec.625,Ann.1; 3.5.7]

(On receipt of «control signal 5» during the phase procedure, the calling station starts the «end-of-communication» procedure and waits for 128 cycles before sending the same «call signal» again. During this waiting time the station is in the «stand-by» condition.)

[Rec.625,Ann.1; 3.5.8]



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Comment	
		OK	NO		
1	On receipt of «control signal 3» during the phase procedure, the EUT immediately changes to the «stand-by» condition 4-signal	X			
2	EUT waits for 128 cycles before sending the same «call signal» again	X			
	4-signal				
3	On receipt of «control signal 5» during the phase procedure, the EUT starts the «end-of-communication» procedure.	X			
	7-signal				
	EUT changes to the «stand-by» condition	х			
	7-signal	~			
4	EUT waits for 128 cycles before sending the same «call signal» again. During this waiting time the station is in the «stand-by» condition.	X			
	7-signal				

I ne equipment meets the requirements (yes / no /n.a) yes	The equipment meets the requirements (yes / no /n.a)	yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

### 1.1.1.4. Automatic identification correctness test

(TEST\_303) [Rec.ITU-R M.625-3,Ann.1; n.3.6.19]

#### 1.1.1.4.1. Definition.

The ability to transmit self identity in the automatic identification mode.

#### 1.1.1.4.2. Method of measurement.

The TE in the "stand-by" condition. The EUT changes to the phasing mode with 7 - signal identity.

#### 1.1.1.4.3. Required results.

On completing the phasing procedure, EUT 7 - signal identity and that automatically identified on the TE are compared.

(Each station should retain the identity of the other station for the duration of the connection and this information should be accessible locally, e.g. by means of display or on a separate output circuit for external use)

[Rec.625,Ann.1; 3.6.19]

Ν	Item	Result		Comment
		OK	NO	
1	7 – signal identity of EUT and that automatically identified on the TE are equal	X		

ets the requirements (yes / no /n.a) yes
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	<u> </u>	
Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

## 1.1.1.5. The end-of- automatic identification test

(TEST\_304-TEST\_305). [Rec.ITU-R M.625-3, Ann.1; n.3.6.9] [Rec.ITU-R M.625-3, Ann.1; n.3.6.10] [Rec.ITU-R M.625-3, Ann.1; n.3.6.11]

## 1.1.1.5.1. Definition.

Automatic identification procedure .

### 1.1.1.5.2. Method of measurement.

The TE in the "stand-by" condition. The EUT changes to the phasing mode with 7 - signal identity. On receiving the «end-of-identification block», the TE generates:

a) control signal CS1 (TEST\_304);

б) control signal CS3 (TEST\_305).

### 1.1.1.5.3. Required results.

On receiving

a) control signal CS1, the EUT remains in the ISS condition;

b) control signal CS3, the end-of-automatic identification process terminates in a change-over procedure.

(On receipt of the «end-of-identification block», the called station sends either

- a) «control signal 1», thus starting the traffic flow; or
- b) «control signal 3», if the called station is required to start the traffic flow in the ISS conditions)

[Rec.625,Ann.1; 3.6.9]

(On receipt of «control signal 1», the calling station ends the identification cycle and starts the traffic flow by transmitting «information block 1».)

[Rec.625,Ann.1; 3.6.10]

(On receipt of «control signal 3», the calling station ends the identification cycle and starts the traffic flow with the change-over procedure.)

[Rec.625,Ann.1; 3.6.11]



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Comment
		OK	NO	
1	On receipt of «control signal 1», the calling station ends the identification cycle and starts the traffic flow by transmitting «information block 1»	X		
2	On receipt of «control signal 3», the calling station ends the identification cycle and starts the traffic flow with the change-over procedure		X	(2)

(2)

On receipt of CS3 the EUT ends the identification cycle and starts the traffic flow with the over procedure. But the first control signal CS2 while it is required CS1. [Rec. ITU-R M.625-3, Annex 1, n.3.6.11, n.3.6.9]

The equipment meets the requirements (yes / no /n.a)	no
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

### 1.1.1.6. Called station identification test

(TEST\_306-TEST\_308). [Rec.ITU-R M.625-3, Ann.1; n.3.6.12]

### 1.1.1.6.1. Definition.

The ability to identify the called station in the automatic identification procedure using «check-sum signals».

### 1.1.1.6.2. Method of measurement

The TE in the "stand-by" condition. The EUT changes to the phasing mode with 7signal identity. The TE transmits one "check-sum signal" inconsistent with self identity.

### 1.1.1.6.3. Required results

With the same wrong check-sum signal one cycle before, the EUT should shift to the end-of-communication procedure followed by the "«stand-by» condition.

TEST\_306 - wrong «check-sum signal 1»;

TEST\_307 - wrong «check-sum signal 2»;

TEST\_308 - wrong «check-sum signal 3».

(If any received check-sum signal is not identical to the locally derived check-sum signal, the calling station retransmits the previous identification block. On receipt of this identification block, the called station sends the appropriate check-sum signal once more. On receipt of this check-sum signal, the calling station compares again. If they are still not identical and the received check-sum signal is the same as the previous one, the calling station initiates the «end-of-communication» procedure; otherwise the calling station transmits the previous identification block again. No identification block should be retransmitted more then four times due to reception or wrong check-sum signals, after which, if the required check-sum signal is still not received, the calling station reverts to the «stand-by» condition.)

[Rec.625,Ann.1; 3.6.12]



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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Comment
		OK	NO	
1	With the same wrong "check-sum signal 1" one cycle before, the EUT should initiate the end-of-communication procedure followed by the "«stand-by» condition.	X		
2	With the same wrong "check-sum signal 2" one cycle before, the EUT should initiate the end-of-communication procedure followed by the "«stand-by» condition.	X		
3	With the same wrong "check-sum signal 3" one cycle before, the EUT should initiate the end-of-communication procedure followed by the "«stand-by» condition.	X		

The equipment meets the requirements (yes / no /n.a)	yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 1.1.1.7. Wrong check-sum signal reception test

(TEST\_309 - TEST\_312). [Rec.ITU-R M.625-3, Ann.1; n.3.6.12]

#### 1.1.1.7.1. Definition.

The ability to perform automatic identification with wrong check sum signals.

#### 1.1.1.7.2. Method of measurement.

The TE in the "stand-by " condition. The EUT changes to the phasing condition with 7 - signal identity. During the automatic identification process, the TE generates

a) three consecutive replacements for different wrong check sum signals 1 - 3 (TEST\_309);

 $\delta$ ) four or more replacements for response check sum signals (TEST\_310-TEST\_312).

### 1.1.1.7.3. Required results.

The EUT, with the emergence in the reception channel

a) up to four signals inconsistent with check sums, should complete the automatic identification procedure successfully;

δ) four or more signals inconsistent with check sums, should change to the end-of-communication procedure to be followed by "stand-by".

TEST\_310 - wrong «check-sum signal 1»;

TEST\_311 - wrong «check-sum signal 2»;

TEST\_312 - wrong «check-sum signal 3».

(If any received check-sum signal is not identical to the locally derived check-sum signal, the calling station retransmits the previous identification block. On receipt of this identification block, the called station sends the appropriate check-sum signal once more. On receipt of this check-sum signal, the calling station compares again. If they are still not identical, and the received check-sum signal is the same as the previous one, the calling station initiates the «end-of-communication» procedure;

otherwise the calling station transmits the previous identification block again. Each identification block should be retransmitted not more than four times due to reception or wrong check-sum signals, after which, if required check-sum signal is still not received, the calling station reverts to the «stand-by» condition.)

[Rec.625,Ann.1; 3.6.12]



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Result Comme		Comment
		OK	NO			
1	On receipt of up to four signals no appropriate check sums, EUT should complete the automatic identification procedure successfully	X				
2	On receipt of four or more no appropriate check sum 1, EUT should <i>initiate</i> the end-of-communication procedure to be followed by "stand-by".	X				
3	On receipt of four or more no appropriate check sum 2, EUT should <i>initiate</i> the end-of-communication procedure to be followed by "stand-by".	X				
4	On receipt of four or more no appropriate check sum 3, EUT should <i>initiate</i> the end-of-communication procedure to be followed by "stand-by".	X				

The equipment meets the requirements (yes / no /n.a) yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

## 1.1.1.8. Test for compatibility with equipment conforming to Recommendation 476

(TEST\_313-TEST\_314). [Rec. ITU-R M.625-3, Ann.1; n.3.5.6, note 1]

### 1.1.1.8.1 Definition.

The EUT is checked for compatibility with equipment conforming to Recommendation 476.

#### 1.1.1.8.2. Method of measurement.

The TE in the "stand-by" condition. The EUT changes to phasing with c 4 - signal identity. During the phasing procedure on receiving a "call signal", the TE generates

- a) "control signal 1" (TEST\_313);
- b) "control signal 2" (TEST\_314).

#### 1.1.1.8.3. Required results.

On receiving during the phasing process control signals under a) and b), the EUT should change to the traffic flow mode.

(Equipment built in accordance with Recommendation 476 sends «control signal 1» or «control signal 2» on receipt of the appropriate «call signal».)

[Rec.625,Ann.1; 3.5.6, note 1]

Ν	Item	Re	sult	Comment
		OK	NO	
1	On receiving during the phasing process control signal 1, the EUT should change to the traffic flow mode.	X		
2	On receiving during the phasing process control signal 2, the EUT should change to the traffic flow mode.	X		

The equipment meets the requirements (yes / no /n.a) yes	The equipment meets the requirements (yes / no /n.a)	yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

### 1.1.1.9. Test for normal automatic identification with mutilated checksum signal reception

(TEST\_315-TEST\_320). [Rec.625,Ann.1; n.3.6.18]

#### 1.1.1.9.1. Definition.

Ability to perform automatic identification with mutilations.

#### 1.1.1.9.2. Method of measurement.

The TE in the "stand-by" condition. The EUT changes to the phasing condition with the 7 - signal identity. During automatic identification, the TE generates:

a) up to 32 mutilated transmitted check-sum signals in succession (TEST\_315);

b) up to 32 consecutive mutilated received identification blocks (TEST\_316);

c) up to 32 consecutive mutilated transmitted check-sum signals and received identification blocks (TEST\_317);

d) more than 32 consecutive mutilated transmitted check-sum signals (TEST\_318);

e) more than 32 consecutive mutilated received identification blocks (TEST\_319);

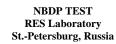
f) more than 32 consecutive mutilated transmitted check-sum signals and received identification blocks (TEST\_320).

#### 1.1.1.9.3. Required results.

For cases a), b) c), the EUT should complete the automatic identification procedure successfully; and for cases d), e), f) change to " stand-by ".

(When reception of signals during the identification cycle is continuously mutilated, both stations revert to the «stand-by» condition after 32 cycles of continuous repetition.)

[Rec.625,Ann.1; 3.6.18]



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Item Result Commer		Comment
		OK	NO			
1	When reception during the identification cycle up to 32 mutilated transmitted check-sum signals the EUT should complete the automatic identification procedure successfully	X				
2	When during the identification cycle up to 32 mutilated identification blocks the EUT should complete the automatic identification procedure successfully		X	(3)		
3	When during the identification cycle up to 32 mutilated identification blocks and check-sum signals the EUT should complete the automatic identification procedure successfully		X	(1)		
4	When reception during the identification cycle more than 32 mutilated transmitted check-sum signals the EUT should revert to the «stand-by» condition	X				
5	When during the identification cycle more than 32 mutilated identification blocks the EUT should revert to the «stand-by» condition	X				
6	When during the identification cycle more than 32 mutilated identification blocks and check-sum signals the EUT should revert to the «stand-by» condition	X				

(1)

EUT does not finish procedure of the automatic identification. Procedures of synchronization EUT demand correct reception of two consistently the following control signal CS4 while the report demands only reception of an once.

[ITU-R M.625-3,Ann.1; 3.6.18]

(3)

EUT specifies on the display, that the automatic identification is completed («Connected to») after reception check-sum signal CK3 while should after reception control signal CS1.

[ITU-R M.625-3,Ann.1; Figure 3]

The equipment meets the requirements (yes / no /n.a	a)	
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no



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### **1.1.2. Traffic flow procedure.**

#### 1.1.2.1. General traffic flow test

(TEST\_321). [Rec.625,Ann.1; n.3.7] [ETS 300 067, n.2.7]

#### 1.1.2.1.1. Definition.

Traffic flow procedures.

#### 1.1.2.1.2. Method of measurement.

Both the EUT and TE in the traffic flow mode: the EUT as the receiving (IRS), and the TE as the sending station (ISS). The TE transmits the test radiogram, using both keying (teleprinter) and buffer<sup>\*)</sup>. Change-over and answer-back procedures are involved. The EUT transmits the test radiogram, using both keying (teleprinter) and buffer.

#### 1.1.2.1.3. Required results.

The EUT should be capable of performing general traffic flow procedures, receiving information to buffer (printer), and transmitting information using keying (teleprinter) or buffer. There should be no mutilations in the received radiogram as compared to the initial text.

\*)buffer - Facilities to compose and verify messages before transmission

Ν	Item	Result		Comment
		OK	NO	
1	The EUT should be capable of performing general traffic flow procedures	X		
2	The EUT should be capable of receiving information to buffer (printer),	X		
3	The EUT should be capable of transmitting information using keying (teleprinter) or buffer.		X	(6)(9)
4	There are facilities to compose and verify messages of at least 4000 characters before transmission [ETS 300 067, n.2.7]		X	(9)
5	There should be no mutilations in the received radiogram as compared to the initial text		X	(10)

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Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

(6)

While the sending message from buffer (file) EUT has not the automatically scrolling function for display current transmission part of text. EUT shows only first part of text. To control of profress of sending operator must scrolling the window.

(9)

There are no means for separate transfer of service symbols: Figure Shift, Letter shift, Line feed (LF), Carriage return (CR).

(10)

Reception of symbol Carriage return without Line Feed is incorrectly fulfilled. EUT adds to text symbol Line Feed automatically.

The equipment meets the requirements (yes / no /n.a)	no
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 1.1.2.2. Change-over procedure test

(TEST\_322). [Rec. ITU-R M.625-3,Ann.1; n.3.7.11.1] [Rec. ITU-R M.625-3,Ann.1; n.3.7.11.2] [ETS 300 067, n.2.7,a]

#### 1.1.2.2.1. Definition.

Change-over procedures.

#### 1.1.2.2.2. Method of measurement.

The EUT and TE in the traffic flow mode: the EUT as the sending (ISS) and the TE as the receiving station (IRS). The "Figure shift", "+", "?" combination is keyed in by the EUT, reporting the button (if any) initiating traffic flow reversal.

The EUT changes to reception (IRS) and the TE to transmission (ISS). The TE types the symbol set:

- a) "Figure shift", "+", "?";
- b) "Figure shift", "1", "2", "3", "+", "?";
- c) "Figure shift", "?", "+".

#### 1.1.2.2.3. Required results.

The traffic flow reversal process is verified. The c) combination should not initiate traffic flow reversal.

(If the ISS is required to initiate a change in the direction of traffic flow, the station sends the signal sequence («Figure shift» (combination No.30), «+» (combination No.26), «?» (combination No.2) followed, if necessary, by one or more «idle signals  $\beta$ » to complete the information block.)

[Rec.625,Ann.1; 3.7.11.1]

(On receipt of the signal sequence ( $\ll$ + $\gg$ ,  $\ll$ ? $\gg$ ) with the traffic flow in the figure case condition, the IRS sends «control signal 3» until the information block containing «idle signals  $\beta$ », «idle signals  $\alpha$ », «idle signals  $\beta$ » has been received.

The presence of «idle signals  $\beta$ » between the signals «+» and «?» should not inhibit the response or the IRS

[Rec.625,Ann.1; 3.7.11.2]



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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Comment
		OK	NO	
1	The facilities of reversion of transmission direction (OVER) shall be available. [ETS 300 067, n.2.7,a]	X		
2	On receipt of the signal sequence ( $\ll$ + $\gg$ , $\ll$ ? $\gg$ ) with the traffic flow in the figure case condition, the EUT IRS sends «control signal 3» until the information block containing «idle signals $\beta$ », «idle signals $\alpha$ », «idle signals $\beta$ » has been received and changes direction of communication.	X		
3	The presence of «idle signals $\beta$ » between the signals «+» and «?» should not inhibit the response or the IRS	X		

The equipment meets the requirements (yes / no /n.a)	yes



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 1.1.2.3. Answer-back procedure test

(TEST\_323) [Rec. ITU-R M.625-3, Ann.1, n.3.7.13.1] [Rec. ITU-R M.626-3, Ann.1; n.3.7.13.2]

#### 1.1.2.3.1. Definition.

The ability to perform answer-back requesting and transmitting procedures.

### 1.1.2.3.2. Method of measurement.

The EUT and TE in the traffic flow mode: the EUT as the sending (ISS) and the TE as the receiving station (IRS). The "Figure shift", "Maltese cross" ( $\ll \oplus$ ») combination No.4. is keyed in by the EUT. The "Figure shift", "Maltese cross" is keyed in by the TE. The answer-back code is printed out.

#### 1.1.2.3.3. Required results.

The answer-back and transmission processes are verified. The answer-back format is checked for conformity to CCITT Recommendation F.130.

(If the ISS is required to request terminal identification, the station sends the signals «Figure shift» (combination No.30) and « $\oplus$ » (combination No.4) followed, if necessary, by one or more «idle signals  $\beta$ » to complete the information block.)

[Rec.625,Ann.1;3.7.13.1] (On receipt of the information block containing the traffic information signals «Figure shift» (combination No.30) and « $\oplus$ » (combination No.4) with the traffic flow in the figure case condition, the IRS

changes the direction of the traffic flow;

transmits the traffic information signals derived from the teleprinter answerback code generator;

transmits, on completion of the answer-back code, or in the absence of the answer-back code, two information blocks of «idle signals  $\beta$ »;

changes the direction of the traffic flow, and reverts to IRS.

[Rec.626,Ann.1; 3.7.13.2]





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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Comment
		OK	NO	
1	On receipt of the information block containing the traffic information signals «Figure shift» (combination No.30) and « $\oplus$ » (combination No.4) with the traffic flow in the figure case condition, the EUT IRS changes the direction of the traffic flow; transmits the traffic information signals derived from the teleprinter answer-back code generator; transmits, on completion of the answer-back code, two information blocks of «idle signals $\beta$ »; changes the direction of the traffic flow, and reverts to IRS	×		
2	If the EUT ISS is required to request terminal identification, the station sends the signals «Figure shift» (combination No.30) and « $\oplus$ » (combination No.4) followed	X		
3	The answer-back format conforms to Recommendation ITU-T F.130.	X		

The equipment meets the requirements (yes / no /n.a)	yes
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NBDP TEST
<b>RES Laboratory</b>
StPetersburg, Russia

Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 1.1.2.4. End-of-communication procedure test

(TEST\_324-TEST\_326). [Rec. ITU-R M.625-3,Ann.1; n.3.7.14.1] [Rec. ITU-R M.625-3,Ann.1; n.3.7.14.2] [Rec. ITU-R M.625-3,Ann.1; n.3.7.14.3]

#### 1.1.2.4.1. Definition.

Communication terminating procedure.

#### 1.1.2.4.2. Method of measurement.

The EUT and TE in the traffic flow mode:

a) the EUT as the receiving (IRS) and the TE as the sending station (ISS). The TE transmits the "end-of communication block", with the response control signal verified (TEST\_324);

b) the EUT as the sending (ISS) and the TE as the receiving station (IRS). The EUT transmits "end-of communication blocks" and the TE checks the number of transmitted blocks (TEST\_325);

c) the EUT as the sending (ISS) and the TE as the receiving station (IRS). The EUT transmits "end-of communication blocks" and the TE sends the relevant control signal and verifies EUT's change to the "stand-by" condition. (TEST\_326).

#### 1.1.2.4.3. Required results.

a) the EUT, on receiving the "end-of communication block", should send the relevant control signal and change to "stand-by";

b) there should be no more than 4 blocks after the end of communication;

c) on receiving the relevant control signal for the transmitted end-of communication block, the EUT should change to "stand-by".

(If the ISS is required to terminate the established circuit, it sends the «end-of communication block» containing three «idle signals  $\alpha$ » until the appropriate «control signal 1» or «control signal 2» has been received; however, the number of transmissions of the «end-of communication block» is limited to four, after which the ISS reverts to the «stand-by» condition.)

[Rec.625,Ann.1; 3.7.14.1] (On receipt of the «end-of communication block», the IRS sends the appropriate control signal indicating correct reception of this block and reverts to the «stand-by» condition)

[Rec.625,Ann.1; 3.7.14.2]

(On receipt of the control signal that confirms unmutilated reception of the «end-of communication block», the ISS reverts to the «stand-by» condition.)

[Rec.625,Ann.1; 3.7.14.3]



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Comment	
		OK	NO		
1	The EUT, on receiving the "end-of communication block", should send the relevant control signal and change to "stand-by";	X			
2	There should be no more than 4 blocks after the end of communication;	X			
3	On receiving the relevant control signal for the transmitted end-of communication block, the EUT should change to "stand-by"		X	(12)	

(12)

End-of-Communication procedure is broken. EUT at reception of next control signal CS1/CS2 sends the block «EOC» once again. While EUT should pass in a condition "Stand-by" after reception of first correctly accepted control signal CS1/CS2.

[ITU-R M.625-3,Ann.1; 3.7.13.2]

The equipment meets the requirements (yes / no /n.a)	no
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5/	nrane&Thrane AILOR 6006 Message Terminal Ine 2010 – January 2011

#### 1.1.2.5. The traffic flow with mutilated reception test.

(TEST\_327-TEST\_332). [Rec. ITU-R M.625-3,Ann.1; n.3.7.5; n.3.7.6] [Rec. ITU-R M.625-3,Ann.1; n.3.7.10] [Rec. ITU-R M.625-3,Ann.1; n.3.7.12.1]

### 1.1.2.5.1. Definition.

The ability to operate the traffic flow with mutilated reception.

#### 1.1.2.5.2. Method of measurement.

The EUT and TE in the traffic flow mode: the EUT as the receiving (IRS) and the TE as the sending station. The EUT is set to transmit the test radiogram from buffer. While receiving the test radiogram, the TE generates:

a) sets of up to 32 consecutive mutilated cycles of received information blocks (TEST\_327);

b) sets of up to 32 consecutive mutilated cycles of transmitted control signals (TEST\_328);

c) sets of up to 32 consecutive mutilated cycles of received information blocks and transmitted control signals (TEST\_329).

The EUT acts as the receiving (IRS) and the TE as the sending station (ISS). The TE is set to transmit the test radiogram from buffer. While transmitting the test radiogram, the TE generates:

a) sets of up to 32 consecutive mutilated cycles of transmitted information blocks (TEST\_330);

b) sets of up to 32 consecutive mutilated cycles of received control signals (TEST\_331);

c) sets of up to 32 consecutive mutilated cycles of transmitted information blocks and received control signals (TEST\_332).

#### 1.1.2.5.3. Required results.

Traffic results are evaluated by comparison of received (transmitted) information with the text contained in the test radiogram. The EUT should not change to the rephasing procedure.

(The IRS sends the «control signal 1/control signal 2» combination on reception of a mutilated «information block 1/information block 2».)

[Rec.625,Ann.1; 3.7.5; 3.7.6]

(On receipt of a mutilated control signal, the ISS sends a block containing three «signal repetitions».)

[Rec.625,Ann.1; 3.7.10]

(With continuously mutilated reception of information blocks or control signals, both stations revert to the «rephase» condition after 32 continuously repeated cycles) [Rec.625,Ann.1; 3.7.12.1]





#### NBDP TEST RES Laboratory St.-Petersburg, Russia

Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Item Result	Result Comme	
		OK	NO	
1	While receiving the test radiogram, the TE generates sets of up to 32 consecutive mutilated cycles of received information blocks. The EUT should not change to the rephasing procedure.	X		
2	While receiving the test radiogram, the TE generates sets of up to 32 consecutive mutilated cycles of transmitted control signals. The EUT should not change to the rephasing procedure.	X		
3	While receiving the test radiogram, the TE generates sets of up to 32 consecutive mutilated cycles of received information blocks and transmitted control signals. The EUT should not change to the rephasing procedure.	X		
4	While transmitting the test radiogram, the TE generates sets of up to 32 consecutive mutilated cycles of transmitted information blocks. The EUT should not change to the rephasing procedure.	X		
5	While transmitting the test radiogram, the TE generates sets sets of up to 32 consecutive mutilated cycles of received control signals. The EUT should not change to the rephasing procedure.	X		
6	While transmitting the test radiogram, the TE generates sets sets of up to 32 consecutive mutilated cycles of transmitted information blocks and received control signals. The EUT should not change to the rephasing procedure.	X		

The equipment meets the requirements (yes / no /n.a)	yes
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5/	nrane&Thrane AILOR 6006 Message Terminal Ine 2010 – January 2011

#### 1.1.2.6. Time-out procedure test

(TEST\_333 - TEST\_338). [Rec. ITU-R M.625-3, Ann.1; n.3.7.12.1]

#### 1.1.2.6.1. Definition.

The ability to terminate continuously mutilated communication.

### 1.1.2.6.2. Method of measurement.

The EUT and TE in the traffic flow mode : the EUT as the sending (ISS) and the TE as the receiving station (IRS). The EUT is set to transmit the test radiogram from buffer. While receiving the test radiogram, the TE generates sets of more than 32 continuously mutilated cycles of

- a) received information blocks (TEST\_333);
- b) transmitted control signals (TEST\_334);
- c) received information blocks and transmitted control signals (TEST\_335).

The EUT changes to the receiving station mode (IRS) and the TE to the sending station mode (ISS). The TE is set to transmit the test radiogram from buffer. While transmitting the test radiogram, the TE generates sets of more than 32 continuously mutilated cycles of

- a) transmitted information blocks (TEST\_336);
- b) received control signals (TEST\_337);
- c) transmitted information blocks and received control signals (TEST\_338).

#### 1.1.2.6.3. Required results.

The processes of terminating and changing to the rephasing procedure are evaluated. Both stations should revert to the «rephase» condition after 32 continuously repeated cycles.

(With continuously mutilated reception of information blocks or control signals is, both stations revert to the «rephase» condition after 32 continuously repeated cycles) [Rec.625,Ann.1; 3.7.12.1]





#### NBDP TEST RES Laboratory St.-Petersburg, Russia

Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item		sult	Comment
		OK	NO	
1	While receiving the test radiogram, the TE generates sets of more than 32 consecutive mutilated cycles of received information blocks. The EUT should change to the rephasing procedure.	X		
2	While receiving the test radiogram, the TE generates sets of more than 32 consecutive mutilated cycles of transmitted control signals. The EUT should change to the rephasing procedure.	X		
3	While receiving the test radiogram, the TE generates sets of more than 32 consecutive mutilated cycles of received information blocks and transmitted control signals. The EUT should change to the rephasing procedure.	X		
4	While transmitting the test radiogram, the TE generates sets of more than 32 consecutive mutilated cycles of transmitted information blocks. The EUT should change to the rephasing procedure.	X		
5	While transmitting the test radiogram, the TE generates sets sets of more than 32 consecutive mutilated cycles of received control signals. The EUT should change to the rephasing procedure.	X		
6	While transmitting the test radiogram, the TE generates sets sets of more than 32 consecutive mutilated cycles of transmitted information blocks and received control signals. The EUT should change to the rephasing procedure.	X		

The equipment meets the requirements (yes / no /n.a)	yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 1.1.3. Rephasing procedure

#### 1.1.3.1. General rephasing procedure test

(TEST\_339 - TEST\_340) [Rec. ITU-R M.625-3, Ann.1; n.3.7.12.1]

#### 1.1.3.1.1. Definition.

The ability to perform rephasing procedures.

#### 1.1.3.1.2. Method of measurement.

The EUT and TE in the traffic flow mode: the EUT as the sending (ISS) and the TE as the receiving station (IRS). The EUT is set to transmit the test radiogram from buffer. The TE generates sets of more than 32 continuously mutilated cycles (TEST\_339) of

a) received information blocks;

b) transmitted control signals;

c) received information blocks and transmitted control signals.

The EUT changes to the rephasing procedure. Cases a), b), c) are repeated until the end of test radiogram transmission.

The EUT changes to reception (IRS) and the TE to transmission (ISS). The TE is set to transmit the test radiogram from buffer. While transmitting the test radiogram, the TE generates sets of more than 32 continuously mutilated cycles (TEST\_340) of

a) transmitted information blocks;

b) received control signals;

c) transmitted information blocks and received control signals.

The EUT changes to the rephasing procedure. Cases a), b), c) are repeated until the end of test radiogram reception

#### 1.1.3.1.3. Required results.

Textual contents of test and received (transmitted) radiograms are compared. The texts should be identical.

(With continuously mutilated reception of information blocks or control signals, both stations revert to the «rephase» condition after 32 continuously repeatedd cycles)

[Rec.625,Ann.1; 3.7.12.1]



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

NBDP TEST

RES Laboratory St.-Petersburg, Russia

Ν	Item	Result		Comment
		OK	NO	
1	The EUT is set to transmit the test radiogram from buffer. While receiving the test radiogram, the TE generates sets of more than 32 consecutive mutilated cycles of received information blocks and transmitted control signals. The EUT changes to the rephasing procedure and repeated until the end of test radiogram reception		X	(11)
2	The TE is set to transmit the test radiogram from buffer. While transmitting the test radiogram, the TE generates sets sets of more than 32 consecutive mutilated cycles of transmitted information blocks and received control signals. The EUT changes to the rephasing procedure and repeated until the end of test radiogram reception	X		

(11)

There is no possible to disable the rephasing procedure.

#### [ITU-R M.625-3, Ann.1, n.3.8.1, NOTE 1]

The equipment meets the requirements (yes / no /n.a)	no
The equipment meets the requirements (yes / no /n.a)	no



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 1.1.3.2. Testing for control signal 4

(TEST\_341). [Rec. ITU-R M.625-3, Ann.1; n.3.8.4]

#### 1.1.3.2.1. Definition.

Generation of the «end-of-communication block» with control signal 4 reception in the rephasing process.

### 1.1.3.2.2. Method of measurement.

The EUT in the rephasing procedure. During rephasing, the TE generates control signal 4.

#### 1.1.3.2.3. Required results.

On receiving control signal 4, the EUT should generate the «end-of-communication block» and then proceed with the rephasing attempt.

(On receipt of «control signal 4» during the rephasing procedure, the master station sends one «end-of-communication block» containing three «idle signals  $\alpha$ », after which it continues with the rephasing attempt.)

[Rec.625,Ann.1; 3.8.4]

Ν	Item		sult	Comment
		OK	NO	
1	On receipt of «control signal 4» during the rephasing procedure, the EUT should send one «end-of- communication block» containing three «idle signals $\alpha$ », after which it continues with the rephasing attempt. (7-signal call ID)	X		

The equipment meets the requirements (yes / no /n.a) yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 1.1.3.3. Rephasing signal time format test

(TEST\_342). [Rec. ITU-R M.625-3, Ann.1; n.3.8.9]

#### 1.1.3.3.1. Definition.

Time relationship in the rephasing procedure.

#### 1.1.3.3.2. Method of measurement.

The EUT in the rephasing procedure. The TE verifies call signals without transmitting controls.

#### 1.1.3.3.3. Required results.

On completing 32 cycles, the EUT should abandon rephasing attempts and change to the «stand-by» condition.

(If rephasing has not been accomplished in the 32-cycle time-out interval, both stations revert to the «stand-by» condition and no further rephasing attempts are made.)

[Rec.625,Ann.1; 3.8.9]

Ν	Item		sult	Comment
		OK	NO	
1	The rephasing should not be accomplished in the 32-cycle time-out interval, and EUT should revert to the «stand-by» condition and no further rephasing attempts are made.	X		



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<b>RES Laboratory</b>		
StPetersburg, Russia		

Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 1.1.3.4. Called station identification test

(TEST\_343-TEST\_345). [Rec. ITU-R M.625-3, Ann.1; n.3.8]

#### 1.1.3.4.1. Definition.

The ability to identify the called station in the automatic identification process using check-sum signals.

#### 1.1.3.4.2. Method of measurement.

The EUT in the rephasing procedure with 7 - signal call identity. During the automatic identification process, the TE transmits a check-sum signal inconsistent with self identity:

"check-sum signal 1" - (TEST\_343); "check-sum signal 2" - (TEST\_344); "check-sum signal 3" - (TEST\_345).

#### 1.1.3.4.3. Required results.

After the second wrong check-sum signal, the EUT should change to the end-ofcommunication procedure with subsequent reversion to rephasing if there were less than 32 cycles. With more than 32, the EUT should change to "stand-by".

Ν	Item	Result		Comment
		OK	NO	
1	After the second wrong check-sum signal 1, the EUT should change to the end-of-communication procedure with subsequent reversion to rephasing.	X		
2	After the second wrong check-sum signal 2, the EUT should change to the end-of-communication procedure with subsequent reversion to rephasing.	X		
3	After the second wrong check-sum signal 3, the EUT should change to the end-of-communication procedure with subsequent reversion to rephasing.	X		

The equipment meets the requirements (yes / no /n.a)	yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 1.1.3.5. The wrong check-sum signal reception test

(TEST\_346-TEST\_347). [Rec. ITU-R M.625-3, Ann.1; n.3.8]

#### 1.1.3.5.1. Definition.

The ability to perform automatic identification with the wrong check-sum signal received.

### 1.1.3.5.2. Method of measurement.

The EUT in the rephasing procedure with 7 - signal call identity. During the automatic identification process, the TE generates

a) up to four consecutive «check-sum signal 1», «check-sum signal 2», «check-sum signal 3» sets (TEST\_346);

b) four or more different wrong check-sum response signals (TEST\_347).

### 1.1.3.5.3. Required results.

The EUT, on emergence in the reception channel of

a) up to four wrong check-sum signals, should complete the automatic identification procedure successfully;

δ) four or more wrong check-sum signals, should change to "stand-by" in the case of more than 32 call signals, otherwise revert to rephasing.

Ν	Item Result		Comment	
		OK	NO	
1	The EUT in the reception of up to four wrong check- sum signals, should complete the automatic identification procedure successfully	X		
2	The EUT in the reception of four or more wrong check-sum signals, should change to "stand-by" in the case of more than 32 call signals, otherwise revert to rephasing.	X		

The equipment meets the requirements (yes / no /n.a)	yes
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<b>RES Laboratory</b>		
StPetersburg, Russia		

Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

## 1.1.3.6. The mutilated signal reception in the automatic identification procedure test

(TEST\_348 - TEST\_353). [Rec. ITU-R M.625-3, Ann.1; n.3.8]

### 1.1.3.6.1. Definition.

The ability to perform automatic identification in the rephasing procedure with mutilations.

### 1.1.3.6.2. Method of measurement.

The TE in the «stand-by» condition. The EUT changes to rephasing with 7-signal call identity. During the automatic identification process with rephasing, the TE generates:

a) a set of up to 32 continuously mutilated transmitted check-sum signals (TEST\_348);

b) a set of up to 32 continuously mutilated received identification blocks (TEST\_349 );

c) a set of up to 32 continuously mutilated transmitted check-sum signals and received identification blocks (TEST\_350);

d) a set of more than 32 continuously mutilated transmitted check-sum signals (TEST\_351);

e) a set of more than 32 continuously mutilated received identification blocks (TEST\_352);

f) a set of more than 32 continuously mutilated transmitted check-sum signals and received identification blocks (TEST\_353).

### 1.1.3.6.3. Required results.

For cases a), b) c), the EUT should complete the automatic identification procedure with rephasing successfully; and for cases d), e), f) change to "stand-by".





#### NBDP TEST RES Laboratory St.-Petersburg, Russia

Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Comment	
		OK	NO	-	
1	During the automatic identification process with rephasing, the TE generates a set of up to 32 continuously mutilated transmitted check-sum signals. The EUT should complete the automatic identification procedure with rephasing successfully.		X	(15)	
2	During the automatic identification process with rephasing, the TE generates a set of up to 32 continuously mutilated received identification blocks. The EUT should complete the automatic identification procedure with rephasing successfully.	X			
3	During the automatic identification process with rephasing, the TE generates a set of up to 32 continuously mutilated transmitted check-sum signals and received identification blocks. The EUT should complete the automatic identification procedure with rephasing successfully.	X			
4	During the automatic identification process with rephasing, the TE generates a set of more than 32 continuously mutilated transmitted check-sum signals. The EUT should complete the automatic identification procedure with rephasing successfully.	X			
5	During the automatic identification process with rephasing, the TE generates a set of more than 32 continuously mutilated received identification blocks. The EUT should complete the automatic identification procedure with rephasing successfully.	X			
6	During the automatic identification process with rephasing, the TE generates a set of more than 32 continuously mutilated transmitted check-sum signals and received identification blocks. The EUT should complete the automatic identification procedure with rephasing successfully.	X			

(15)

EUT does not finish procedure of the phasing. Procedures of re-phasing EUT demand correct reception of two consistently the following control signal CS5 while the report demands only reception of an once.

[ITU-R M.625-3,Ann.1; 3.8.3]

The equipment meets the requirements (yes / no /n.a)	no
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NBDP TEST
<b>RES Laboratory</b>
StPetersburg, Russia

Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

## 1.1.3.7. Test for control signal 3 with automatic identification in the rephasing procedure

(TEST\_354). [Rec. ITU-R M.625-3, Ann.1; n.3.8]

### 1.1.3.7.1. Definition.

Interrupting automatic identification and switching to the change-over procedure with control signal 3 replacing check-sum signal.

#### 1.1.3.7.2. Method of measurement.

The EUT in rephasing. During the rephasing process with automatic identification, the TE generates control signal 3.

#### 1.1.3.7.3. Required results.

On receiving control signal 3, the EUT should interrupt the automatic identification and initiate the traffic flow reversal procedure.

Ν	Item	Result		Comment
		OK	NO	
1	On receiving control signal 3, the EUT should interrupt the automatic identification and initiate the traffic flow reversal procedure.	X		

The equipment meets the requirements (yes / no /n.a)	yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

### 1.2. Slave station.

### **1.2.1.** Phasing procedure and automatic identification.

# **1.2.1.1. General test for the phasing procedure with 4-signal and 7-signal call identity**

(TEST\_400). [Rec. ITU-R M.625-3,Ann.1; n.3.5.2.1] [Rec. ITU-R M.625-3,Ann.1; n.3.6.19]

### 1.2.1.1.1. Definition.

The ability to perform the phasing procedure with automatic selection of 4 - and 7 - signal identification.

#### 1.2.1.1.2. Method of measurement.

The EUT in the "stand-by" condition. The TE alternately performs phasing with the EUT for 4 - and 7 - signal identity.

### 1.2.1.1.3. Required results.

The EUT should be able to handle both 4 - and 7 - signal identity. Selecting should be automatic. For the case of phasing with 7 - signal identity, the EUT should maintain and provide access to master station identity. Correct automatic identification is verified by comparing the TE identification with that obtained in automatic identification.

(The equipment should be capable of operating both 4-signal and 7-signal identity procedures and automatically employing the appropriate procedure indicated by the composition of the «call signal» received from a calling station or by the number of digits (4,5 or 9) supplied to the equipment of a calling station to identify the station to be called.)

[Rec.625,Ann.1; 3.5.2.1]

(Each station should retain the identity of the other station for the duration of the connection and this information should be accessible locally, e.g. by means of display or on a separate output circuit for external use)

[Rec.625,Ann.1; 3.6.19]



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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Comment
		OK	NO	
1	The EUT should be able to automatically handle 4- signal identity.	X		
2	The EUT should be able to automatically handle 7- signal identity.	X		
3	The EUT should retain the identity of the other station for the duration of the connection and this information should be accessible locally.	X		
4	Visual indicators shall be available to indicate that a call is detected (CALLED)	X		

The equipment meets the requirements (yes / no /n.a) yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

## **1.2.1.2.** Test for the end-of-communication procedure with automatic identification

(TEST\_401-TEST\_404). [Rec. ITU-R M.625-3,Ann.1; n.3.6.17]

#### 1.2.1.2.1. Definition.

The ability to change to "stand-by" on receiving the «end-of-communication block» in phasing.

#### 1.2.1.2.2. Method of measurement.

The EUT in the "stand-by" condition. The TE changes to phasing with 7 - signal identity. During the identification cycle, the TE generates the «end-of-communication block»

a) in the «identification block 1» position (TEST\_401);

b) in the «identification block 2» position (TEST\_402);

c) in the «identification block 3» position (TEST\_403);

d) in the «end-of- automatic identification block» position (TEST\_404).

### 1.2.1.2.3. Required results.

The EUT should transmit «control signal 1» and change to "stand-by".

(If during the identification cycle the called station receives the «end-ofcommunication block» (containing the «idle signal  $\alpha$ »), it sends «control signal 1» and reverts to the «stand-by» condition).

[Rec.625,Ann.1; 3.6.17]





#### NBDP TEST RES Laboratory St.-Petersburg, Russia

Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item Result Co		Comment	
		OK	NO	
1	During the identification cycle, the TE generates the «end- of-communication block» in the «identification block 1» position. The EUT should transmit «control signal 1» and change to "stand-by".	X		
2	During the identification cycle, the TE generates the «end- of-communication block» in the «identification block 2» position. The EUT should transmit «control signal 1» and change to "stand-by".	X		
3	During the identification cycle, the TE generates the «end- of-communication block» in the «identification block 3» position. The EUT should transmit «control signal 1» and change to "stand-by".	X		
4	During the identification cycle, the TE generates the «end- of-communication block» in «end – of - automatic identification block» position. The EUT should transmit «control signal 1» and change to "stand-by".	X		

The equipment meets the requirements (yes / no /n.a)	yes	
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NBDP TEST
RES Laboratory
StPetersburg, Russia

Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

## **1.2.1.3.** Test for normal automatic identification procedure with mutilated reception

(TEST\_405-TEST\_409). [Rec. ITU-R M.625-3,Ann.1; n.3.6.18]

#### 1.2.1.3.1. Definition.

The ability to perform automatic identification with mutilated reception channel.

#### 1.2.1.3.2. Method of measurement.

The EUT in the "stand-by" condition. The TE changes to the phasing procedure with 7-signal call identity. While receiving identification blocks, the TE generates:

a) a set of up to 32 consecutive mutilated: «identification block 1», «identification block 2», «identification block 3», and the «end-of-identification block» alternately (TEST\_405);

b) a set of up to 32 consecutive mutilated: «check-sum signal 1», «check-sum signal 2», «check-sum signal 3», and «control signal 1» (TEST\_406);

c) a set of up to 32 consecutive mutilated identification blocks 1, 2, 3, the endof-automatic identification block and check-sum signals 1, 2, 3, control signal 1 (TEST\_407);

d) a set of more than 32 consecutive mutilated identification blocks (TEST\_408);

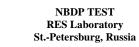
e) a set of more than 32 consecutive mutilated check-sum signals (TEST\_409).

#### 1.2.1.3.3. Required results.

For cases a), b), c), the EUT should complete the automatic identification procedure successfully; and for cases d), e) change to " stand-by ".

(With continuously mutilated reception of signals during the identification cycle, both stations revert to the «stand-by» condition after 32 continuously repeated cycles)

[Rec.625,Ann.1; 3.6.18]



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Item Result		Comment
		OK	NO			
1	While receiving identification blocks, the TE generates a set of up to 32 consecutive mutilated: «identification block 1», «identification block 2», «identification block 3», and the «end-of-identification block» alternately. The EUT should complete the automatic identification procedure successfully.	X				
2	While receiving identification blocks, the TE generates a set of up to 32 consecutive mutilated: «check-sum signal 1», «check-sum signal 2», «check-sum signal 3», and «control signal 1». The EUT should complete the automatic identification procedure successfully.	X				
3	While receiving identification blocks, the TE generates a set of up to 32 consecutive mutilated identification blocks 1, 2, 3, the end-of-automatic identification block and check-sum signals 1, 2, 3, control signal 1. The EUT should complete the automatic identification procedure successfully.	X				
4	While receiving identification blocks, the TE generates a set of more than 32 consecutive mutilated identification blocks. The EUT should change to "stand-by ".	X				
5	While receiving identification blocks, the TE generates a set of more than 32 consecutive mutilated check-sum signals. The EUT should change to "stand-by ".	X				

The equipment meets the requirements (yes / no /n.a)	yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### **1.2.2. Traffic flow procedure.**

#### 1.2.2.1. General traffic flow procedure test

(TEST\_410). [Rec.625,Ann.1; 3.7] [ETS 300 067, n.2.7]

#### 1.2.2.1.1. Definition.

Traffic flow procedures.

#### 1.2.2.1.2. Method of measurement.

The EUT and TE in the traffic flow mode: the EUT as the receiving (IRS) and the TE as the sending station (ISS). The TE transmits the test radiogram, using both keying (teleprinter) and buffer<sup>\*)</sup>. Testing involves the change-over and answer-back procedures. The EUT transmits the test radiogram, using both keying (teleprinter) and buffer.

#### 1.2.2.1.3. Required results.

The EUT should be able to perform general traffic flow procedures, input to buffer (printer), and transmission using keying (teletype) and buffer. There should be no mutilations of received (transmitted) radiogram as compared with the initial text. \*)buffer - Facilities to compose and verify messages before transmission

Ν	Item	Result		Comment
		OK	NO	
1	The EUT should be capable of performing general traffic flow procedures	X		
2	The EUT should be capable of receiving information to buffer (printer),	X		
3	The EUT should be capable of transmitting information using keying (teleprinter) or buffer.		X	See 1.1.2.1
4	There are facilities to compose and verify messages of at least 4000 characters before transmission [ETS 300 067, n.2.7]		X	See 1.1.2.1
5	There should be no mutilations in the received radiogram as compared to the initial text		X	See 1.1.2.1

The equipment meets the requirements (yes / no /n.a)	no
····· • • • • • • • • • • • • • • • • •	



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 1.2.2.2. Change-over procedure test.

(TEST\_411). [Rec. ITU-R M.625-3,Ann.1; n.3.7.11.1] [Rec. ITU-R M.625-3,Ann.1; n.3.7.11.2]

#### 1.2.2.2.1. Definition.

Change-over procedures.

#### 1.2.2.2.2. Method of measurement.

The EUT and TE in the traffic flow mode: the EUT as the sending (ISS) and the TE as the receiving station (IRS). The «Figure shift», "+", "?" combination is keyed in by the EUT, with the button (if any) initiating the traffic flow change-over reported. The EUT as the receiving (IRS) and the TE as the sending (ISS) station. TE consecutively keyes in the symbol sets :

- a) «Figure shift», "+", "?";
- b) «Figure shift», "1", "2", "3", "+", "?";
- c) «Figure shift», "?", "+".

#### 1.2.2.2.3. . Required results.

The traffic flow reversal is verified. The c) combination should not initiate the traffic flow change-over process.

(If the ISS is required to initiate a change in the traffic flow direction, the station sends the signal sequence («Figure shift» (combination No.30), «+» (combination No.26), «?» (combination No.2) followed, if necessary, by one or more «idle signals  $\beta$ » to complete the information block.)

[Rec.625,Ann.1; 3.7.11.1]

(On receipt of the signal sequence ((+\*), (\*\*)) with the traffic flow in the figure case condition, the IRS sends (control signal 3) until the information block containing (idle signal  $\beta$ ), (idle signal  $\alpha$ ), (idle signal  $\beta$ ) has been received.

The presence of «idle signal  $\beta$ » between the signals «+» and «?» should not inhibit the response or the IRS)

[Rec.625,Ann.1; 3.7.11.2]



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Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Comment
		OK	NO	
1	The facilities of reversion of transmission direction (OVER) shall be available. [ETS 300 067, n.2.7,a]	X		
2	On receipt of the signal sequence ( $\ll$ + $\gg$ , $\ll$ ? $\gg$ ) with the traffic flow in the figure case condition, the EUT IRS sends «control signal 3» until the information block containing «idle signals $\beta$ », «idle signals $\alpha$ », «idle signals $\beta$ » has been received and changes direction of communication.	X		
3	The presence of «idle signals $\beta$ » between the signals «+» and «?» should not inhibit the response or the IRS	X		

The equipment meets the requirements (yes / no /n.a)	yes
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#### 1.2.2.3. The answer-back procedure test

(TEST\_412). [Rec. ITU-R M.625-3, Ann.1, n.3.7.13.1] [Rec. ITU-R M.626-3, Ann.1; n.3.7.13.2]

### 1.2.2.3.1. Definition.

The ability to perform the request and answer-back procedure.

### 1.2.2.3.2. Method of measurement.

The EUT and TE in the traffic flow mode: the EUT as the sending (ISS) and the TE as the receiving (IRS) station. The «Figure shift», « $\oplus$ » (combination No.4) is keyed in by the EUT.

The EUT changes to reception (IRS) and the TE to transmission (ISS). The TE keyes in the «Figure shift», « $\oplus$ » combination. The answer-back code is printed out.

#### 1.2.2.3.3. Required results.

The answer-back request/transmission process is verified. The answer-back format is checked for conformity to CCITT Recommendation F.130.

(If the ISS is required to request terminal identification, the station sends the signals «Figure shift» (combination No.30) and « $\oplus$ » (combination No.4) followed, if necessary, by one or more «idle signal  $\beta$ » to complete the information block.)

[Rec.625,Ann.1; 3.7.13.1]

(On receipt of the information block containing the traffic information signals «Figure shift» (combination No.30) and « $\oplus$ » (combination No.4) with the traffic flow in the figure case condition, the IRS

changes the direction of the traffic flow;

transmits the traffic information signals derived from the teleprinter answerback code generator;

transmits, on completion of the answer-back code or in the absence of the answer-back code, two information blocks «idle signal  $\beta$ »;

changes the direction of the traffic flow, and reverts to IRS.

[Rec.625,Ann.1; 3.7.13.2])





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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Comment
		OK	NO	
1	On receipt of the information block containing the traffic information signals «Figure shift» (combination No.30) and « $\oplus$ » (combination No.4) with the traffic flow in the figure case condition, the EUT IRS changes the direction of the traffic flow; transmits the traffic information signals derived from the teleprinter answer-back code generator; transmits, on completion of the answer-back code, or in the absence of the answer-back code, two information blocks of «idle signals $\beta$ »; changes the direction of the traffic flow, and reverts to IRS	×		
2	If the EUT ISS is required to request terminal identification, the station sends the signals «Figure shift» (combination No.30) and « $\oplus$ » (combination No.4) followed	X		
3	The answer-back format conforms to Recommendation ITU-T F.130.	X		

The equipment meets the requirements (yes / no /n.a)	yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### **1.2.2.4.** The end-of-communication procedure test

(TEST\_413). [Rec. ITU-R M.625-3,Ann.1; n.3.7.14.1] [Rec. ITU-R M.625-3,Ann.1; n.3.7.14.2] [Rec. ITU-R M.625-3,Ann.1; n.3.7.14.3]

#### 1.2.2.4.1. Definition.

The end-of-communication procedure.

#### 1.2.2.4.2. Method of measurement.

The EUT and TE in the traffic flow mode: the EUT as the receceiving (IRS) and the TE as the sending (ISS) station. The TE sends the «end-of- communication block» and the response control signal is verified.

#### 1.2.2.4.3. Required results.

On receiving the «end-of-communication block», the EUT should send the relevant control signal and change to «stand-by».

(If the ISS is required to terminate the established circuit, it sends the «end-of communication block» containing three «idle signals  $\alpha$ » until the appropriate «control signal 1» or «control signal 2» has been received; however, the number of the «end-of communication block» transmissions is limited to four, after which the ISS reverts to the «stand-by» condition.)

[Rec.625,Ann.1; 3.7.14.1]

(On receipt of the «end-of communication block», the IRS sends the appropriate control signal indicating correct reception of this block and reverts to the «stand-by» condition)

[Rec.625,Ann.1; 3.7.14.2]

(On receipt of the control signal confirming unmutilated reception of the «end-of communication block», the ISS reverts to the «stand-by» condition.)

[Rec.625,Ann.1; 3.7.14.3]

Ν	Item	Result		Comment
		OK	NO	
1	The EUT, on receiving the "end-of communication block", should send the relevant control signal and change to "stand-by";	X		

The equipment meets the requirements (yes / no /n.a)	yes



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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 1.2.2.5. Testing the traffic flow with mutilations

(TEST\_414-TEST\_419). [Rec. ITU-R M.625-3,Ann.1; n.3.7.5; n.3.7.6] [Rec. ITU-R M.625-3,Ann.1; n.3.7.10] [Rec. ITU-R M.625-3,Ann.1; n.3.7.12.1]

#### 1.2.2.5.1. Definition.

The ability to operate the traffic flow with mutilations.

#### 1.2.2.5.2. Method of measurement.

The EUT and TE in the traffic flow mode: the EUT as the sending (ISS) and the TE as the receiving (IRS) station. The EUT is set to transmit the test radiogram from buffer. While receiving the test radiogram, the TE generates:

a) sets of up to 32 consecutive mutilated cycles of received information blocks (TEST\_414);

b) sets of up to 32 consecutive mutilated cycles of transmitted control signals (TEST\_415);

c) sets of up to 32 consecutive mutilated cycles of received information blocks and transmitted control signals (TEST\_416).

The EUT is switched to reception and the TE to transmission. The TE is set to transmit the test radiogram from buffer. While transmitting the test radiogram, the TE generates:

a) sets of up to 32 consecutive mutilated cycles of transmitted information blocks (TEST\_417);

b) sets of up to 32 consecutive mutilated cycles of received control signals (TEST\_418);

c) sets of up to 32 consecutive mutilated cycles of transmitted information blocks and received control signals (TEST\_419).

#### 1.2.2.5.3. Required results.

Traffic flow completion is verified by checking received (transmitted) information against the text contained in the test radiogram. The EUT should not initiate the rephasing procedure.

(*The IRS sends «control signal 1/control signal 2» on reception of a mutilated «information block 1/information block 2».*)

[Rec.625,Ann.1; 3.7.5; 3.7.6]

(On receipt of a mutilated control signal, the ISS sends a block containing three «signal repetitions».)

[Rec.625,Ann.1; 3.7.10]

(With continuously mutilated reception of information blocks or control signals, both stations revert to the «rephase» condition after 32 continuously repeated cycles)

[Rec.625,Ann1; 3.7.12.1]





Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Comment
		OK	NO	
1	While receiving the test radiogram, the TE generates sets of more than 32 consecutive mutilated cycles of received information blocks. The EUT should change to the rephasing procedure.	X		
2	While receiving the test radiogram, the TE generates sets of more than 32 consecutive mutilated cycles of transmitted control signals. The EUT should change to the rephasing procedure.	X		
3	While receiving the test radiogram, the TE generates sets of more than 32 consecutive mutilated cycles of received information blocks and transmitted control signals. The EUT should change to the rephasing procedure.	X		
4	While transmitting the test radiogram, the TE generates sets of more than 32 consecutive mutilated cycles of transmitted information blocks. The EUT should change to the rephasing procedure.	X		
5	While transmitting the test radiogram, the TE generates sets sets of more than 32 consecutive mutilated cycles of received control signals. The EUT should change to the rephasing procedure.	X		
6	While transmitting the test radiogram, the TE generates sets sets of more than 32 consecutive mutilated cycles of transmitted information blocks and received control signals. The EUT should change to the rephasing procedure.	X		

yes



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 1.2.2.6. The time-out procedure test

(TEST\_420-TEST\_425). [Rec. ITU-R M.625-3, Ann.1; n.3.7.12.1]

#### 1.2.2.6.1 Definition.

The ability to cancel communication in the case of prolonged consecutive mutilations.

#### 1.2.2.6.2. Method of measurement.

The EUT in the traffic flow mode: the EUT as the sending (ISS) and the TE as the receiving station (IRS). The EUT is set to transmit the test radiogram from buffer. While receiving the test radiogram, the TE generates sets of more than 32 consecutive mutilated cycles of

- a) received information blocks (TEST\_420);
- b) transmitted control signals (TEST\_421);
- c) received information blocks and transmitted control signals (TEST\_422).

The EUT is switched to reception and the TE to transmission. The TE is set to transmit the test radiogram from buffer. While transmitting the test radiogram, the TE generates sets of more than 32 consecutive mutilated cycles of

- a) transmitted information blocks (TEST\_423);
- b) received control signals (TEST\_424);
- c) transmitted information blocks and received control signals (TEST\_425).

#### 1.2.2.6.3. Required results.

The process involved in the time-out procedure and change to rephasing.

(With continuously mutilated reception of information blocks or control signals, both stations revert to the «rephase» condition after 32 continuously repeated cycles) [Rec.625,Ann.1; 3.7.12.1]





Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	N Item		sult	Comment
		OK	NO	
1	While receiving the test radiogram, the TE generates sets of more than 32 consecutive mutilated cycles of received information blocks. The EUT should change to the rephasing procedure.	X		
2	While receiving the test radiogram, the TE generates sets of more than 32 consecutive mutilated cycles of transmitted control signals. The EUT should change to the rephasing procedure.	X		
3	While receiving the test radiogram, the TE generates sets of more than 32 consecutive mutilated cycles of received information blocks and transmitted control signals. The EUT should change to the rephasing procedure.	X		
4	While transmitting the test radiogram, the TE generates sets of more than 32 consecutive mutilated cycles of transmitted information blocks. The EUT should change to the rephasing procedure.	X		
5	While transmitting the test radiogram, the TE generates sets sets of more than 32 consecutive mutilated cycles of received control signals. The EUT should change to the rephasing procedure.	X		
6	While transmitting the test radiogram, the TE generates sets sets of more than 32 consecutive mutilated cycles of transmitted information blocks and received control signals. The EUT should change to the rephasing procedure.	X		

The equipment meets the requirements (yes / no /n.a)	ye
	,

yes



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### **1.2.3.** The rephasing procedure.

## 1.2.3.1. General rephasing test

(TEST\_426 - TEST\_427). [Rec. ITU-R M.625-3, Ann.1; n.3.7.12.1]

#### 1.2.3.1.1. Definition.

The ability to perform the rephasing procedure.

#### 1.2.3.1.2. Method of measurement.

The EUT in the traffic flow mode, acting as the sending station (ISS) with the TE as the receiving station (IRS). The EUT is set to transmit the test radiogram from buffer. The TE generates sets of more than 32 consecutive mutilated cycles (TEST\_426) of

- a) received information blocks;
- b) transmitted control signals;
- c) received information blocks and transmitted control signals.

The EUT changes to the rephasing procedure. Cases a), b), c) are repeated until the test radiogram transmission is completed.

The EUT changes to reception and the TE to transmission. The TE is set to transmit the test radiogram from buffer. While transmitting the test radiogram, the TE generates sets of more than 32 consecutive mutilated cycles (TEST\_427) of

- a) transmitted information blocks;
- δ) received control signals;
- B) transmitted information blocks and received control signals.

The EUT changes to the rephasing procedure. Cases a), b), c) are repeated until the test radiogram transmission is completed.

#### 1.2.3.1.3. Required results.

Texts contained in the test- and received (transmitted) radiograms are compared. The texts should be identical.

(With continuously mutilated reception of information blocks or control signals is, both stations revert to the «rephase» condition after 32 continuously repeated cycles) [Rec.625,Ann.1; 3.7.12.1]





Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Comment	
		OK	NO		
1	The EUT is set to transmit the test radiogram from buffer. While receiving the test radiogram, the TE generates sets of more than 32 consecutive mutilated cycles of received information blocks and transmitted control signals. The EUT changes to the rephasing procedure and repeated until the end of test radiogram reception	X			
2	The TE is set to transmit the test radiogram from buffer. While transmitting the test radiogram, the TE generates sets sets of more than 32 consecutive mutilated cycles of transmitted information blocks and received control signals. The EUT changes to the rephasing procedure and repeated until the end of test radiogram reception	X			

quipment meets the requirements (yes / no /n.a) yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

# **1.2.3.2.** Test for the end-of-communication procedure in automatic identification

(TEST\_428-TEST\_431). [Rec. ITU-R M.625-3, Ann.1, n.3.8.6]

#### 1.2.3.2.1. Definition.

The EUT changes to the rephasing procedure with 7 -signal call identity. During the cycle of identification, the TE generates the «end-of-communication block». Reverting to rephase cycle is verified.

#### 1.2.3.2.2. Method of measurement.

The EUT in the rephasing condition. The TE changes to the rephasing procedure with 7 -signal call identity. During the identification cycle, the TE generates the «end-of-communication block»

- a) in the «identification block 1» position (TEST\_428);
- b) in the «identification block 2» position (TEST\_429);
- c) in the «identification block 3» position (TEST\_430);
- d) in the «end-of- automatic identification block» position (TEST\_431).

#### 1.2.3.2.3. Required results.

The EUT sends «control signal 1» and reverts to rephasing with subsequent reversion to phasing.

(On receipt of a block containing three «idle signal  $\alpha$ », the slave station sends one «control signal 1» and remains in the «rephase» condition.)

[Rec.625,Ann.1; 3.8.6]



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item Result		sult	Comment	
		OK	NO		
1	During the identification cycle, the TE generates the «end- of-communication block» in the «identification block 1» position. The EUT sends «control signal 1» and reverts to rephasing with subsequent reversion to phasing.	X			
2	During the identification cycle, the TE generates the «end- of-communication block» in the «identification block 2» position. The EUT sends «control signal 1» and reverts to rephasing with subsequent reversion to phasing.	X			
3	During the identification cycle, the TE generates the «end- of-communication block» in the «identification block 1» position. The EUT sends «control signal 3» and reverts to rephasing with subsequent reversion to phasing.	X			
4	During the identification cycle, the TE generates the «end- of-communication block» in the «end-of- automatic identification block» position. The EUT sends «control signal 1» and reverts to rephasing with subsequent reversion to phasing.	X			

The equipment meets the requirements (yes / no /n.a) yes	
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Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

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#### 1.2.3.3.Test for mutilated signal reception in the automatic identification procedure

(TEST\_432-TEST\_437). [Rec. ITU-R M.625-3, Ann.1, n.3.8]

#### 1.2.3.3.1. Definition.

The ability to perform automatic identification with mutilated reception channel.

## 1.2.3.3.2. Method of measurement.

Test radiogram transmission is maintained between the EUT and TE.

The EUT and TE initiate the rephasing procedure with 7-signal identity. In the process of automatic identification the TE generates:

a) a set of up to 32 consecutive mutilated «call signal blocks», identification blocks 1, 2, 3, and the "end-of-automatic identification block" (TEST\_432);

b) a set of up to 32 consecutive mutilated check-sum signals 1, 2, 3 and «control signal 1(3)» (TEST 433);

c) a set of up to 32 consecutive mutilated identification blocks 1, 2, 3, the endof-automatic identification block and check-sum signals 1, 2, 3, and control signal 1(3) (TEST 434);

d) a set of more than 32 consecutive mutilated call blocks (TEST\_435);

e) a set of more than 32 consecutive mutilated identification blocks (TEST\_436);

f) a set of more than 32 consecutive mutilated check-sum signals (TEST\_437); The EUT and TE initiate the rephasing procedure with 4-signal call identity. During rephasing, the TE generates:

g) a set of more than 32 consecutive mutilated call blocks (TEST 435);

#### 1.2.3.3.3. Required results.

For cases a), b), c), the EUT should complete the automatic identification procedure successfully; and for cases d), e), f), g), on completing 32 cycles, change to «standby».

Texts contained in transmitted and received radiograms should be identical.



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item Result OK NO		esult Comment	
			NO	
1	During the automatic identification process with rephasing, the TE generates a set of up to 32 continuously mutilated «call signal blocks», identification blocks 1, 2, 3, and the "end-of-automatic identification block". The EUT should complete the automatic identification procedure with rephasing successfully.	X		
2	During the automatic identification process with rephasing, the TE generates a set of up to 32 consecutive mutilated check-sum signals 1, 2, 3 and «control signal 1(3)». The EUT should complete the automatic identification procedure with rephasing successfully.	X		
3	During the automatic identification process with rephasing, the TE generates a set of up to 32 consecutive mutilated identification blocks 1, 2, 3, the end-of-automatic identification block and check-sum signals 1, 2, 3, and control signal 1(3). The EUT should complete the automatic identification procedure with rephasing successfully.	×		
4	During the automatic identification process with rephasing, the TE generates a set of more than 32 consecutive mutilated call blocks. The EUT should complete the automatic identification procedure with rephasing successfully.	X		
5	During the automatic identification process with rephasing, the TE generates a set of more than 32 consecutive mutilated identification blocks. The EUT should complete the automatic identification procedure with rephasing successfully.	X		
6	During the automatic identification process with rephasing, the TE generates a set of more than 32 consecutive mutilated check-sum signals. The EUT should complete the automatic identification procedure with rephasing successfully.	X		
7	During the automatic identification process with rephasing, the TE generates a set of more than 32 consecutive mutilated call blocks. The EUT should complete the automatic identification procedure with rephasing successfully.	X		

The equipment meets the requirements (yes / no /n.a) yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

# 2. Collective FEC mode: Operational procedures

[ETS 300 067, n.12]

#### 2.1. The sending station.

#### 2.1.1. Phasing procedure.

#### 2.1.1.1. General phasing test

(TEST\_500). [Rec. ITU-R M.625-3, Ann.1; n.4.4.2]

#### 2.1.1.1.1. Definition.

Phasing sequence content.

#### 2.1.1.1.2. Method of measurement.

The TE in the "stand-by" condition. The EUT changes to phasing. During the phasing process, keying (teleprinter) attempts are made.

#### 2.1.1.1.3. Required results.

The TE should change from "stand-by" to « Collective FEC mode» the receiving station. Information can only be transmitted with at least sixteen "phasing signal 1"/ "phasing signal 2" pairs generated.

(The station required to transmit information becomes the sending station and sends alternately «phasing signal 2» and «phasing signal 1», whereby «phasing signal 2» is transmitted in the DX position and «phasing signal 1» in the RX position. At least sixteen pairs should be transmitted.)

[Rec.625,Ann.1; 4.4.2]

Ν	Item	Result		Comment
		OK	NO	
1	The TE should change from "stand-by" to « Collective FEC mode» the receiving station.	X		
2	Information can only be transmitted with at least sixteen "phasing signal 1"/ "phasing signal 2" pairs generated	X		50 pairs

equipment meets the requirements (yes / no /n.a) yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 2.1.2. The traffic flow procedure.

#### 2.1.2.1. General traffic flow test

(TEST\_501). [Rec. ITU-R M.625-3, Ann.1; n.4.6]

#### 2.1.2.1.1. Definition.

General traffic flow procedures.

#### 2.1.2.1.2. Method of measurement.

The TE in the «stand-by» condition. The EUT changes to the traffic flow mode. Test radiogram is transmitted using keyboard and buffer

#### 2.1.2.1.3. Required results.

Texts contained in reeceived- and test radiograms are compared. The texts should be identical.

Ν	Item	Result		Comment
		OK	NO	
1	The EUT should be capable of performing general traffic flow procedures	X		
2	The EUT should be capable of transmitting information using keying (teleprinter) or buffer.		X	See 1.1.2.1
3	There are facilities to compose and verify messages of at least 4000 characters before transmission [ETS 300 067, n.2.7]		X	See 1.1.2.1
4	There should be no mutilations in the received by TE radiogram as compared to the initial text		X	See 1.1.2.1

The equipment meets the requirements (yes / no /n.a) no	The equipment meets the requirements (yes / no /n.a)	no
---	--	----



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 2.1.2.2. Test for the phasing signal generation in the traffic flow

(TEST\_502). [Rec. ITU-R M.625-3,Ann.1; n.4.6.2]

#### 2.1.2.2.1. Definition.

Generation of phasing signal sets in the traffic flow.

#### 2.1.2.2.2. Method of measurement.

The EUT and TE in the traffic flow mode. Keyboard (teleprinter) and then EUTbuffered transmission of the test radiogram containing over 500 signalls.

#### 2.1.2.2.3. Required results.

The TE verifies the presence of at least four consecutive "phasing signal 1"/" phasing signal 2" pairs preceding every hundred signals in the traffic flow.

(A sending station in the collective FEC mode sends, during breaks in the information flow, «phasing signal 1» and «phasing signal 2» in the RX and DX position respectively. At least one sequence in four consecutive phasing signal pairs should occur for every 100 signals sent in the DX position during traffic flow.)

[Rec.625,Ann.1; 4.6.2]

Ν	ltem	Result		Comment
		OK	NO	
1	At least one sequence in four consecutive phasing signal pairs should occur for every 100 signals sent in the DX position during traffic flow	X		For every 50 signals

The equipment meets the requirements (yes / no /n.a)	yes
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NBDP TEST		
<b>RES Laboratory</b>		
StPetersburg, Russia		

Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 2.1.3. The end-of-transmission procedure.

#### 2.1.3.1. The end-of-transmission test

(TEST\_503). [Rec. ITU-R M.625-3,Ann.1; n.4.6.7.1]

#### 2.1.3.1.1. Definition.

The «end-of-transmission» signal format.

#### 2.1.3.1.2. Method of measurement.

The EUT and TE in the traffic flow mode. The EUT performs the end-of-communication procedure.

#### 2.1.3.1.3. Required results.

The TE verifies «end-of-transmission» signals of at least 2 sec.

(A sending station in the collective FEC mode should terminate the transmission by sending at least 2-sec. consecutive «idle signal  $\alpha$ » immediately following the last transmitted traffic information signals after which the station reverts to the «stand-by» condition.)

[Rec.625,Ann.1; 4.6.7.1]

Ν	Item	Result		Comment
		OK	NO	
1	The EUT in the collective FEC mode should terminate the transmission by sending at least 2-sec. consecutive «idle signal $\alpha$ » immediately following the last transmitted traffic information signals after which the station reverts to the «stand-by» condition	X		2.5 sec

The equipment meets the requirements (yes / no /n.a)	yes
	,00



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

## 2.2. The receiving station

#### 2.2.1. The phasing procedure

#### 2.2.1.1. General phasing test

(TEST\_600). [Rec. ITU-R M.625-3,Ann.1; n.4.4.3]

#### 2.2.1.1.1. Definition.

EUT phasing capacity.

#### 2.2.1.1.2. Method of measurement.

The EUT in the "stand-by" condition, with the TE in the sending station - phasing condition.

#### 2.2.1.1.3. Required results.

The EUT should change from "stand-by" to the receiving station collective FEC mode.

(On receipt of the «phase signal 1»/«phase signal 2» or the «phase signal 2»/«phase signal 1» sequence with «phasing signal 1» determining the DX position and «phasing signal 1» the RX position, and at least two more phasing signals in the appropriate position, the station changes to the receiving station collective FEC mode condition and offers continuous stop-polarity to the line output terminal until either the traffic information signal «←» (combination No.27) or «=» (combination No.28) is received.

[Rec.625,Ann.1; 4.4.3]





Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Comment
		OK	NO	
1	On receipt of the «phase signal 1»/«phase signal 2» or the «phase signal 2»/«phase signal 1» sequence with «phasing signal 1» determining the DX position and «phasing signal 1» the RX position, and at least two more phasing signals in the appropriate position, the station changes to the receiving station collective FEC mode condition and offers continuous stop-polarity to the line output terminal until either the traffic information signal «←» (combination No.27) or «=» (combination No.28) is received.		×	(13)
2	Visual indicators shall be available to indicate that a call is detected (CALLED)	X		

(13)

EUT passes from Stand-by in CBRS Broadcast FEC only after reception of symbols Carriage return or Line Feed while it is required after performance of procedure of synchronization.

[ITU-R M.625-3,Ann.1, n.4.4.3]

The equipment meets the requirements (yes / no /n.a)	no
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 2.2.1.2. The end-of-phasing test

(TEST\_601). [Rec. ITU-R M.625-3,Ann.1; n.4.4.3] [Rec. ITU-R M.625-3,Ann.1; n.4.6.4]

#### 2.2.1.2.1. Definition.

The "start printing" capacity.

#### 2.2.1.2.2. Method of measurement.

The EUT in the "stand-by" condition. The TE changes to phasing. TE keyes in the information, excluding the "line feed" ( $\ll$  (combination No.28)) and "carriage return" ( $\ll$  (combination No.27)). Within a specified time interval, the "carriage return"/"line feed" combination is transmitted and the information is keyed in again.

#### 2.2.1.2.3. Required results.

On completing phasing, the EUT should not start printing the information until the "carriage return"/"line feed" signals have been received.

(On receipt of the «phase signal 1»-«phase signal 2» or the «phase signal 2»-«phase signal 1» sequence with «phasing signal 1» determining the DX position and «phasing signal 1» the RX position and least two more phasing signals in the appropriate position, the station changes to the receiving station collective FEC mode condition and offers continuous stop-polarity to the line output terminal until either the traffic information signal «←» (combination No.27) or the «=» (combination No.28) is received.

[Rec.625,Ann.1; 4.4.3]

(On receipt of either the traffic combination signal « $\leftarrow$ » (combination No.27) or the «=» (combination No.28), the receiving station starts printing received traffic information signals.)

[Rec.625,Ann.1; 4.6.4]

Ν	Item	Result		Comment
		OK	NO	
1	On receipt of either the traffic combination signal «←» (combination No.27) or the «≡» (combination No.28), the EUT starts printing received traffic information signals.	X		

he equipment meets the requirements (yes / no /n.a)	yes
ne equipment meets the requirements (yes / no /n.a)	yes



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 2.2.2. The traffic flow procedure.

#### 2.2.2.1. General traffic flow test

(TEST\_602). [Rec. ITU-R M.625-3, Ann.1, n.4.6]

#### 2.2.2.1.1. Definition.

General traffic flow procedures.

#### 2.2.2.1.2. Method of measurement.

The EUT in the "stand-by" and the TE in the transmitting station collective FEC condition. With phasing completed, the text contained in the test radiogram is transmitted using TE buffer. The EUT receives and prints out the information.

#### 2.2.2.1.3. Required results.

The EUT should be able to perform general traffic flow procedures, with information output to buffer (printer). There should be no mutilations in the received radiogram as compared to the initial text.

Ν	Item	Result		Comment
		OK	NO	
1	The EUT should be capable of performing general traffic flow procedures	X		
2	The EUT should be capable of receiving information using printer or buffer.	X		
3	There should be no mutilations in the received by EUT radiogram as compared to the initial text		X	See 1.1.2.1

The equipment meets the requirements (yes / no /n.a)	no
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 2.2.2.2. Error-correcting code test

(TEST\_603-TEST\_605). [Rec. ITU-R M.625-3,Ann.1; n.4.3] [Rec. ITU-R M.625-3,Ann.1; n.4.6.5]

#### 2.2.2.2.1. Definition.

The ability to correct mutilated signals.

#### 2.2.2.2.2. Method of measurement.

The EUT and TE in the traffic flow mode. The TE transmits the test radiogram from buffer, generating the following mutilated types:

a) mutilated signal in the DX- and true signal in the RX position. A single bit error is alternately developed in each bit of the 7-unit signal (TEST\_603);

b) true signal in the DX- and mutilated signal in the RX position. A single bit error is alternately developed in each bit of the 7-unit signal(TEST\_603);

c) true signal in the DX position appears as nonmutilated in RX though differing from that in DX, and vice versa - the DX signal appears as nonmutilated though differing from the true signal in RX (TEST\_604);

d) signals in DX and RX mutilated in a different manner. (TEST\_605).

e) signals in DX and RX mutilated in the same manner. (TEST\_606).

The mutilations should be scarce so as not to affect phasing.

#### 2.2.2.2.3. Required results.

In cases a), b) the EUT should detect mutilations and derive the true signal; and in cases c), d), e) detect mutilations and print out the «error character».

(The receiving station checks both signals (DX and RX) and uses the unmutilated one. When both signals appear as unmutilated but different, then both signals should be considered as mutilated.)

[Rec.625,Ann.1; 4.3]

(The receiving station checks both signals received in the DX and RX position, printing a  $\ll \Delta \gg$  (combination No.31)), or alternatively an «error character» (to be user defined); in both DX and RX signals are mutilated or appear unmutilated but are different.)

[Rec.625,Ann.1; 4.6.5]





Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	N Item		sult	Comment
		OK	NO	
1	The TE transmits the test radiogram from buffer, generating the mutilated types: mutilated signal in the DX- and true signal in the RX position. A single bit error is alternately developed in each bit of the 7-unit signal. The EUT should detect mutilations and derive the true signal.	X		
2	The TE transmits the test radiogram from buffer, generating the mutilated types: true signal in the DX- and mutilated signal in the RX position. A single bit error is alternately developed in each bit of the 7-unit signal. The EUT should detect mutilations and derive the true signal.	X		
3	The TE transmits the test radiogram from buffer, generating the mutilated types: true signal in the DX position appears as nonmutilated in RX though differing from that in DX, and vice versa - the DX signal appears as nonmutilated though differing from the true signal in RX. The EUT should detect mutilations and print out the «error character».	X		Note 1
4	The TE transmits the test radiogram from buffer, generating the mutilated types: signals in DX and RX mutilated in a different manner. The EUT should detect mutilations and print out the «error character».	X		
5	The TE transmits the test radiogram from buffer, generating the mutilated types: signals in DX and RX mutilated in the same manner. The EUT should detect mutilations and print out the «error character».	X		

Note 1: Error character is "\_".

The equipment meets the requirements (yes / no /n.a)	yes
····· • • • • • • • • • • • • • • • • •	,



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 2.2.2.3. Interrupted phasing test

(TEST\_607). [Rec. ITU-R M.625-3,Ann.1; n.4.6.6]

#### 2.2.2.3.1. Definition.

The ability to cancel reception with continuous mutilations within the specified time.

#### 2.2.2.3.2. Method of measurement.

The EUT and TE in the traffic flow mode. The TE transmits the test radiogram from buffer, generating mutilated signal sequences.

#### 2.2.2.3.3. Required results.

The EUT should change from the traffic flow procedure to "stand-by". Comparison of the test radiogram with received information will indicate the percentage of mutilated signals received within the specified time that will affect phasing.

(A receiving station reverts to the «stand-by» condition if, during a predetermined time, the percentage of mutilated signals received has reached a predetermined value.)

[Rec.625,Ann.1; 4.6.6]

Ν	Item	Result		Comment
		OK	NO	
1	The EUT reverts to the «stand-by» condition if, during a predetermined time, the percentage of mutilated signals received has reached a predetermined value.	X		
2	The percentage of mutilated signals and a predetermined time when EUT reverts to the «stand-by» condition.	N.T.	N.T.	

The equipment meets the requirements (yes / no /n.a) ye	es
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 2.2.2.4. The rephasing capacity test

(TEST\_608) [Rec. ITU-R M.625-3,Ann.1; n.4.6.2]

#### 2.2.2.4.1. Definition.

The capacity to rephase during the traffic flow.

#### 2.2.2.4.2. Method of measurement.

The EUT and TE in the traffic flow mode. The TE transmits the test radiogram from buffer, generating mutilated signal sequences initiating EUT change to «stand-by». Every hundred transmitted signals in DX are preceded by a sequence of four consecutive phasing signal 1/2pairs.

#### 2.2.2.4.3. Required results.

The EUT should change to "stand-by" but on transmitting to the TE a phasing signal sequence, revert to the phasing procedure.

(A sending station in the collective FEC mode sends, during breaks in the information flow, «phasing signal 1» and «phasing signal 2» in the RX and DX position respectively. At least one sequence of four consecutive phasing signal pairs should occur for every 100 signals sent in the DX position during traffic flow.)

[Rec.625,Ann.1; 4.6.2]

Ν	Item	Result		Comment
		OK	NO	
1	The EUT should change to "stand-by" but on transmitting to the TE a phasing signal sequence, revert to the phasing procedure.	X		

The equipment meets the requirements (yes / no /n.a)	yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 2.2.3. The end-of transmission procedure.

#### 2.2.3.1. The end-of transmission procedure test

(TEST\_609 - TEST\_610). [Rec. ITU-R M.625-3, Ann.1, n.4.6.7.2]

#### 2.2.3.1.1. Definition.

The ability to terminate the traffic flow procedure on receiving the end-of transmission signals.

#### 2.2.3.1.2. Method of measurement.

The EUT and TE in the traffic flow mode. The TE generates

- a) for two secs, end-of transmission sequence; (TEST\_610)
- b) two consecutive «idle signals  $\alpha$ » in the DX position (TEST\_609)

#### 2.2.3.1.3. Required results.

On receiving the end-of transmission sequence, the EUT should change to "stand-by" both for a) and b).

(The receiving station reverts to the «stand-by» condition not later than 210 ms after receipt of at least two consecutive «idle signals  $\alpha$ » in the DX position) [Rec. ITU-R M.625-3, Ann.1, n.4.6.7.2]

Ν	Item	Result		Comment
		OK	NO	
1	On receiving the 2 secs, end-of transmission sequence, the EUT should change to "stand-by"	X		
2	On receiving the two consecutive «idle signals $\alpha$ » in the DX position, the EUT should change to "stand-by"	X		

The equipment meets the requirements (yes / no /n.a)	yes



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

# **3. Selective FEC mode: Operational procedures**

[ETS 300 067, n.12]

## 3.1. The sending station.

## 3.1.1. Selective calling procedure

## 3.1.1.1. General phasing procedure test

(TEST\_700). [Rec. ITU-R M.625-3, Ann.1, n.4.5]

## 3.1.1.1.1. Definition.

The ability to generate phasing and call signal sequences.

## 3.1.1.1.2. Method of measurement.

The TE in the "stand-by" condition. The EUT changes to the phasing procedure for a) 4-signal call identity;

b) 7-signal call identity,

assigned to the TE. During the phasing process, keyboard (teleprinter) transmission is attempted.

#### 3.1.1.1.3. Required results.

The EUT and TE phasing process is verified for

a) 4-signal call identity;

b) 7-signal call identity.

The TE should change from «stand-by» to the receiving station condition in selective FEC mode. Information can only be transmitted on phasing, including at least sixteen "phasing signal 1/phasing signal 2" pairs and six selective call signals.



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Re	sult	Comment
		OK	NO	
1	The equipment should be capable of operating with 4-digit call identity	X		
2	The equipment should be capable of operating with 5-digit call identity	X		
3	The equipment should be capable of operating with 9-digit call identity	X		
4	The EUT should retain the identity of the other station for the duration of the connection	X		
5	The EUT called station self-identity should be accessible locally	X		

	The equipment meets the requirements (yes / no /n.a)	yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 3.1.1.2. The phasing sequence format test

(TEST\_701). [Rec. ITU-R M.625-3,Ann.1; n.4.4.2]

#### 3.1.1.2.1. Definition

The phasing sequence format.

#### 3.1.1.2.2. Method of measurement.

The TE in the «stand-by» condition. The EUT changes to phasing for

a) 4-signal call identity;

b) 7-signal call identity.

#### 3.1.1.2.3. Required results

The TE should change from «stand-by» to the receiving station condition in selective FEC mode. The phasing sequence should contain at least sixteen "phasing signal 1/phasing signal 2" pairs.

(The station required to transmit information becomes the sending station and sends alternately «phasing signal 2» and «phasing signal 1», whereby «phasing signal 2» is transmitted in the DX position and «phasing signal 1» in the RX position. At least sixteen pairs should be transmitted.)

[Rec.625,Ann.1; 4.4.2]

Ν	Item	Res	sult	Comment
		OK	NO	
1	The phasing sequence should contain at least sixteen "phasing signal 1/phasing signal 2" pairs. (4-signal call ID)	X		50 pairs
2	The phasing sequence should contain at least sixteen "phasing signal 1/phasing signal 2" pairs. (7-signal call ID)	X		50 pairs

The equipment meets the requirements (yes / no /n.a) yes	
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 3.1.1.3. The selective call sequence format test

(TEST\_702). [Rec. ITU-R M.625-3,Ann.1; n.4.5.1] [Rec. ITU-R M.625-3,Ann.1; n.4.5.3]

#### 3.1.1.3.1. Definition.

The call signal format.

#### 3.1.1.3.2. Method of measurement.

The TE in the "stand-by" condition. The EUTchanges to phasing for

a) 4-signal call identity;

b) 7-signal call identity.

#### 3.1.1.3.3. Required results.

The TE should change from «stand-by» to the receiving station condition in selective FEC mode. The phasing sequence should contain six call signals.

(After transmission of the required number of phasing signals, the transmitting station sends the «call signal» consisting of six sequence transmissions, each containing identification signals of the station to be selected followed by an «idle signal  $\beta$ ».) [Rec.625,Ann.1; 4.5.1] (The «call signal» contains either four or seven identification signals as applicable.) [Rec.625,Ann.1; 4.5.3]



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Re	sult	Comment
		OK	NO	
1	After transmission of phasing signals, the EUT sends the «call signal» consisting of six sequence transmissions, each containing identification signals of the station to be selected followed by an «idle signal $\beta$ ». (4 signal call ID)	X		
2	The «call signal» contains four identification signals.			
Z	(4 signal call ID)	X		
3	After transmission of phasing signals, the EUT sends the «call signal» consisting of six sequence transmissions, each containing identification signals of the station to be selected followed by an «idle signal $\beta$ ».	X		
	(7 signal call ID)			
4	The «call signal» contains seven identification signals	X		
	(7 signal call ID)			

e requirements (yes / no /n.a) yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### **3.1.2.** The traffic flow procedure.

**3.1.2.1. General traffic flow test** (TEST\_703). [Rec. ITU-R M.625-3,Ann.1; n.4.6]

3.1.2.1.1. Target features. General traffic flow procedures.

3.1.2.1.2. Testing techniques.

The TE and EUT in the traffic flow condition. The EUT transmits the test radiogram using keying or buffer.

3.1.2.1.3. Required results.

Textual content of received and test radiograms compared. The texts should be identical.

Ν	ltem	Result		Comment	
		OK	NO		
1	The EUT should be capable of performing general traffic flow procedures	X			
2	The EUT should be capable of transmitting information using keying (teleprinter) or buffer.		X	See 1.1.2.1	
3	There are facilities to compose and verify messages of at least 4000 characters before transmission [ETS 300 067, n.2.7]		X	See 1.1.2.1	
4	There should be no mutilations in the received by TE radiogram as compared to the initial text		X	See 1.1.2.1	

The equipment meets the requirements (yes / no /n.a)	no
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 3.1.3. The end-of-transmission procedure.

#### 3.1.3.1. The end-of-transmission test.

(TEST\_704). [Rec. ITU-R M.625-3, Ann.1; n.4.6.7.1]

#### 3.1.3.1.1. Definition.

The end-of-transmission signal formats.

#### 3.1.3.1.2. Method of measurement.

The TE and EUT in the traffic flow mode. The EUT performs the end-of-transmission procedure.

#### 3.1.3.1.3. Required results.

The TE verifies end-of-transmission signals (« idle signal  $\alpha$ » sequences) of at least 2 sec.

(A sending station in the selective FEC mode should terminate the transmission by sending at least 2-sec consecutive «idle signals  $\alpha$ » immediately following the last transmitted traffic information signals, after which the station reverts to the «stand-by» condition.)

[Rec.625,Ann.1; 4.6.7.1]

Ν	Item		sult	Comment
		OK	NO	
1	The EUT in the selective FEC mode should terminate the transmission by sending at least 2-sec. consecutive «idle signal $\alpha$ » immediately following the last transmitted traffic information signals after which the station reverts to the «stand-by» condition	X		

The equipment meets the requirements (yes / no /n.a)	yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 3.2. The receiving station.

# **3.2.1.** The phasing procedure and identification (Selecting calling procedure).

#### 3.2.1.1. General phasing procedure test

(TEST\_800). [Rec. ITU-R M.625-3, Ann.1, n.4.3]

#### 3.2.1.1.1. Definition.

The phasing and identification capacity.

#### 3.2.1.1.2. Method of measurement.

The EUT in the "stand-by" condition, The TE changes to phasing with

- a) 4-signal call identity;
- b) 7-signal call identity.

#### 3.2.1.1.3. Required results.

The EUT should change from "stand-by" to the receiving station in selective FEC mode.

Ν	Item	Res	sult	Comment
		OK	NO	
1	The EUT should change from "stand-by" to the receiving station in selective FEC mode.	X		
	(4-signal call ID)			
2	The EUT should change from "stand-by" to the receiving station in selective FEC mode. (7-signal call ID)	X		
3	Visual indicators shall be available to indicate that a call is detected (CALLED)		X	(14)

(14)

EUT passes from Stand-by in SBRS sel. FEC only after reception of symbols Carriage return or Line Feed while it is required after performance of procedure of synchronization.

#### [ITU-R M.625-3,Ann.1, n.4.5.4]

no



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 3.2.1.2. The mutilated call signals test

(TEST\_801- TEST\_807). [Rec. ITU-R M.625-3,Ann.1; n.4.5.4] [Rec. ITU-R M.625-3,Ann.1; n.4.6.4]

#### 3.2.1.2.1. Definition.

The ability to perform identification with mutilated call signal.

#### 3.2.1.2.2. Method of measurement.

The EUT in the "stand-by" condition, The TE changes to phasing with

- a) 4-signal call identity;
- b) 7-signal call identity.

While transmitting the call signal, the TE mutilates

- a) all but the first identification signal sequence (TEST\_801);
- b) all but the second identification signals sequence (TEST\_802);
- c) all but the third identification signal sequence (TEST\_803);
- d) all but the fourth identification signal sequence (TEST\_804);
- e) all but the fifth identification signal sequence (TEST\_805);
- f) all but the sixth identification signal sequence (TEST\_806);
- g) all the six identification signal sequences (TEST\_807);

#### 3.2.1.2.3. Required results.

For cases a) - f), the EUT should complete the phasing and identification procedure successfully; and for the case g) change to " stand-by ".

(Following unmutilated reception of one complete signal sequence representing inverted identification signals, the station changes to the receiving station selective FEC mode condition and continues offering stop polarity to the line output terminal until either the traffic information signal « $\leftarrow$ » (combination No.27) or «=» (combination No.28) is received.)

[rec.625,Ann.1; 4.5.4]

(On receipt of either the traffic combination signal « $\leftarrow$ » (combination No.27) or «=» (combination No.28), the receiving station starts printing the received traffic information signals.)

[Rec.625,Ann.1; 4.6.4]



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Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

NBDP TEST

Ν	Item	Re	sult	Comment
		OK	NO	
1	While transmitting the call signal, the TE mutilates all but the first identification signal sequence. The EUT should complete the phasing and identification procedure successfully. (4-signal call ID)	X		
2	While transmitting the call signal, the TE mutilates all but the second identification signal sequence. The EUT should complete the phasing and identification procedure successfully. (4-signal call ID)	X		
3	While transmitting the call signal, the TE mutilates all but the third identification signal sequence. The EUT should complete the phasing and identification procedure successfully. (4-signal call ID)	X		
4	While transmitting the call signal, the TE mutilates all but the fourth identification signal sequence. The EUT should complete the phasing and identification procedure successfully.	X		
5	<ul><li>(4-signal call ID)</li><li>While transmitting the call signal, the TE mutilates all but the fifth identification signal sequence. The EUT should complete the phasing and identification procedure successfully.</li><li>(4-signal call ID)</li></ul>	X		
6	While transmitting the call signal, the TE mutilates all but the sixth identification signal sequence. The EUT should complete the phasing and identification procedure successfully. (4-signal call ID)	X		
7	While transmitting the call signal, the TE mutilates all the the six identification signal sequence. The EUT should complete the phasing and identification procedure successfully. (4-signal call ID)	X		





Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item		sult	Comment
			NO	
8	While transmitting the call signal, the TE mutilates all but the first identification signal sequence. The EUT should complete the phasing and identification procedure successfully. (7-signal call ID)	X		
9	While transmitting the call signal, the TE mutilates all but the second identification signal sequence. The EUT should complete the phasing and identification procedure successfully. (7-signal call ID)	X		
10	While transmitting the call signal, the TE mutilates all but the third identification signal sequence. The EUT should complete the phasing and identification procedure successfully. (7-signal call ID)	X		
11	While transmitting the call signal, the TE mutilates all but the fourth identification signal sequence. The EUT should complete the phasing and identification procedure successfully.	X		
12	(7-signal call ID) While transmitting the call signal, the TE mutilates all but the fifth identification signal sequence. The EUT should complete the phasing and identification procedure successfully.	X		
13	<ul> <li>(7-signal call ID)</li> <li>While transmitting the call signal, the TE mutilates all but the sixth identification signal sequence. The EUT should complete the phasing and identification procedure successfully.</li> <li>(7-signal call ID)</li> </ul>	X		
14	While transmitting the call signal, the TE mutilates all the the six identification signal sequence. The EUT should complete the phasing and identification procedure successfully. (7-signal call ID)	X		

The equipment meets the requirements (yes / no /n.a)	yes



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

#### 3.2.1.3. The end-of-phasing test.

(TEST\_808). [Rec. ITU-R M.625-3,Ann.1; n.4.5.4] [Rec. ITU-R M.625-3,Ann.1; n.4.6.4]

#### 3.2.1.3.1. Definition.

The printout capacity.

#### 3.2.1.3.2. Method of measurement.

The EUT is in the "stand-by " condition. The TE changes to phasing with

- a) 4-signal call identity;
- b) 7-signal call identity.

#### 3.2.1.3.3. Required results.

On completing the phasing procedure, the EUT should not print out the information until receiving the "carriage return"(( $\ll$ » (combination No.27)) - "line feed"( $\ll$ » (combination No.28)) signals.

(Following unmutilated reception of one complete signal sequence representing inverted identification signals, the station changes to the receiving station selective FEC mode condition and continues offering stop polarity to the line output terminal until either the traffic information signal « $\leftarrow$ » (combination No.27) or « $\equiv$ » (combination No.28) is received.)

[Rec.625,Ann.1; 4.5.4]

(On receipt of either the traffic combination signal « $\leftarrow$ » (combination No.27) or «=» (combination No.28), the receiving station starts printing the received traffic information signals.)

[Rec.625,Ann.1; 4.6.4]



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Comment
		OK	NO	
1	On receipt of either the traffic combination signal «←» (combination No.27) or the «≡» (combination No.28), the EUT starts printing received traffic information signals. (4-signal call ID)	X		
2	On receipt of either the traffic combination signal «←» (combination No.27) or the «≡» (combination No.28), the EUT starts printing received traffic information signals. (7-signal call ID)	X		

The equipment meets the requirements (yes / no /n.a)	yes
	<b>, , , , , , , , , ,</b>



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Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

### **3.2.2.** The traffic flow procedure.

### 3.2.2.1. General traffic flow test

(TEST\_809). [rec. ITU-R M.625-3, Ann.1, n.4.6]

### 3.2.2.1.1. Definition.

General traffic flow procedures.

### 3.2.2.1.2. Method of measurement.

The EUT in the "stand-by" condition, the TE changing to the traffic flow mode with

- a) 4-signal call identity;
- b) 7-signal call identity.

The TE transmits the text contained in the test radiogram from buffer. The EUT receives and prints out the information.

### 3.2.2.1.3. Required results.

The EUT should be able to perform the general traffic flow procedures, with output to buffer (printer). There should be no mutilations in the received radiogram as compared to the initial text.



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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item		sult	Comment
		OK	NO	
1	The EUT should be capable of performing general traffic flow procedures	X		
	(4-signal call ID)			
2	The EUT should be capable of receiving information using printer or buffer. (4-signal call ID)	X		
3	There should be no mutilations in the received by EUT radiogram as compared to the initial text	X		
	(4-signal call ID)			
4	The EUT should be capable of performing general traffic flow procedures	X		
	(7-signal call ID)			
5	The EUT should be capable of receiving information using printer or buffer.		x	See 1.1.2.1
	(7-signal call ID)			
6	There should be no mutilations in the received by EUT radiogram as compared to the initial text		x	See 1.1.2.1
	(7-signal call ID)			

The equipment meets the requirements (yes / no /n.a)	no	
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

### 3.2.2.2. Interrupted phasing test

(TEST\_810). [Rec. ITU-R M.625-3,Ann.1; n.4.6.6]

### 3.2.2.2.1. Definition.

The ability to cancel reception with continuous mutilations within a specified time interval.

### 3.2.2.2.2. Method of measurement.

The EUT and TE in the traffic flow mode for

a) 4 - signal identity;

b) 7 - signal identity.

The TE transmits the test radiogram from buffer, while generating mutilated signal sequences.

### 3.2.2.2.3. Required results.

The EUT should change from the traffic flow procedure to "stand-by". Comparison of textual content in the test radiogram and received information indicates the percentage of mutilated reception within a specified time interval that will affect phasing.

(A receiving station reverts to the «stand-by» condition if, during a predetermined time, the percentage of mutilated signals received has reached a predetermined value.)

[*Rec.625*,*Ann.1*; 4.6.6]



Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

NBDP TEST

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Ν	Item	Result		Item Result Comme		Comment
		OK	NO			
1	The EUT reverts to the «stand-by» condition if, during a predetermined time, the percentage of mutilated signals received has reached a predetermined value. (4-signal call ID)	X				
2	The percentage of mutilated signals and a predetermined time when EUT reverts to the «stand-by» condition.	X				
	(4-signal call ID)					
3	The EUT reverts to the «stand-by» condition if, during a predetermined time, the percentage of mutilated signals received has reached a predetermined value.	X				
	(7-signal call ID)					
4	The percentage of mutilated signals and a predetermined time when EUT reverts to the «stand-by» condition.	X				
	(7-signal call ID)					

The equipment meets the requirements (yes / no /n.a) yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

### 3.2.2.3. The of error-correcting code test

(TEST\_811-TEST\_814). [Rec. ITU-R M.625-3,Ann.1; n.4.3] [Rec. ITU-R M.625-3,Ann.1; n.4.6.5]

### 3.2.2.3.1. Definition.

The ability to correct mutilated signals.

### 3.2.2.3.2. Method of measurement.

The EUT and TE in the traffic flow mode. The TE transmits the test radiogram from buffer, while generating the following mutilated types:

a) mutilated signal in the DX- and true signal in the RX position. A single-bit error is alternately developed in all 7-unit signals (TEST\_811);

b) true signal in the DX - and mutilated one in the RX position. A single-bit error is alternately developed in all 7-unit signals (TEST\_811);

c) true signal in the DX- and a signal appearing as nonmutilated in the RX position though differing from the DX signal, and vice versa, a DX signal appearing as nonmutilated while differing from the true one in the RX position. (TEST\_812);

d) signals in DX and RX positions mutilated in a different manner. (TEST\_813).

e) signals in DX and RX  $\,$  positions mutilated in the same manner. (TEST\_814).

The mutilations should be scarce so as not to affect phasing.

For cases a), b), the EUT should detect mutilations and derive the true signal; and for cases c), d), e) detect the mutilation and print out the "error character".

### 3.2.2.2.3. Required results.

For cases a), b), the EUT should detect mutilations and derive the true signal; and for cases c), d), e) detect the mutilation and print out the "error character".

(The receiving station checks both signals (DX and RX), using the unmutilated one. Both signals appearing as unmutilated but differing should be considered as mutilated.)

[Rec.625,Ann.1; 4.3] (The receiving station checks both signals received in the DX and RX position and prints a  $\ll \Delta$ » (combination No.31)) or alternatively an «error character» (to be user defined) in both DX and RX signals are mutilated or appear unmutilated but are different.)

[Rec.625,Ann.1; 4.6.5]





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Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	N Item		sult	Comment
			NO	
1	The TE transmits the test radiogram from buffer, generating the mutilated types: mutilated signal in the DX- and true signal in the RX position. A single bit error is alternately developed in each bit of the 7-unit signal. The EUT should detect mutilations and derive the true signal.	X		
2	The TE transmits the test radiogram from buffer, generating the mutilated types: true signal in the DX- and mutilated signal in the RX position. A single bit error is alternately developed in each bit of the 7-unit signal. The EUT should detect mutilations and derive the true signal.	X		
3	The TE transmits the test radiogram from buffer, generating the mutilated types: true signal in the DX position appears as nonmutilated in RX though differing from that in DX, and vice versa - the DX signal appears as nonmutilated though differing from the true signal in RX. The EUT should detect mutilations and print out the «error character».	x		
4	The TE transmits the test radiogram from buffer, generating the mutilated types: signals in DX and RX mutilated in a different manner. The EUT should detect mutilations and print out the «error character».			
5	The TE transmits the test radiogram from buffer, generating the mutilated types: signals in DX and RX mutilated in the same manner. The EUT should detect mutilations and print out the «error character».	X		

The equipment meets the requirements (yes / no /n.a)	yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

### 3.2.3. The end-of-transmission procedure.

### 3.2.3.1. The end-of-transmission test

(TEST\_815 - TEST\_816). [Rec. ITU-R M.625-3,Ann.1; n.4.6.7.1]

### 3.2.3.1.1. Definition.

The ability to terminate the traffic flow procedure by transmitting the «end-of-transmission signals».

### 3.2.3.1.2. Method of measurement.

The EUT and TE in the traffic flow mode for

- a) 4-signal call identity;
- b) 7-signal call identity.

The TE generates:

- a) for two secs, consecutive «end-of-transmission signals»; (TEST\_816)
- δ) two consecutive «idle signals α» in the DX position. (TEST\_815)

### 3.2.3.1.3. Required results.

In transmitting consecutive end-of-transmission signals, the EUT should change to "stand-by" both for a) and b).

(A sending station in the collective FEC mode should terminate the transmission by sending at least 2-sec consecutive «idle signals  $\alpha$ » immediately following the last transmitted traffic information signals, after which the station reverts to the «stand-by» condition.)

[Rec. 625, Ann.1; 4.6.7.1]



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Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

Ν	Item	Result		Comment
		OK	NO	
1	On receiving the 2 secs, end-of transmission sequence, the EUT should change to "stand-by" (4 signal call ID)	X		
2	On receiving the two consecutive «idle signals $\alpha$ » in the DX position, the EUT should change to "stand-by"	X		
	(4 signal call ID)			
3	On receiving the 2 secs, end-of transmission sequence, the EUT should change to "stand-by"	X		
	(7 signal call ID)			
4	On receiving the two consecutive «idle signals $\alpha$ » in the DX position, the EUT should change to "stand-by"	X		
	(7 signal call ID)			

The equipment meets the requirements (yes / no /n.a)	yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

# 4. Station requirements

#### 4.1. General

[ETS 300 067, n.10.1]

### 4.1.1. Definition

This test checks general station requirements.

### 4.1.2. Method of measurement.

### 4.1.3. Required results

Verify that:

	L Kom		literer		Result		Com-
N	ltem	Value	OK	NO	ment		
1	When the radiotelex station has been set up to the required working frequency or frequencies, the transmitter shall be activated automatically when the receiver registers that a selective call number has been received corresponding to the identity number of the equipment.		x				
2	In the ARQ mode of operation, the station which establishes a circuit is the master station and sends the "call signal" until it receives an appropriate control signal. However, if the circuit has not been established after 128 cycles (128 x 450 msec.), the station shall change its condition to "stand-by" and shall wait for a duration of at least 128 cycles before it sends the "call signal" again.		X				

The equipment meets the requirements (yes / no /n.a)	yes
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Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

## 4.2 Maintenance of phasing

[ETS 300 067, n.10.2]

### 4.2.1 Definition

The maintenance of phasing is defined as the ability of the Information Receiving Station (IRS) to maintain synchronization with the Information Sending Station (ISS), when the incoming signal is suppresed for a specified period of time.

### 4.2.2 Method of measurement

The equipment shall be set up as Information Receiving Station (IRS) in the ARQmode of operation. An RF signal with a level of 20 dBuV and modulated with test signal 1, shall be applied to the receiver through a matching network as specified in para 3.9 [ETS 300 067]. The test signal applied to the receiver shall be suppressed so that precisely 31 repetitions occur and then be reestablished.

### 4.2.3 Required results

The information receiving station shall start to print the information of the test signal as soon as the connection is reestablished and no character from the order of the test signal shall be missing.

N Item		Result		Com-	
	item	Value	OK	NO	ment
1	The information receiving station shall start to print the information of the test signal as soon as the connection is reestablished.		X		
2	No character from the order of the test signal shall be missing.		X		





Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

### 4.3 Time-to-answer a call

[ETS 300 067, n.10.3]

### 4.3.1 Definition

The time-to-answer a call is the time between the reception of a selective call number in the equipment, and the beginning of emission of correct signals.

#### 4.3.2 Method of measurement

The equipment shall be tuned to the correct frequency and set up as a station ready for operation (STAND-BY). An RF test signal with a level of 20 dBuV shall be applied to the receiver as specified in subclause 3.9 [ETS 300 067]. The test signal shall comprise of call-blocks containing the identity number of the equipment. The time-to-answer a call shall be measured as the time the selective call signal is applied to the receiver until the transmitter starts to emit the correct control signals, indicating that the equipments identity has been correctly decoded.

### 4.3.3 Required results

The time-to-answer a call shall not exceed 4.1 seconds.

N Item		Result		Com-	
		Value	OK	NO	ment
1	The time-to-answer a call shall not exceed 4.1 seconds.	Less than 2 sec	X		

The equipment meets the requirements (yes / no /n.a)	yes
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

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### 4.4 Station delay time

[ETS 300 067, n.10.4]

### 4.4.1 Definition

In the ARQ mode of operation, the station delay time is the time between:

a) the end of an information block on the receiver's antenna input and the start of a related control signal on the transmitter's antenna output.

b) the end of a control signal on the receiver's antenna input and the start of an information block on the transmitter's antenna output.

The end and start of an information block, respectively a control signal, refer to the moment the level of the RF signal has reached a value corresponding to -2 dB relative to the mean level.

### 10.4.2 Method of measurement

The equipment shall be set up as an:

a) Information Receiving Station (IRS)

b) Information Sending Station (ISS).

An RF test signal with a level of 20 dBuV consisting of standard test signal 3 shall be applied to the receiver through the matching network specified in subclause 3.9.

### 4.4.3 Limits

The station delay time shall not be more than 12 msec.

N Item		Result		Com-	
	item	Value	OK	NO	ment
1	The station delay time shall not be more than 12 msec.	< 12 ms	X		NOTE 1

NOTE 1

For the measurements used instrumentation firm Thrane&Thrane.

requirements (yes / no /n.a) yes
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Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

### 4.5 Scanning receivers

Where scanning receivers are used, the following requirements are to be met.

### 4.5.1 Channel dwell-time

[ETS 300 067, n.10.5.1]

#### 4.5.1.1 Definition

The channel dwell-time is the time that the receiver monitors each channel effectively.

#### 4.5.1.2 Method of measurement

The equipment shall be set up as station ready for operation (STAND-BY).

Two RF test signals with a level of 20 dBuV shall be applied to the receiver as specified in para 3.8 [ETS 300 067]. One of the RF signals, with a nominal frequency corresponding to a desired radiotelex channel, shall consist of standard test signal 2. The other RF signal shall have a frequency corresponding to the assigned frequency of an arbitrarily chosen radiotelex channel and shall be unmodulated. The receiver shall be arranged to scan between the two radiotelex channels, and the channel dwell-time shall be measured at the output of the receiver.

### 4.5.1.3 Required results

The dwell-time per channel shall be at least 2.7 seconds but not more than 4.5 seconds. The dwell-time per channel shall in no event be shorter than the measured time to answer a call (subclause 10.3).

	N liom		Result		Com-
N	ltem	Value	OK	NO	ment
1	The dwell-time per channel shall be at least 2.7 seconds but not more than 4.5 seconds.				
2	The dwell-time per channel shall in no event be shorter than the measured time to answer a call				

The equipment meets the requirements (yes / no /n.a) N.T.	
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Company:	Thrane&Thrane	
Equipment Under Test:	SAILOR 6006 Message Terminal	
Date:	June 2010 – January 2011	

### 4.5.2 Time for channel shift

[ETS 300 067, n.10.5.2]

### 4.5.2.1 Definition

The time for channel shift is the time between the moment the receiver ceases the monitoring of a channel until the moment the receiver is ready for operation on another channel.

### 4.5.2.2 Method of measurement

The equipment shall be set up as a station ready for operation (STAND-BY). The two RF signals with a level of 20 dBuV shall be applied to the receiver as specified in subclause 3.8 [ETS 300 067]. One of the RF signals, with a nominal frequency corresponding to a desired radiotelex channel shall consist of standard test signal 2. The other RF signal shall have a frequency corresponding to the assigned frequency of an arbitrarily chosen radiotelex channel and shall be unmodulated. The receiver shall be arranged to scan between the two radiotelex channels. The time for channel shift shall be measured at the output of the receiver.

### 4.5.2.3 Required results

The time for channel shift shall not exceed 10% of the channel dwell-time.

	ltom		Result		Com-
IN	Item	Value	ок	NO	ment
1	The time for channel shift shall not exceed 10% of the channel dwell-time.				

The equipment meets the requirements (yes / no /n.a)	N.T
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Company:	Thrane&Thrane			
Equipment Under Test:	SAILOR 6006 Message Terminal			
Date:	June 2010 – January 2011			