

Approved by OMB
3060-0678

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

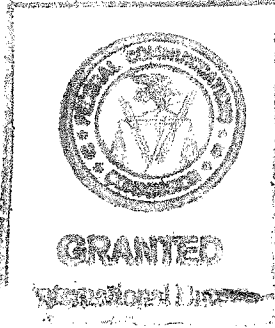
APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:
Request for Temporary Authority starting 9/28/07

1. Applicant

Name:	COMTECH MOBILE DATACOM CORP.	Phone Number:	240-686-3300
DBA Name:		Fax Number:	240-686-3301
Street:	20430 Century Boulevard	E-Mail:	david.ulanow@comtechmobile. com
City:	Germantown	State:	MD
Country:	USA	Zipcode:	20874 -
Attention:	Mr David A Ulanow		

"Conditions Attached"

SES-STA-20070913-01277



Cell Site _____ Grant Date 9/28/07
(or Identifier) _____
Date 9/28/07 To 10/27/07
Approved: *Sophie E. Armstrong*

Attachment

SES-STA-20070913-01277

Comtech Mobile Datacom Corp.'s request for Special Temporary Authority is **GRANTED WITH CONDITIONS.**

1. Operations shall be on an unprotected basis. Comtech Mobile Datacom Corp. shall not claim protection from, and is required to accept interference from, other lawfully operating satellites or radiocommunication systems.
2. Comtech Mobile Datacom Corp. shall meet the real-time priority and preemptive access limits set forth in its STA request, including the requirement that all METs will be capable of preemption for maritime safety systems within no more than 3.6 seconds.

2. Contact	
Name: Joan M. Griffin	Phone Number: 202-342-8573
Company: Kelley Drye & Warren LLP	Fax Number: 202-342-8451
Street: 3050 K Street NW Suite 400	E-Mail: jgriffin@kelleydrye.com
City: Washington	State: DC
Country: USA	Zipcode: 20007 -5108
Attention:	Relationship: Legal Counsel
(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)	
3. Reference File Number or Submission ID	
4a. Is a fee submitted with this application?	
<input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).	
<input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee	
<input type="radio"/> Other (please explain):	
4b. Fee Classification CGB – Mobile Satellite Earth Stations	
5. Type Request	
<input type="radio"/> Use Prior to Grant <input type="radio"/> Change Station Location <input checked="" type="radio"/> Other	
6. Requested Use Prior Date	
7. City	8. Latitude (dd mm ss.s h) 0 0 0.0

9. State	10. Longitude (dd mm ss.s h) 0 0 0.0
11. Please supply any need attachments. Attachment 1: Schedule B info Attachment 2: Exhibit A Attachment 3:	
12. Description. (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.) <div style="border: 1px solid black; padding: 5px; margin: 10px 0;">Request for temporary authority to operate up to 10 mobile earth terminals having the antenna facilities and particulars of operation provided in the attached FCC Form 312 Schedule B for a period not to exceed 30 days starting 9/28/07.</div>	
13. By checking Yes, the undersigned certifies that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes. <input checked="" type="radio"/> Yes <input type="radio"/> No	
14. Name of Person Signing John Fossaceca	15. Title of Person Signing Vice President, Engineering
WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).	

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

The public reporting for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PER, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to jboley@fcc.gov. **PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.**

Remember – You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0678.

THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE EARTH STATION AUTHORIZATIONS
(Technical and Operational Description)

(Place an "X" in one of the blocks below)

License of New Station Registration of New Domestic Receive-Only Station Amendment to a Pending Application Modification of License/Registration Notification of Minor Modification

B1. Location of Earth Station Site. If temporary-fixed, mobile, or VSAT remote facility, specify area of operation and point of contact. If VSAT hub station, give its location. For VSAT networks attach individual Schedule B, Page 1 sheets for each hub station and each remote station. Individually provide the Location, Points of Communications, and Destination Points for each hub and remote station.

B1a. Station Call Sign E990143	B1b. Site Identifier (HUB, REMOTE1, etc.) TEMP1	B1c. Telephone Number (240) 686-3300	B1j. Geographic Coordinates Deg. - Min. - Sec. - N/S, E/W	B1k. Lat./Lon. Coordinates are: <input type="checkbox"/> NAD-27 <input type="checkbox"/> NAD-83
B1d. Street Address of Station or Area of Operation		B1e. Name of Contact Person Dan Williamson	Lat. _____	
			Lon. _____	
B1f. City	B1g. County	B1h. State	B1i. Zip Code	B1l. Site Elevation (AMSL) _____ meters

B2. Points of Communications: List the names and orbit locations of all satellites with which this earth station will communicate. The entry "ALSAT" is sufficient to identify the names and locations of all satellite facilities licensed by the U.S. All non-U.S. licensed satellites must be listed individually.

Satellite Name and Orbit Location	Satellite Name and Orbit Location	Satellite Name and Orbit Location
AMSC-1 at 101.0 W.L.		

B3. Destination points for communications using non-U.S. licensed satellites. For each non-U.S. licensed satellite facility identified in section B2 above, specify the destination point(s) (countries) where the services will be provided by this earth station via each non-U.S. licensed satellite system. Use additional sheets as needed.

Satellite Name	List of Destination Points
N/A	N/A

**FEDERAL COMMUNICATIONS COMMISSION
SATELLITE EARTH STATION AUTHORIZATIONS
FCC Form 312 - Schedule B: (Technical and Operational Description)**

B4. Earth Station Antenna Facilities: Use additional pages as needed.

(a) Site ID*	(b) Antenna ID**	(c) Quantity	(d) Manufacturer	(e) Model	(f) Antenna Size (meters)	(g) Antenna Gain Transmit and/or Receive (____ dBi at ____ GHz)
TEMP1	ANT1/EXT	0	PCTEL	3481Z-3	0.18	3.7 dBi @ 1645 GHz 3.7dBi @ 1545 GHz

B5. Antenna Heights and Maximum Power Limits: (The corresponding Antenna ID in tables B4 and B5 applies to the same antenna)

(a) Antenna ID**	(b) Antenna Structure Registration No.	Maximum Antenna Height		(e) Building Height Above Ground Level (meters)***	(f) Maximum Antenna Height Above Rooftop (meters)***	(g) Total Input Power at antenna flange (Watts)	(h) Total EIRP for all carriers (dBW)
		(c) Above Ground Level (meters)	(d) Above Mean Sea Level (meters)				
ANT1/EXT	N/A	0	0	0	0	2.5	7.7

Notes: * If this is an application for a VSAT network, identify the site (Item B1b, Schedule B, Page 1) where each antenna is located. Also include this Site-ID on Schedule B, Page 5.
 ** Identify each antenna in VSAT network or multi-antenna station with a unique identifier, such as HUB, REMOTE1, A1, A2, 10M, 12M, 7M, etc. Use this same antenna ID throughout tables B4, B5, B6, and B7 when referring to the same antenna.
 *** Attach sketch of site or exemption, See 47 CFR Part 17.

**FEDERAL COMMUNICATIONS COMMISSION
SATELLITE EARTH STATION AUTHORIZATIONS
FCC Form 312 - Schedule B: (Technical and Operational Description)**

B6. Frequency Coordination Limits: Use additional pages as needed.

(a) Antenna ID*	(b) Frequency Limits (MHz)	(c) Range of Satellite Arc Eastern Limit**	(d) Range of Satellite Arc Western Limit**	(e) Antenna Elevation Angle Eastern Limit	(f) Antenna Elevation Angle Western Limit	(g) Earth Station Azimuth Angle Eastern Limit	(h) Earth Station Azimuth Angle Western Limit	(i) Maximum EIRP Density toward the Horizon (dBW/4kHz)
ANT1/EXT	1532.085	101.0 W.L.	101.0 W.L.	0	0	0	0	
ANT1/EXT	1633.585	101.0 W.L.	101.0 W.L.	0	0	0	0	-6.1

Notes: * Provide the ANTENNA-ID from table B4 to identify the antenna to which each frequency band and orbital arc range is associated.
** If operating with geostationary satellites, give the orbital arc limits and the associated elevation and azimuth angles. If operating with non-geostationary satellites, give the notation "NON-GEO" for the satellite arc and give the minimum operational elevation angle and the maximum azimuth angle range.

**FEDERAL COMMUNICATIONS COMMISSION
SATELLITE EARTH STATION AUTHORIZATIONS
FCC Form 312 - Schedule B: (Technical and Operational Description)**

B7. Particulars of Operation (Full particulars are required for each r.f. carrier): Use additional pages as needed.

(a) Antenna ID*	(b) Frequency Bands (MHz)	(c) T/R Mode **	(d) Antenna Polarization (H,V,L,R)	(e) Emission Designator	(f) Maximum EIRP per Carrier (dBW)	(g) Maximum EIRP Density per Carrier (dBW/4kHz)	(h) Description of Modulation and Services
ANT1/EXT	1532.085	R	RHC	168KG1D	0	0	DSSS, BPSK, 84,375 CPS, Land Mobile
ANT1/EXT	1633.585	T	RHC	168KG1D	7.7	1.9	DSSS, BPSK, 84,375 CPS, Land Mobile

Notes: * Provide the ANTENNA-ID from table B4 to identify the antenna to which each frequency band and emission is associated. For VSAT networks, include frequencies and emissions for all HUB and REMOTE units.
** Indicate whether the earth station transmits or receives in each frequency band.

**FEDERAL COMMUNICATIONS COMMISSION
SATELLITE EARTH STATION AUTHORIZATIONS
FCC Form 312 - Schedule B: (Technical and Operational Description)**

If VSAT Network, provide the SITE-ID (Item B1b) of the station that B8-B13 are in response to (HUB, REMOTE1, etc.): _____

B8. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurements? If NO, provide as an exhibit, a technical analysis showing compliance with two-degree spacing policy.	<input type="checkbox"/> YES	<input type="checkbox"/> NO	N/A												
B9. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non-geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	N/A												
B10. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO													
Remote Control Point Location:															
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="4" style="padding: 2px;"> B10a. Street Address 20430 Century Boulevard </td> </tr> <tr> <td style="width: 33%; padding: 2px;"> B10b. City Germantown </td> <td style="width: 33%; padding: 2px;"> B10c. County Montgomery </td> <td style="width: 15%; padding: 2px;"> B10d. State / Country MD/USA </td> <td style="width: 19%; padding: 2px;"> B10e. Zip Code 20874 </td> </tr> <tr> <td style="padding: 2px;"> B10f. Telephone Number (240) 686-3389 </td> <td colspan="3" style="padding: 2px;"> B10g. Call Sign of Control Station (if appropriate) N/A </td> </tr> </table>				B10a. Street Address 20430 Century Boulevard				B10b. City Germantown	B10c. County Montgomery	B10d. State / Country MD/USA	B10e. Zip Code 20874	B10f. Telephone Number (240) 686-3389	B10g. Call Sign of Control Station (if appropriate) N/A		
B10a. Street Address 20430 Century Boulevard															
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B10f. Telephone Number (240) 686-3389	B10g. Call Sign of Control Station (if appropriate) N/A														
B11. Is frequency coordination required? If YES, attach a frequency coordination report as an exhibit.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO													
B12. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as an exhibit.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO													
B13. FAA Notification - (See 47 CFR Part 17 and 47 CFR Part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and/or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	<input type="checkbox"/> YES	<input type="checkbox"/> NO	N/A												

Comtech Mobile Datacom Corporation
Request for Temporary Authority
Exhibit A

**Description of Request for Authority and
Request for Waiver**

Comtech Mobile Datacom Corporation ("CMDC"), by this application, requests temporary authority pursuant to Section 25.120 of the FCC Rules to operate up to ten (10) mobile earth terminals ("METs") having the antenna facilities and particulars of operation provided in the attached FCC Form 312 Schedule B. CMDC proposes to operate these METs on AMSC-1 (1633.585 MHz transmit, 1532.085 MHz receive) at locations in the continental U.S. ("CONUS"). Initial locations are Melbourne, FL (N28°05'10, " W80°38'23"), Germantown, MD (N39°11'33, " W77°01'26"), and Washington, DC (N38 54'12, " W77 01'26"); other CONUS locations may be added at a later date. The operation of these METs will controlled remotely from CMDC's existing network operations control center, located in Germantown, MD.

CMDC requests this authority for a period not to exceed 30 days commencing on September 28, 2007. An application for permanent authority for the antenna facilities and particulars of operation proposed in this request is not contemplated at this time. CMDC is requesting this authority in connection with a customer demonstration. Specifically, CMDC has been asked to demonstrate and verify the operation of CMDC's MTM-203 MET, equipped with a new antenna, in a mobile installation in urban and suburban environments and in the presence of 802.11 wireless emitters placed on the same vehicle. Grant of this temporary authority will allow CMDC to conduct this demonstration per the customer's request and thus will serve the public interest.

In connection with this request for temporary authority, CMDC requests a waiver of footnote US315 to the U.S. Table of Frequency Allocations and Section 25.136(d) of the Commission's Rules. These provisions require that a mobile earth station operating in the lower L-band meet certain real-time priority and preemptive access requirements. CMDC has previously requested this waiver, on the same grounds and with the same supporting information, in connection with previously filed modification applications. See File No. SES-MFS-20070530-00731, Exhibit B to FCC Form 312, Schedule B. A copy of this exhibit is attached.

As discussed in the attached exhibit, CMDC's METs (all half-duplex) comply with the requirements listed in Section 25.136(d) of the Commission's Rules. However, CMDC's terminals do not comply with NTIA's interpretation of footnote US315, as CMDC's terminals, being half-duplex, are unable to cease transmissions within one second. Nonetheless, CMDC demonstrates in the attached exhibit that there is good cause for granting a waiver of footnote US315 (as well as Section 25.136(d) and any other rules or footnotes that may apply here, in the Commission's view). CMDC notes that CMDC's operations pursuant to the temporary authority requested herein will be limited to CONUS and thus that these METs will cease transmitting in at most 2.4 seconds.

CMDC very much appreciates the prompt attention of the FCC staff to this matter. CMDC acknowledges that any grant of this temporary request is without prejudice to the Commission's final action on any pending or future application.

Request for Waivers – Question 35

Comtech Mobile Datacom Corporation (“CMDC”) requests a waiver of footnotes US308 and US315 to the U.S. Table of Frequency Allocations and Section 25.136(d) of the Commission’s Rules. These provisions require that a mobile earth station operating in the 1530-1544 MHz and 1626.5-1645.5 MHz bands meet certain real-time priority and preemptive access requirements. Compliance with these requirements is intended to protect from interference the maritime mobile-satellite service distress and safety communications that also operate in the lower L-band. The National Telecommunications and Information Administration (“NTIA”) has indicated that if a terminal is capable of, among other things, ceasing transmissions and inhibiting further transmissions within one second, that terminal would be considered to meet the real time access and priority preemption requirements in footnotes US308 and US315.¹

As discussed below, CMDC’s terminals (all half-duplex) comply with the requirements listed in Section 25.136(d) of the Commission’s Rules. However, CMDC’s terminals do not comply with NTIA’s interpretation of footnotes US308 and US315, as CMDC’s terminals, being half-duplex, are unable to cease transmissions within one second. Nonetheless, CMDC demonstrates below that there is good cause for granting a waiver of footnotes US308 and US315 (as well as Section 25.136(d) and any other rules or footnotes that may apply here, in the Commission’s view).

Description of CMDC System

CMDC provides wireless packet data services from mobile terminals throughout the United States and overseas. CMDC terminals typically are placed on land vehicles or at remote, fixed site locations. Either data collection devices or keyboard/displays, or both, may be attached to the terminals depending on the customers’ needs in that location or at that time.

The terminals transmit and receive data packets via dedicated channels in the L-band, which for the U.S.-based transceivers is provided by MSAT-1 or MSAT-2. The packets can be routed over any of several terrestrial data networks, or to other mobile transceivers in the CMDC network. Use of the satellite relay is as a “bent pipe,” meaning that only bandwidth and power are purchased from the satellite relay operator. Network management is provided by CMDC-owned and operated gateway sites.

The wireless packet data network is bi-directional, and transmission can be asynchronous in both directions. When powered on, terminals are either listening for packets addressed to them - individually or in groups - from a gateway station, or are transmitting packets in short bursts to a gateway station. Other modes of operation are possible, including periodic reporting from a terminal to a customer’s operation center, via a gateway, and polled queries to the terminals by either the gateway or operation center.

¹ See *Richtec Inc.*, 18 FCC Rcd 3295, 3298 (2003) (“*Richtec*”).

The mobile transceivers transmit and receive direct sequence spread spectrum bursts. In the contiguous U.S. (“CONUS”), the typical burst duration is less than 100 milliseconds, while the maximum burst duration is about 400 milliseconds. In Alaska and Hawaii, a reduced data rate service is employed that results in a maximum burst duration of 1.6 seconds. Bursts from any individual transceiver are usually a minimum of several minutes apart. This means that the maximum interval during which a transceiver will not be listening to the outbound channel is less than 0.4 seconds (1.6 seconds in Alaska and Hawaii), and represents only a small fraction of one percent of its operating time.

In normal operation, a packet of information sent by a mobile terminal will be received by the CMDC gateway station, then routed to the designated recipient via the Internet, dedicated links, or the CMDC network outbound channel. There are no constraints on the routing of packets, though mobile-to-mobile, mobile-to-operation center, and operation center-to-mobile represent the majority of the traffic.

The mobile terminals can be tuned to transmit and receive across the entire L-band. This is to facilitate access to available bandwidth on the satellite relays, since the satellites operate many beams, and any one frequency may not be available across all beams. The outbound beams broadcast their identity in the form of network management packets from which the mobile terminal can determine what transmission frequencies are available for use. The operating frequencies may be changed by command from the gateway stations. Also, a mobile terminal can only transmit when its receiver is locked onto a CMDC forward link.

The network management function of the CMDC network is provided by CMDC’s 24/7 Network Operations Center in Germantown, MD. This function includes monitoring traffic, setting and adjusting operating frequencies, and activating a system wide shut-down capability for individual or multiple service regions as required. The shut-down can be accomplished by either CMDC personnel, locally or remotely, as well as by the satellite operator.

Compliance with Section 25.136(d)

The following paragraphs explain CMDC’s compliance with Section 25.136(d) of the Commission’s Rules.

Section 25.136(d)(1). All MES transmissions shall have a priority assigned to them that preserves the priority and preemptive access given to maritime distress and safety communications sharing the band.

Section 25.136(d)(2). Each MES with a requirement to handle maritime distress and safety data communications shall be capable of either: (i) recognizing message and call priority identification when transmitted from its associated LES or (ii) accepting message and call priority identification embedded in the message or call when transmitted from its associated LES and passing the identification to shipboard data message processing equipment.

CMDC's terminals contain a priority field built into the CMDC message protocol used between the MESS and its associated LES. This priority field could be used to determine how the message should be handled within the CMDC network. Since CDMC terminals are not used for maritime distress services and do not share a channel with transceivers used for that purpose, there is no requirement for the network to process this priority field at this time. By putting the field in the transceiver firmware, however, CMDC has the "hooks" in place to deploy a network priority scheme should the need arise.

Section 25.136(d)(3). Each MESS shall be assigned a unique terminal identification number that will be transmitted upon any attempt to gain access to a system.

CMDC's terminals comply with this requirement. Each CMDC MESS is part of a virtual private network with a distinct identity.

Section 25.136(d)(4). After an MESS has gained access to a system, the mobile terminal shall be under control of a LES and shall obtain all channel assignments from it.

CMDC's terminals comply with this requirement. After connecting to an associated LES system, the CMDC MESSs obtain control and frequency tuning commands over the communication channel only from that LES.

Section 25.136(d)(5). All MESS that do not continuously monitor a separate signalling channel or signalling within the communications channel shall monitor the signalling channel at the end of each transmission.

CMDC's terminals comply with this requirement. The CMDC MESSs are a half-duplex RF system operating on dedicated channels and when not transmitting are continuously monitoring the LES for command signals.

Section 25.136(d)(6). Each MESS shall automatically inhibit its transmissions if it is not correctly receiving separate signalling channel or signalling within the communications channel from its associated LES.

CMDC's terminals comply with this requirement. As noted previously, a CMDC MESS will not transmit unless it is properly receiving and locked onto the incoming RF signal from its associated LES.

Section 25.136(d)(7). Each MESS shall automatically inhibit its transmissions on any or all channels upon receiving a channel-shut-off command on a signalling or communications channel it is receiving from its associated LES.

CMDC's terminals comply with this requirement. A CMDC MESS will not transmit if it has been disabled by a control signal from the associated LES.

Section 25.136(d)(8). Each MES with a requirement to handle maritime distress and safety communications shall have the capability within the station to automatically preempt lower precedence traffic.

As noted previously, there is no requirement for CMDC's MESSs to handle maritime distress and safety communications, but the "hooks" are in the transceiver firmware and thus a priority function can be easily added if the need should arise.

Compliance with NTIA interpretation regarding real time access and priority preemption

As noted previously, NTIA has indicated that it will consider a terminal to satisfy the real time access and priority preemption requirements in footnotes US308 and US315 if the terminal is capable of, among other things, ceasing transmissions and inhibiting further transmissions within one second. CMDC interprets this benchmark as meaning that each MESS for all of its operating modes must, within one second of receiving a shutdown command, stop all ongoing RF transmissions and prevent any new RF transmissions.

The CMDC MES is an extremely low duty cycle (0.03 percent on average) DSSS system having an RF transmission duration, at the maximum message length (128 bytes) and data rate of 400 milliseconds. The message length of a typical transmission is roughly 50 bytes, having an RF transmission duration at the full data rate of approximately 152 milliseconds.

The data rate at which a MES transmits is set by CMDC's signal set and not by the individual operating the terminal. All MESSs that are used in CONUS, which constitute the vast majority of CMDC MESSs in the U.S., operate at the full data rate. A small number of CMDC's terminals that operate in Alaska and Hawaii are programmed to operate at ¼ data rate. Operation at a slower data rate is necessary in Alaska and Hawaii to compensate for the reduced availability of satellite bandwidth for Alaska and Hawaii. At ¼ data rate, the transmission duration of a typical transmission (50 bytes) increases to 607 milliseconds, and the transmission duration for a full length message increases to 1.6 seconds.

The timeout parameter on CMDC's MESSs is set at 2 seconds. This means that when a MES detects a loss of forward link, the MES will continue to monitor the forward link for an additional 2 seconds to confirm that the carrier is down before disabling the transmitter.

Adding the 2 second timeout period to the transmission duration provides the total time required by CMDC's MESSs to stop all ongoing transmissions and prevent any new transmissions, as follows. The information provided in the following table applies to each model of MES for which CMDC seeks authority in this Application.

<u>Length of Message</u>	<u>Data Rate</u>	<u>Seconds</u>
128 bytes	Maximum	2.4
50 bytes	Maximum	2.2
128 bytes	¼	3.6
50 bytes	¼	2.6

Waiver Request

Section 1.3 of the Commission's Rules authorizes the Commission to waive its rules for "good cause shown."² In general, the Commission will grant a waiver of its rules if the relief requested would not undermine the policy objective of the rule in question and would otherwise serve the public interest.³ In considering requests for non-conforming spectrum uses, the Commission has indicated that it will generally grant such waivers when there is little potential for interference into any services authorized under the Table of Allocations and when the non-conforming operator accepts any interference from authorized services.⁴

CMDC submits that all of the Commission's requirements for grant of a waiver are satisfied here. It is unlikely that the preemptive capability of CMDC's terminals will adversely affect maritime safety for the following reasons. *First*, as noted previously, CMDC's terminals operate on dedicated rather than shared channels. The Commission and NTIA have previously recognized that operation of MESSs on dedicated channels makes it unlikely that such operation will affect the real time access and priority preemption for maritime distress services.⁵

Second, even under the worst-case scenario – a terminal transmitting a full-length message at ¼ rate – the terminal will cease transmitting in only 3.6 seconds, since CMDC's MESSs transmit only short bursts of data. The Commission has previously granted waivers to other systems that require considerably longer than 3.6 seconds to cease transmission, recognizing that these systems are unlikely to adversely impact maritime safety.⁶

Third, the worse-case scenario rarely occurs, because CMDC's terminals operate at ¼ rate only in Alaska and Hawaii, and CMDC's system is an extremely low duty cycle system. CMDC has analyzed data from its operations in the U.S. over the past 8 months, and has determined that only an average of 2900 packets per month had a transmission duration of 1 second or longer.

Finally, CMDC notes that it has never received any indication that its operations in the lower L-band have interfered with any marine broadcasts.

² 47 CFR § 1.3.

³ *Geologic Solutions, Inc.*, Order and Authorization, DA 06-1179, rel. May 31, 2006, at ¶ 5 (“*Geologic Solutions*”) (citations omitted).

⁴ *Id.*

⁵ See *Richtec* at ¶ 11.

⁶ See, e.g., *Geologic Solutions* at ¶ 7 (maximum time necessary for preemption is 10.34 seconds).

Comtech Mobile Datacom Corporation
FCC Form 312, Schedule B
Exhibit B, Page 6

At the same time, grant of this waiver request will serve the public interest. CMDC is the sole supplier of hardware and services for the U.S. Army Logistics Command's Movement Tracking System ("MTS"). MTS is used by U.S. forces in Iraq and around the world for near real-time messaging and location tracking of mobile assets. CMDC's technology and services are also integrated into the U.S. Army's Force XXI Battle Command, Brigade and Below ("FBCB2") command and control systems, also known as Blue Force Tracking ("BFT"). The U.S. Army uses this MTS system as a key part of its overseas deployment training, as well as for logistics tracking in the US. The National Guard has recently adopted the MTS to support its tracking and messaging requirements during disaster and recovery operations at the local, state and national levels due to the MTS's superior performance and widespread Army use. CMDC's system is also used by commercial entities operating in remote areas, particularly in the field of energy development. Grant of this waiver request will enable CMDC to continue to provide these critical services to the U.S. Army, National Guard, and energy companies.

In light of these facts, it is clear that there is good cause for grant of CMDC's waiver request. CMDC respectfully asks that the Commission grant this request.