

**Description of Application, Services to Be Provided,
Frequencies Requested, and
Public Interest Showing – Items 24 and 43**

Description of Application; Frequencies Requested

By this Application, Comtech Mobile Datacom Corporation (“CMDC”) requests authority to modify its existing blanket license, E090027 (the “ROUS” license), to add one (1) new Site ID and delete two (2) existing Site IDs. These changes to the license will (1) enable CMDC to operate its existing mobile earth station terminals (“MESs”) model MTM202 on SkyTerra 1, the replacement satellite for MSAT-2, and (2) help streamline and simplify the ROUS license. The following Site ID should be added to the license:

- (a) Site ID “SkyTerra--202,” specified half-duplex MESs using SkyTerra 1. The METs included under this Site ID are CMDC’s MTM202, all operating with various antennas, in CONUS, Alaska, Hawaii, and any U.S. territory or possession within the footprint of SkyTerra 1.

A spreadsheet of the new Site ID is provided in Exhibit A, Annex 1.

The following Site IDs should be deleted from the license:

- (a) Site ID “ISAT—ROUS;” and
- (b) Site ID “MSV—AK, HI, T&P.”

The following Site IDs should remain on the license unchanged. The MESs currently authorized under this Site ID are not affected by this Application:

- (a) Site ID “MSAT1&2—T&P;”
- (b) Site ID “MSV—ROUS;” and
- (c) Site ID “ISAT—ROUS/CONUS—202.”

A spreadsheet of all of the Site IDs on the license after grant of this Application is provided in Exhibit A, Annex 2.

All MESs authorized under this license operate in portions of the L-band (1525-1544/1545-1559 MHz and 1626.5-1645.5/1646.5-1660.5 MHz). CMDC’s total number of MESs authorized under E090027 and its two (2) other blanket MET licenses, E090029 and E990143, will not exceed the 25,000 authorized under E990143 unless an increase in CMDC’s total number of authorized MESs has been otherwise authorized by the Commission.

As discussed in Exhibit C, CMDC requests a two-year waiver of footnotes US308 and US315 to the U.S. Table of Frequency Allocations and Section 25.136(d) of the Commission's Rules with respect to the operation of its MTM202 terminals on SkyTerra 1 outside of the continental U.S. ("CONUS"). The MTM202s comply with the requirements listed in Section 25.136(d) of the Commission's Rules for the protection of maritime mobile-satellite service distress and safety communications in the lower L-band, and the equivalent requirements for the protection of aeronautical mobile-satellite service distress and safety communications in the upper L-band.¹ However, the MTM202s do not comply with the National Telecommunications and Information Administration's ("NTIA's") interpretation of footnotes US308 and US315 when operated outside of CONUS. NTIA has indicated that if a terminal meets certain minimum requirements and is capable of ceasing transmissions and inhibiting further transmissions within three (3) seconds, that terminal would be considered to meet the real time access and priority preemption requirements in footnotes US308 and US315.² CMDC's MTM202 terminals are unable to cease transmissions within three (3) seconds when operated outside of CONUS. Worst case, the MTM202 requires 3.6 seconds to shut down when operated outside of CONUS.

Per the *NTIA 2009 Letter*, an applicant can be authorized under a two-year waiver to operate METs that do not satisfy the three-second shutdown requirement if the total number of non-compliant METs is less than 10,000 and the applicant agrees to submit an analysis of its MET operations in the U.S. showing the number of packets each month that exceed three (3) seconds in duration.³ Those requirements are satisfied here. There are only about 900 MTM202 METs in existence today, and no additional MTM202s are being built. CMDC requests a two-year waiver (as noted previously) and accepts a condition to submit a packet length analysis. As such, grant of this waiver request is appropriate under the terms of the *NTIA 2009 Letter*. Finally, CMDC notes that its MTM202 METs currently operate outside of CONUS on MSAT-1 and MSAT-2 (which SkyTerra 1 will replace) pursuant to a waiver.⁴ Grant of this waiver request is consistent with this and other prior precedent.

¹ See *Amendment of Part 87 of the Commission's Rules to Establish Technical Standards and Licensing Procedures for Aircraft Earth Stations*, 8 FCC Rcd 3156, ¶ 5, n. 22 (1993), citing Letter from Richard D. Parlow, Associate Administrator, Office of Spectrum Management, NTIA, and Gerald Markey, Manager, Spectrum Engineering Division, FAA to Cheryl Tritt, Chief, Common Carrier Bureau, FCC, dated January 14, 1993 ("*NTIA/FAA Letter*").

² See Letter of Karl B. Nebbia, Associate Administrator, Office of Spectrum Management, U.S. Department of Commerce, NTIA, to Mr. Julius Knapp, Chief, Office of Engineering and Technology, FCC, May 13, 2009 ("*NTIA 2009 Letter*").

³ See *NTIA 2009 Letter* at 4.

⁴ See IB File Nos. SES-LIC-20090211-00164 and SES-MOD-20090923-01223.

Services to be Provided

CMDC will use E090027 as modified to provide the same types of services that CMDC is currently providing under E090027. At present, CMDC provides mobile packet data communications services to government and commercial customers throughout the United States and overseas.

CMDC terminals typically are placed on land vehicles or at remote, fixed site locations. The terminals transmit and receive data packets via dedicated channels in the L-band. 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’s 24/7 Network Operations Center in Germantown, MD.

CMDC’s system employs a version of CDMA that relies on code phase as opposed to multiple codes to differentiate between overlapping signals. The maximum number of simultaneous transmissions processed today is 4. CMDC is developing state-of-the-art, next generation, earth station equipment that will be capable of processing 34 simultaneous transmissions in the near future.

At present, CMDC has over 150,000 activated terminals in service, of which only a small percentage operate in the U.S. during any given month. The vast majority of CMDC’s terminals have been deployed in support of three (3) applications for the U.S. military and operate outside of the U.S.

Public Interest Showing

Grant of this Application will serve the public interest. CMDC currently operates on MSAT-2. This satellite is near end-of-life and is being replaced by SkyTerra 1. Grant of CMDC’s request to add the new Site ID “SkyTerra” to the license will enable CMDC to operate its model MTM202 MESs on SkyTerra 1 and thus continue to provide service currently provided on MSAT-2 to existing customers that use these terminals. Grant of CMDC’s request to delete the existing Site IDs “ISAT—ROUS” and “MSV—AK, HI, T&P” will help simplify and streamline the ROUS license. As such, grant of this request should help resolve some of the confusion regarding CMDC’s licenses, thereby relieving some of the administrative burdens on FCC staff and CMDC.