

Exhibit A

Mobile Satellite Ventures Subsidiary LLC (“MSV”) requests an experimental Special Temporary Authority (“STA”) to conduct a limited test and demonstration using L band spectrum coordinated for MSV and Mobile Satellite Ventures (Canada) Inc.¹

The test will consist of a satellite-based portion and a terrestrial portion. The terrestrial portion comprises one (1) base station (BTS) and six (6) mobile customer premises equipment (CPE). As demonstrated in Figure 1, a BTS using the WiMAX protocol adapted for use over a satellite will be installed at the MSV site in Ottawa.² WiMAX transmissions will be made from Ottawa over the U.S.-licensed MSAT-2 satellite to up to 6 mobile CPEs located in Reston, Virginia.³ The mobile CPEs will be equipped for both for terrestrial-mode operation and satellite-mode operation.

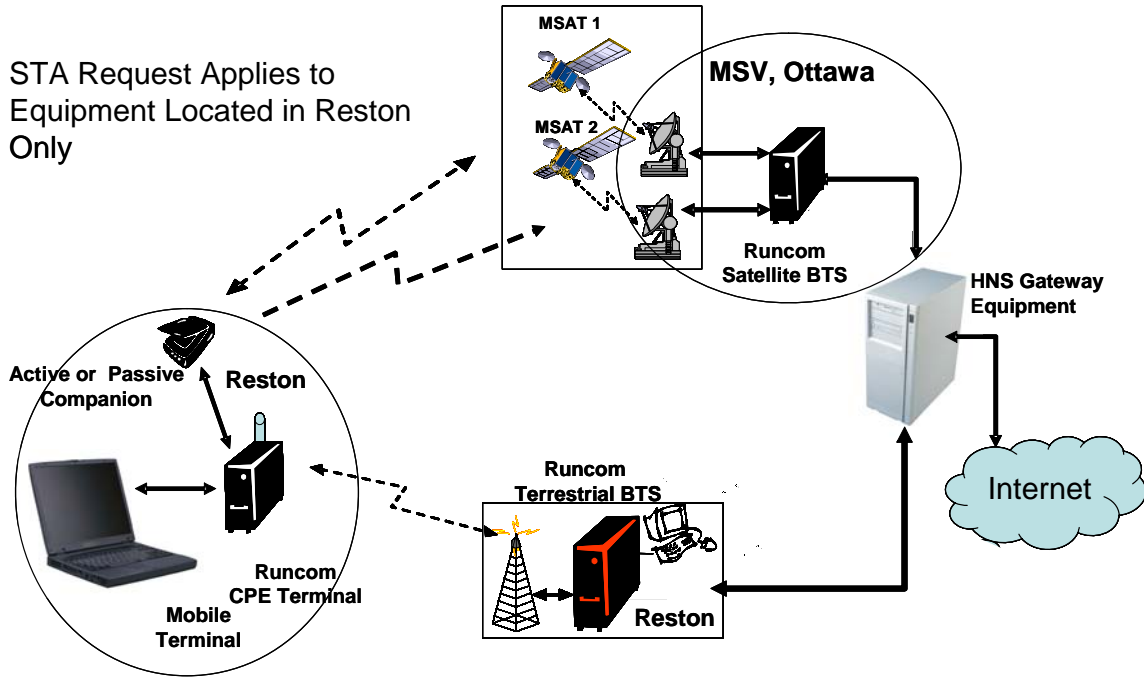
- In terrestrial mode, the CPE will transmit to and receive from the terrestrial BTS located in Reston, Virginia.
- In satellite mode, the CPE will be coupled to one of two companion unit types, active or passive, to boost both the transmit and receive signals, via a passive companion unit and for terrestrial-mode operation. Transmissions from the mobile CPEs in satellite mode will be received by both the MSAT-2 and the Canadian-licensed MSAT-1 satellites and sent to the BTS (“satellite BTS”) handling signals on the satellite path. At the satellite BTS, the signals from the two satellites will be combined, thus improving the signal-to-noise ratio on the mobile CPE to BTS path. The BTS located in Reston, Virginia will not be used over the satellite, but will be used to communicate terrestrially with the mobile CPEs.

¹ These frequencies do not include any of the “disputed” (also know as “loaned”) frequencies between MSV and Inmarsat, as discussed in MSV’s June 20, 2006 letter. *See* Letter from Jennifer A. Manner, MSV, to Ms. Marlene H. Dortch, FCC (June 20, 2006).

² This request for an experimental STA applies only to equipment located in the United States and not to equipment located in Canada.

³ MSV currently holds licenses to operate an Ancillary Terrestrial Component (ATC) and a next-generation satellite in the L band, but these licenses do not yet include authority to operate using the WiMAX air interface. MSV understands that a grant of this experimental STA is without prejudice to the Commission’s consideration of MSV’s pending requests to add the WiMAX air interference to its ATC and next-generation licenses. *See* MSV, Application, File Nos. SAT-MOD-20051104-00212, SAT-MOD-20051104-00211, SES-MOD-20051110-01561 (November 4, 2005); MSV, Application, File No. SAT-MOD-20070117-00012 (January 17, 2007).

Figure 1: Network Overview



Satellite Transmissions. The system will operate in frequency division duplex (FDD) mode when operating via the satellite. The CPE will transmit a 1.25 MHz wide OFDM signal centered at 1658.125 MHz and will receive the same type of signal transmitted from the satellite centered at 1556.625 MHz. As shown in the table below, the power density transmitted from the satellite for the WiMAX OFDM signals is less than that of the currently authorized QPSK signals for the MSAT-1 and MSAT-2 satellites. *Therefore the WiMAX OFDM satellite signals have less potential for causing interference than do MSV's currently authorized satellite signals.*

	QPSK	WiMAX
Satellite EIRP (dBW)	28	45
Assigned Bandwidth (kHz)	6	1250
Power Density (dBW/kHz)	20.2	14.0

Satellite CPE Transmissions. In the satellite mode, the CPE will be operated within a 5 kilometer range of the MSV Reston office where the terrestrial BTS is located. The peak EIRP of the mobile CPE in satellite mode with the Runcom companion is ~~in satellite mode~~ will be -0.915 dBW, which is well below the asimilar to the power authorized power of MSV's authorized and existing satellite-only mobile earth terminals ("METs") (12-16 dBW). With the HNS companion, the EIRP is much less, 3 dBW. Further, the radiated power spectral density from the mobile CPE will be much lower than that of MSV's existing satellite METs because of the difference in bandwidth of the signals (1500 kHz for the mobile CPE and 6 kHz for the existing METs). *Therefore, the*



mobile CPE transmissions in satellite mode using either companion have less potential for causing interference than do MSV's currently authorized METs.

Terrestrial – Base Station Transmissions. The BTS will be located at 10780-10790 Parkridge Blvd, Reston, Virginia 10191. The BTS will transmit in one 60° sector only. The peak EIRP of the BTS will be 11 dBW which is within the range (12-16 dBW) that MSV's authorized and existing satellite-only METs operate. Further, the radiated power spectral density from the BTS will be much lower than that of MSV's existing METs because of the difference in bandwidth of the signals (3500 kHz for the BTS and 6 kHz for the existing METs). *Therefore, the BTS transmissions have less potential for causing interference than do MSV's currently authorized METs.*

Terrestrial – CPE Transmissions. ~~The mobile CPEs will be installed in vehicles and will be operated within a ten kilometer radius of the BTS.~~ The BTS is expected to have a range of less than 1.0 kilometers and thus the CPEs will be within approximately that distance when communicating with the BTS. Beyond that distance, the CPEs will communicate with the satellite. When operating via the terrestrial BTS, the CPE will operate in time-division duplex (TDD) mode. The CPE will transmit a 3.5 MHz wide OFDM signal centered at 1654.370 MHz and receive the same type of signal from the terrestrial BTS, also centered at 1654.370 MHz. In addition, the peak EIRP of the mobile CPE in terrestrial mode will be -10 dBW which is well below the authorized power of MSV's authorized and existing satellite-only METs (12-16 dBW). Further, the radiated power spectral density from the mobile CPE will be much lower than that of MSV's existing satellite METs because of the difference in bandwidth of the signals (3500 kHz for the mobile CPE and 6 kHz for the existing METs). *Therefore, the mobile CPE transmissions in terrestrial mode have less potential for causing interference than do MSV's currently authorized METs.*

Out-of-Band Emissions into the 1559-1610 MHz Band. The base station and CPE (in terrestrial mode) will satisfy the out-of-band emission limits MSV previously committed to meet, which are more stringent than the limits specified in the Commission's rules.⁴

	1559-1610 MHz	
	Wideband	Narrowband
Base Station	-100 dBW/MHz	-110 dBW
CPE (terrestrial)	-90 dBW/MHz	-100 dBW

⁴ See MSV and U.S. GPS Industry Council *ex parte* presentation, IB Docket No. 01-185 (July 17, 2002); MSV *ex parte* presentation, IB Docket No. 01-185 (July 29, 2002); Application of Mobile Satellite Ventures Subsidiary LLC, File No. SAT-MOD-20031118-00333 et al (Nov. 18, 2003); *Mobile Satellite Ventures Subsidiary LLC, Order and Authorization*, DA 04-3553 (Chief, International Bureau, November 8, 2004).



The CPE (in satellite mode) will comply with the out-of-band emission limits specified in the FCC's rules.⁵

Contemplated Hours of Operation. The BTS and CPE are capable of operation 24 hours per day and 7 days per week, but MSV expects testing will normally be conducted only during regular business hours (9 AM – 6 PM; Monday - Friday).

Goal of Experiment. The major aim of this testing is to develop and test the capability for the BTS system to hand-off a call in-progress with a mobile CPE from the satellite path to the terrestrial path as the CPE travels in and out of terrestrial coverage. Given this goal, the BTS for this experiment can be operated at a much lower transmit power level than would a BTS in commercial service. The equipment to be operated pursuant to this STA is strictly for testing purposes only.

Given the limited nature of this testing, MSV is confident that this experimental operation will not result in interference to other spectrum users. MSV will also ensure that this testing does not result in interference to its existing customers. MSV will keep records of the dates and times when operations are conducted pursuant to this experimental authority.

MSV acknowledges that operations pursuant to an experimental STA are strictly on a non-harmful interference basis. MSV's Network Operations Center ("NOC") can be contacted 24 hours/7 days per week in the event of interference concerns at the following number: 1-800-216-6728.

⁵ 47 C.F.R. § 25.216(c) (specifying -70 dBW/MHz (wideband) and -80 dBW (narrowband)).