

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Service Rules for the 698-746, 747-762 and 777-792 MHz Bands)	WT Docket No. 06-150
)	
Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band)	PS Docket No. 06-229

REPLY COMMENTS OF MOBILE SATELLITE VENTURES SUBSIDIARY LLC

Mobile Satellite Ventures Subsidiary LLC (“MSV”) hereby submits these reply comments in response to the *Third Further Notice of Proposed Rulemaking* in the above-referenced proceedings.¹ The comments submitted in response to the *Third FNPRM*, as well as the previous record in this docket, reflect widespread recognition that first responders relying on the 700 MHz interoperable public safety network also should have access to mobile satellite services, both to improve reliability in areas where the 700 MHz network has been built and to extend coverage to unserved areas.² Among the dozens of comments filed in response to the

¹ See *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band*, FCC 09-230 (September 25, 2008) (“*Third FNPRM*”).

² See, e.g., *Comments of Rural Telecommunications Alliance*, WT Docket No. 06-150, PS Docket No. 06-229, 4 (filed Oct. 30, 2008) (The Alliance states that “the better approach is to pair the lowered built-out requirement with mandatory satellite capability. This would make the network more economically viable for the D-Block Licensee, allow for faster build-out of the network, and most importantly, allow for true nationwide coverage.”); *Comments of the Satellite Industry Association*, WT Docket No. 06-150, PS Docket No. 06-229, 6-7 (filed Nov. 3, 2008) (“Ubiquitous satellite coverage, as a component of the shared 700 MHz public/private network, would ensure that all geographic areas (including skies and waterways), no matter how remote, have available communications infrastructure at all times. This is particularly important in light of the Commission’s proposal to reduce coverage requirements.”); *Comments of Northrop Grumman Information Technology Inc.*, WT Docket No. 06-150, PS Docket No. 06-229, 6, n. 9 (June 20, 2008) (supporting the use of Mobile Satellite Services to provide coverage to remote, sparsely populated areas); *Reply Comments of the American Association of State Highway and Transportation Officials*, WT Docket No. 06-150, PS Docket No. 06-229, 9 (filed July 7, 2008) (stating that supplementing terrestrial coverage with space-based satellite systems is a viable option); *Reply*

notice, there has not been a single challenge to the fact that satellite service brings important utility to the public safety network. Even parties that argue that satellite service should not be used to abate terrestrial buildout requirements have agreed that satellite service has important and unique capabilities.³ In short, the importance of a meaningful level of satellite access is one of the few issues in this proceeding on which there is general consensus.

The comments also reflect a general consensus that the best way to implement a satellite component is by making available dual-mode devices that are capable of establishing links with both the terrestrial D Block public safety network and a mobile satellite service system operating in another band. Many parties, including many of the primary stakeholders, understand that limiting the satellite service mandate to a requirement for a single model of handset is not sufficient to provide first responders with the full benefits of redundancy and coverage that satellite service is capable of providing.⁴ Beyond general recognition that at least three different types of satellite-enabled devices are needed, the comments reflect differing views as to how many public safety devices should be satellite-enabled: some commenters propose that all public

Comments of Leap Wireless International, Inc., WT Docket No. 06-150, PS Docket No. 06-229, 8-9 (filed July 7, 2008) (finding that “[s]atellites provide unrivaled coverage and are often insulated from catastrophic events on the ground”); *Reply Comments of the National Public Safety Telecommunications Council*, WT Docket No. 06-150, PS Docket No. 06-229, 12 (filed July 7, 2008) (stating that “the overall population coverage requirement may be...made instantly operational through satellite links”); *Reply Comments of the Public Safety Spectrum Trust Corporation*, WT Docket No. 06-150, PS Docket No. 06-229 (filed July 7, 2008) (proposing that the Commission require satellite coverage and service requirements); *Reply of the Satellite Industry Association*, WT Docket No. 06-150, PS Docket No. 06-229, 3 (arguing that “satellites are unique in their ability to provide ubiquitous service coverage and withstand terrestrial disasters”).

³ See *Comments of National Public Safety Telecommunications Council*, WT Docket No. 06-150, PS Docket No. 06-229, 32 (filed Nov. 3, 2008); *Comments of Motorola, Inc.*, WT Docket No. 06-150, PS Docket No. 06-229, 11 (filed Nov. 3, 2008); *Comments of Regional Planning Committee Twenty*, WT Docket No. 06-150, PS Docket No. 06-229, 8 (filed Nov. 3, 2008).

⁴ See *Comments of American Association of State Highway and Transportation Officials, The Congressional Fire Services Institute, The Forestry Conservation Communications Association, the International Association of Fire Chiefs and the International Municipal Signal Association*, WT Docket No. 06-150, PS Docket No. 06-229, 14-15 (filed Nov. 3, 2008); *Comments of Public Safety Spectrum Trust Corporation*, WT Docket No. 06-150, PS Docket No. 06-229, 28-29 (filed Nov. 3, 2008); *Comments of John A. Picarello, Fire Chief, Pembroke Pines Fire Department*, WT Docket No. 06-150, PS Docket No. 06-229 (filed Oct. 22, 2008); *Comments of the Satellite Industry Association*, WT Docket No. 06-150, PS Docket No. 06-229, 9 (filed Nov. 3, 2008).

safety devices should be satellite capable,⁵ and others propose different benchmarks.⁶ MSV submits that because different types of devices performing very different functions are likely to be used on a wireless broadband network, at least one device of each major device type (laptop card, PDA, and handset) should be satellite-enabled. MSV has shown that the cost of providing a satellite mode is very modest, below \$3 per device manufacturer's cost, at appropriate scale.⁷

As MSV has demonstrated, greater benefits accrue from a more widespread deployment of satellite capable devices and the cost of incorporating satellite capability into devices is very low relative to the immense public safety benefits. As has been shown in the record, the existing, more limited requirement of a single satellite handset may severely limit the number of first responders who have access to satellite links when they are most needed and would result in basic features and applications being unavailable via satellite links.⁸ Naturally, incorporating satellite capability into all public safety devices would offer the highest level of assurance that all first responders can access communications links and use their data-centric applications anytime,

⁵ See, e.g., *Comments of John A. Picarello, Fire Chief, Pembroke Pines Fire Department*, WT Docket No. 06-150, PS Docket No. 06-229 (filed Oct. 22, 2008) (“I strongly encourage the Commission to mandate that all public safety devices have satellite capability.”).

⁶ *Comments of Mobile Satellite Ventures Subsidiary LLC*, WT Docket No. 06-150, PS Docket No. 06-229, 2, 9-10 (filed Nov. 3, 2008) (“MSV urges the Commission to modify its “one satellite handset” rule to require that at least one model of each major device type (e.g., one laptop card, one PDA, and one phone) and half of all models made available to public safety incorporate satellite communications capability. This requirement should be phased in over two years, such that the first model of each of these device types must be made available within 36 months of the award of the D block license, and half of all models must include satellite capability within 60 months of the award of the license.”); *Comments of the Satellite Industry Association*, WT Docket No. 06-150, PS Docket No. 06-229, 2, 9 (filed Nov. 3, 2008) (SIA “proposes that: 1) dual-mode devices satisfying this requirement be made available within a reasonable period after licensing, as determined in the Network Sharing Agreement (“NSA”); and 2) the Commission expand this requirement to include at least one model of each major device type with a minimum of 20% of all models being satellite-enabled, rather than limiting the requirement to a single handset.”).

⁷ See *MSV Ex Parte Presentation*, WT Docket No. 06-150, PS Docket No. 06-229 (filed October 2, 2008). See also *Comments of Ericsson Inc*, 28 (filed June 20, 2008) (stating that “[s]atellite functionality can be incorporated into modern handsets with minor impact to the manufacturing cost to the handset”).

⁸ *Comments of Mobile Satellite Ventures Subsidiary LLC*, WT Docket No. 06-150, PS Docket No. 06-229, 12-15 (filed Nov. 3, 2008).

anywhere, regardless of conditions on the ground, and MSV believes 100% satellite capability would provide a uniquely capable and resilient public safety network.

MSV's comments proposed a middle ground approach that would ensure that agencies have the ability to choose satellite-capable devices that meet their day-to-day needs, without requiring that all devices used on the public safety network include satellite capability. MSV urges the Commission to modify its "one satellite handset" rule to require that at least one model of each major device type (laptop card, PDA, and handset) and half of all models made available to public safety incorporate satellite communications capability. This middle ground approach should also help to resolve some of the questions other commenters raised about implementation of the satellite component. These questions generally involve who selects any satellite provider, when that decision is made, and how the satellite component is integrated among several D block licensees if the spectrum is licensed regionally.

MSV submits that if the widespread deployment of satellite capable devices is assured, many of the details of implementation do not need to be resolved prior to auction of the D Block. Unlike the situation that prevails with respect to the relationship between the PSBL and the D Block licensee or licensees, where very specific rules may be needed in advance because those parties are essentially captives of one another post-auction, the same is not true of the relationship with the MSS provider or providers. Mobile satellite service is a competitive market, and within the time frame contemplated for initial deployment of the 700 MHz shared network, several MSS providers are likely to have advanced satellite systems on orbit. All will have the incentive to compete aggressively for the ability to offer a variety of services to public safety agencies at competitive prices. Accordingly, the optimal time to address implementation questions for MSS is after some of the more important facts about the public/private network are

known – whether there is one licensee or many, what technology choices have been made, what areas will be served and unserved, and so on. Defining service specifications, prices, or even the processes for determining such things at this point could unnecessarily constrain the parties and limit the ability of MSS providers to compete creatively and flexibly to serve those needs.⁹

With respect to implementation questions commenters raise related to regional licensing, the nature of the MSS network mitigates concerns about interoperability. If D Block licenses are awarded regionally, there should not be a problem if different regional licensees select different satellite suppliers. All MSS operators are expected to provide nationwide coverage,¹⁰ so intra-region roaming and access will exist even if agencies use different MSS providers. Because all devices will operate on their native satellite links in all places, “interoperability” at the network layer is irrelevant; similarly, because applications will exist on the devices themselves, they will operate nationwide on the satellite network, regardless of where the user’s home terrestrial network is located. The ability of different agencies to choose different satellite providers, without impairing the fullest measure of interoperability, further ensures that satellite services will be available on the most competitive terms and with the greatest flexibility.

In light of the broad support evidenced in the record for the use of a satellite component as part of the public safety network, the Commission should assure that satellites serve the crucial purpose of providing improved reliability and extended coverage by modifying its “one satellite handset” rule to require that at least one model of each major device type (e.g., one

⁹ MSV does not oppose efforts to define the satellite component in more detail prior to auction, but MSV believes there is little risk and perhaps much to be gained from addressing some of the issues post-auction.

¹⁰ See 47 C.F.R. 25.143(b)(2)(iii)-(iv) (requiring that applicants for 1.6/2.4 GHz mobile satellite service and 2 GHz mobile satellite service demonstrate the following: (a) that “a system proposed to operate using non-geostationary satellites be capable of providing mobile satellite services on a continuous basis throughout the fifty states, Puerto Rico and the U.S. Virgin Islands”; and (b) that “a system only using geostationary orbit satellites, at a minimum, be capable of providing mobile satellite services on a continuous basis throughout the 50 states, Puerto Rico, and the U.S. Virgin Islands, if technically feasible”).

laptop card, one PDA, and one handset)¹¹ and half of all models made available to public safety incorporate satellite communications capability.

Respectfully submitted,

/s/Bruce D. Jacobs

Bruce D. Jacobs

John K. Hane

Tony Lin

PILLSBURY WINTHROP

SHAW PITTMAN LLP

2300 N Street, NW

Washington, DC 20037-1128

(202) 663-8000

/s/Jennifer A. Manner

Jennifer A. Manner

Vice President, Regulatory Affairs

MOBILE SATELLITE VENTURES

SUBSIDIARY LLC

10802 Parkridge Boulevard

Reston, Virginia 20191

(703) 390-2700

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¹¹ For the purposes of this proposal, “device type” means each of (i) a PC card - a data-oriented device intended to be attached to a laptop or other computing device to enable connections to a network; (ii) handset – a traditional voice-oriented handset whose primary purpose is voice communications (but may include access to data services); and, (iii) PDA (personal digital assistant)-type device – a converged voice / data device whose primary purpose includes both voice and data communications.