

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

In the Matter of )  
 )  
Eleventh Annual Report and Analysis of ) WT Docket No. 06-17  
Competitive Market Conditions with Respect )  
to Commercial Mobile Services )  
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**COMMENTS OF MOBILE SATELLITE VENTURES SUBSIDIARY LLC**

Mobile Satellite Ventures Subsidiary LLC (“MSV”) hereby files these Comments in response to the Commission’s Public Notice soliciting data and information to assist in the preparation of the *Eleventh Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services* (“*Eleventh Annual Report*”).<sup>1</sup> As set forth herein, MSV currently provides mobile voice and data services to customers throughout North America using two in-orbit Mobile Satellite Service (“MSS”) satellites. As soon as late 2007, MSV plans to augment its existing MSS offerings by incorporating an Ancillary Terrestrial Component (“ATC”) into its current system. Beginning in 2009, MSV will launch and operate a next-generation system using satellites that will be among the largest and most powerful commercial satellites ever built and that will use spot-beam technology in conjunction with ATC. These advances in satellite technology and systems design, in conjunction with ATC, will soon permit MSV to offer service at lower rates and with smaller handsets that are comparable to those offered by traditional terrestrial Commercial Mobile Radio Service (“CMRS”) providers.

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<sup>1</sup> See *WTB Seeks Comment on CMRS Market Competition*, DA 06-62, WT Docket No. 06-17 (Jan. 18, 2006) (“*Public Notice*”).

## Background

*MSV.* MSV is the entity authorized by the Commission in 1989 to construct, launch, and operate a United States MSS system in the L band.<sup>2</sup> MSV's licensed satellite (called "AMSC-1") was launched in 1995, and MSV began offering service in 1996. Today, MSV offers a full range of land, maritime, and aeronautical satellite services, including voice and data, using both its own U.S.-licensed satellite and the Canadian-licensed L band satellite licensed to Mobile Satellite Ventures (Canada) Inc. ("MSV Canada"). In January 2005, the Bureau licensed MSV to launch and operate an L band MSS satellite at 63.5°WL (called "MSV-SA") to provide MSS in South America.<sup>3</sup> In May 2005, the Bureau licensed MSV to launch and operate a replacement L band MSS satellite at 101°WL (called "MSV-1").<sup>4</sup>

*ATC Order.* In February 2003, the Commission issued rules permitting MSS licensees to integrate ATC into their satellite systems.<sup>5</sup> The Commission's order hailed the value of ATC, finding that the expanded authority would promote the efficient use of MSS spectrum, allow MSS providers to offer ubiquitous service by overcoming coverage gaps in densely populated areas, and achieve economies of scale that would dramatically reduce the cost of MSS equipment and service, promote public safety and national security, and increase competition.<sup>6</sup>

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<sup>2</sup> *Order and Authorization*, 4 FCC Rcd 6041 (1989); *remanded by Aeronautical Radio, Inc. v. FCC*, 928 F.2d 428 (D.C. Cir. 1991); *Final Decision on Remand*, 7 FCC Rcd 266 (1992); *aff'd*, *Aeronautical Radio, Inc. v. FCC*, 983 F.2d 275 (D.C. Cir. 1993); *see also AMSC Subsidiary Corporation, Memorandum Opinion and Order*, 8 FCC Rcd 4040 (1993).

<sup>3</sup> *See Mobile Satellite Ventures Subsidiary LLC, Order and Authorization*, DA 05-50 (January 10, 2005) ("MSV-SA Order").

<sup>4</sup> *See Mobile Satellite Ventures Subsidiary LLC, Order and Authorization*, DA 05-1492 (May 23, 2005) ("MSV-1 Order").

<sup>5</sup> *See Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Bands*, 18 FCC Rcd 1962 (2003) ("ATC Order").

<sup>6</sup> *ATC Order* at ¶¶ 1, 21, 23, 24, 29, and 32.

*MSV's ATC License.* On November 18, 2003, MSV filed an application to operate ATC in connection with the existing and planned L band MSS systems of MSV and MSV Canada.<sup>7</sup> On November 8, 2004, the Bureau granted MSV's application, thereby making MSV the first MSS licensee authorized to operate ATC.<sup>8</sup>

*MSV's Next-Generation Satellites.* On January 11, 2006, MSV announced that it had entered into a contract with Boeing Satellite Systems, Inc. for the construction and delivery of three next generation, transparency class L band satellites to serve the Western Hemisphere.<sup>9</sup> The satellites will be among the largest and most powerful commercial satellites ever built. Each satellite's primary antenna will be twice as large as any previous commercial satellite, and the satellites will have significantly more power available over the U.S. compared to any other currently operational MSS system serving the U.S. The satellites will be used to provide advanced mobile broadband services to devices that are virtually identical to cell phone handsets in terms of aesthetics, cost, and functionality. MSV is ahead of the Commission's milestone schedule and is planning to launch these satellites beginning in 2009.

*Public Notice.* On January 18, 2006, the Commission issued a Public Notice soliciting data and information to assist in the preparation of the *Eleventh Annual Report*. See *Public Notice*. Among other issues, the Commission seeks input on which entities compete to provide

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<sup>7</sup> See Application of Mobile Satellite Ventures Subsidiary LLC, File No. SAT-MOD-20031118-00333, File No. SAT-AMD-20031118-00332, File No. SES-MOD-20031118-01879 (filed Nov. 18, 2003).

<sup>8</sup> *Mobile Satellite Ventures Subsidiary LLC, Order and Authorization*, DA 04-3553 (Chief, International Bureau, November 8, 2004). MSV recently filed to modify this license to take advantage of new rules adopted by the Commission in February 2005. See MSV, Application, File Nos. SAT-MOD-20051104-00212, SAT-MOD-20051104-00211, SES-MOD-20051110-01561 (November 4, 2005).

<sup>9</sup> See "Mobile Satellite Ventures Engages Boeing to Develop Next Generation Satellites" (Jan. 11, 2006), available at [http://www.msvlp.com/pr/news\\_releases\\_view.cfm?id=80](http://www.msvlp.com/pr/news_releases_view.cfm?id=80).

CMRS services, the extent of deployment of CMRS services, the state of competition in the provision of CMRS services, and how competition in the CMRS marketplace varies across the United States, in particular between rural and urban areas. *Id.*

## **Discussion**

### **I. MSV CONTINUES TO OFFER QUALITY SERVICE USING ITS CURRENT-GENERATION SATELLITES**

MSV has been a provider of satellite communications services since 1996. Today, MSV continues to provide voice and data service to customers throughout North America. MSV has worked diligently to continuously improve both the quality and scope of the services it is able to provide to end-user customers. MSV's service is particularly valuable in rural and remote areas, which are often unserved by terrestrial networks. Simple economic forces preclude terrestrial CMRS providers from serving sparsely populated areas, and as a result vast areas of the nation remain underserved by these providers. In contrast, MSV's coverage is available everywhere in North America, including underserved rural areas. Rural customers can directly access MSV's satellites with their mobile terminals from any point with a clear line-of-sight, without the need for costly terrestrial infrastructure. MSV's current service thus proves correct the Commission's previous findings regarding the unique suitability of satellites for serving rural portions of the United States.<sup>10</sup>

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<sup>10</sup> See, e.g., *Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band*, 15 FCC Rcd 16127, ¶ 35 (August 25, 2000) (“[W]e believe satellites are an excellent technology for delivering basic and advanced telecommunication services to unserved, rural, insular or economically isolated areas[.]”); *Extending Wireless Telecommunications Services To Tribal Lands, Report and Order and Further Notice of Proposed Rulemaking*, 15 FCC Rcd 11794, ¶ 13 (June 30, 2000) (noting that satellites “provide communications opportunities for communities in geographically isolated areas, such as mountainous regions and deep valleys, where rugged and impassable terrain may make service via terrestrial wireless or wireline telephony economically impractical.”).

MSV's service also plays a critical role with respect to public safety communications. Since MSV began to offer service in 1996, a large portion of its customer base has consisted of public safety and emergency responders at the federal, state, and local levels. These customers have recognized that MSV's system is ideally-suited to meet the critical needs of emergency response providers.<sup>11</sup> Recent events have tragically underscored the vulnerability of terrestrial communications infrastructure to both natural disaster and deliberate attack. MSV's system does not share this vulnerability; MSV's satellites are located thousands of miles above the earth and are thus not impacted by ground-based disasters. MSV also offers ubiquitous coverage using satellite capacity that can be dynamically reassigned to facilitate communications in geographic areas impacted by a disaster.

During the Hurricane Katrina and Hurricane Rita relief efforts, MSV quickly provided service to public safety and relief organizations in the affected areas, including the American Red Cross, the Federal Emergency Management Agency (FEMA), the Louisiana Department of Homeland Security, the Mississippi Emergency Management Agency, and the Texas Urban Search and Rescue Team. When state, federal and local government officials in the affected areas called asking for satellite phones, MSV shipped them immediately without waiting for the paperwork and provided free service to critical state and local first responders. MSV also reached out to federal, state, and local public safety and other agencies to provide additional help. MSV is continuing these efforts. Because of the high-capacity of MSV's geostationary

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<sup>11</sup> See *Establishing Rules and Policies for the Use of Spectrum for Mobile Satellite Service in the Upper and Lower L-band, Notice of Proposed Rulemaking*, 11 FCC Rcd 11675, 11681 ¶ 12 (1996) (noting that satellites "provide emergency communications to any area in times of emergencies and natural disasters"); *Qualcomm Incorporated, Order*, DA 00-2438, ¶ 7 (Chief, Wireless Bureau, Oct. 30, 2000) (explaining that satellites "may provide an important additional emergency telecommunications resource, especially to callers located in remote and rural areas and callers located in underpopulated regions where neither landline nor terrestrial mobile services exists").

orbit satellite system, these public safety users, even at peak times, received reliable communications.

Notwithstanding the manifest benefits of MSV's service to rural customers and first responders, its unaugmented current-generation satellite system – like all current-generation MSS systems – cannot effectively compete with terrestrial providers in urban, non-niche markets. In these areas, MSV's satellite signal is typically blocked by buildings and other man-made structures, unacceptably impairing signal quality. Moreover, the inability of MSS providers to serve urban subscribers has prevented MSS providers from developing the critical mass of customers necessary to reduce per-customer rates, equipment costs, and handset size to levels that are competitive with terrestrial CMRS providers. There is simply no demand for expensive and unwieldy MSS terminals when terrestrial CMRS operators offer the same service at significantly lower prices. For these reasons, the current service offerings of MSV and other MSS providers cannot be considered competitive with or substitutes for terrestrial mobile services.

## **II. MSV'S PLANNED ATC SERVICE OFFERINGS WILL OFFER A COMPETITIVE ALTERNATIVE TO TERRESTRIAL CMRS**

The high costs of providing MSS are the inevitable result of inefficient spectrum use by many MSS operators, and limited overall system capacity.<sup>12</sup> ATC, however, provides for the

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<sup>12</sup> For example, the high costs of the user equipment and service offered by Inmarsat Ventures Limited ("Inmarsat"), such as its new BGAN service, is the inevitable result of its failure to adopt advancements in space-based technology, which adversely impacts satellite power and efficient spectrum use. Inmarsat's next-generation satellites (called the Inmarsat-4 or I-4 satellites) are several times more powerful than the current generation of Inmarsat satellites, but have only 1/15<sup>th</sup> the power of MSV's next-generation satellites (an I-4 satellite is capable of approximately 68 dBW AEIRP whereas a next generation MSV satellite is capable of approximately 80 dBW AEIRP). This is primarily due to a significantly smaller antenna aperture of the I-4 satellite (9 meters vs. MSV's 22 meters) resulting in significantly larger spot beams and significantly reduced frequency reuse.

coverage, capacity, and economies of scale needed to overcome this vicious cycle with a virtuous one of affordable equipment and service that puts spectrum to use from the most densely populated urban cores to the most remote areas.

MSV is the pioneer in proposing and developing ATC, having filed an application to provide ATC in 2003 and received the first authorization to do so in 2004. MSV has made substantial and sustained investments in the research and development, planning, and implementation of ATC. Since filing the first ATC application over five years ago,<sup>13</sup> MSV has spent millions of dollars developing the intellectual property needed to make the system work and has raised millions more to begin implementing its vision for the system.

MSV plans to implement an interim ATC solution using its current-generation satellites as early as late 2007, which will utilize boosters to effectively facilitate hybrid operations. By coupling ATC with MSS, MSV will offer service that is more efficient, more robust, more dynamic, and less expensive. As noted above, beginning in 2009, MSV will launch and operate a next-generation system using higher-power satellites that will use spot-beam technology in conjunction with ATC. MSV will use these satellites, which will be among the largest and most powerful commercial satellites ever built, to provide advanced mobile broadband services throughout the nation, including to the most rural and remote areas. All users throughout the nation will be able to access these broadband services using devices that are virtually identical to cell phone handsets in terms of aesthetics, cost, and functionality.

ATC will also facilitate even more efficient, robust, and flexible communications for public safety users. In the case of an emergency where terrestrial networks are unreachable, like Hurricane Katrina, the system will instantly and seamlessly switch to the satellite network,

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<sup>13</sup> See Application of Motient Services Inc. and Mobile Satellite Ventures Subsidiary LLC, File No. SAT-ASG-20010116-00010 *et al.* (Jan. 16, 2001).

ensuring that emergency responders have continued and immediate access to reliable, interoperable, and redundant communications. First responders and disaster management personnel will be able to ensure that when a disaster occurs they are able to communicate efficiently and effectively in order to save lives. Instead of waiting for satellite phones to arrive or for their local networks to be rebuilt, they will be able to continue using the same phones they carry on their belts and in their purses everyday.

Aside from these benefits for rural and public safety users, MSV is confident that its ATC offerings will be able to effectively compete with the offerings of terrestrial CMRS providers more generally. Although the 2003 *ATC Order* noted that “terrestrial CMRS and MSS ATC are expected to have different prices, coverage, product acceptance and distribution,” MSV’s next-generation system may prove these expectations false. *See ATC Order* at ¶ 39. Recent advances in satellite technology and systems design will soon permit MSV to offer high-quality service at low rates using smaller, less-expensive handsets comparable to those offered by terrestrial CMRS providers. Moreover, MSV’s service will be distinguished by the value-added benefits stemming from the availability of ubiquitous and robust satellite service, benefits which cannot be matched by terrestrial CMRS providers. In short, MSV’s service offerings may soon offer a truly competitive alternative to terrestrial CMRS.

## Conclusion

MSV requests that the Commission consider these Comments in connection with its *Eleventh Annual Report* on conditions in the CMRS market.

Respectfully submitted,

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