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Before the
Federal Communications Commission
Washington, DC 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of	)	
Flexibility for Delivery	)	IB Docket No. 01-185
Of Communications by	)	
Mobile-Satellite Service Providers	)	
In the 2 GHz Band, the L-Band, and the	)	
1.6/2.4 GHz Band	)	
	)	
Amendment of Section 2.106 of the	)	ET Docket No. 95-18
Commission's Rules to Allocate Spectrum at	)	
2 GHz for Use by the Mobile-Satellite Service	)	

To: The Commission

REPLY COMMENTS OF
THE UNOFFICIAL BONDHOLDERS COMMITTEE
OF GLOBALSTAR, L.P.

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November 13, 2001

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EXECUTIVE SUMMARY

An analysis of the comments filed with the Federal Communications Commission ("Commission") in its proceeding to consider whether to authorize Mobile-Satellite Service ("MSS") licensees to integrate ancillary terrestrial components ("ATCs") with their satellite systems demonstrates clearly that such authority serves the public interest. Echoing the initial comments of the Unofficial Bondholders Committee (the "Bondholders") of Globalstar, L.P. ("Globalstar"), commenters described in detail the benefits that MSS providers currently provide to government organizations, industries, and individuals. Further, ATC proponents opined that grant of ATC authority will revitalize the MSS industry, thereby preserving and increasing these benefits by improving domestic mobile service offerings and expanding MSS subscribership. In contrast, no commenter provided any meaningful public interest, legal, or technical argument that effectively rebutted the public interest benefits of ATC.

The Commission Should Summarily Dismiss the Argument of ATC Opponents That Grant of ATC Authority Would be Unfair to Terrestrial Mobile Providers

Opponents of ATC authority largely neglected the public interest. They endorsed generally the Commission's policy of providing flexible operational authority to spectrum licensees to enable the licensees to realize market-driven spectrum-use and economic efficiencies. They boldly asserted, however, that such flexibility should not be provided to the MSS industry. Having developed over the past ten years annual revenues of $200 billion and domestic subscribership of over 100 million, the terrestrial wireless industry is well over two hundred times larger than the nascent MSS industry. Nevertheless, representatives of the

terrestrial industry brazenly argued in their comments that Commission grant of ATC authority to MSS providers will provide MSS providers with an unfair competitive advantage.

Disregarding the interests of the American public, and in particular the rural Americans that terrestrial providers are unable to serve adequately, terrestrial providers syllogistically argued that they were required to pay for the spectrum that they use to provide mobile services, and thus that it would be unfair for the Commission to grant MSS providers ATC authority. The Commission should summarily dismiss this argument because it is untrue and, more importantly, because the Commission has been charged with upholding the public interest, which is served by a robust MSS industry, and not the private commercial interests of terrestrial providers intent on avoiding perceived new competition.

First, it simply is untrue that terrestrial providers were required to obtain all of their spectrum via competitive bidding. The Commission did not begin auctioning spectrum until 1995. Prior to 1995, the Commission assigned virtually all cellular licenses, which comprise nearly a third of all spectrum currently used to provide mobile telephony, by lotteries and comparative hearings. Terrestrial providers were not required to pay for spectrum when terrestrial mobile telephony was a fledgling industry and thus it is disingenuous for terrestrial providers now to argue that the nascent MSS industry should be required to do so.

Second, the arguments of ATC opponents that MSS and terrestrial providers are similarly situated and thus should be assigned spectrum in an equivalent manner ring hollow. Globalstar was required to raise and spend $4.5 billion, including $1.5 billion provided by the Bondholders, before it could provide service to its first subscriber. By contrast, terrestrial networks are constructed incrementally city-by-city, with expansion funded, in part, by revenues from existing subscribers. This difference exposes MSS providers to tremendous risk that the economy or the

mobile satellite communications market could change dramatically between the time an MSS provider forms and funds its business plan and the day, years later, that the provider commences service. In fact, the United States' economic downturn and the dramatic growth and extension of terrestrial mobile networks, due in large part to economies of scale, could not have been adequately forecast when the Commission began its Big LEO allocation proceeding nearly a decade ago.

Third, Congress recognized when it passed the ORBIT Act in 1998 the substantial financial risk entailed in the development, construction, launch, and operation of an MSS system. As a result, Congress prohibited the Commission from auctioning MSS spectrum. It is not a great leap of faith to realize that if the issue had been directly before Congress, it would have intended this prohibition to prevent the Commission from initially auctioning MSS licenses that included ancillary ATC authority. Thus, it follows that this prohibition also prevents the Commission from now auctioning ancillary ATC authority to existing MSS licensees.

Commenters Clearly Demonstrated That The MSS Industry Serves the Public Interest

Proponents of ATC authority, by contrast, painted a vivid picture of the unique and vital public interest benefits provided by MSS providers. MSS providers demonstrated that they are the sole source of adequate mobile voice and data services for rural and remote locations because the economics of terrestrial networks prevent terrestrial providers from ever providing service to rural America. Despite the Commission's queries on the subject, comments filed by terrestrial providers offered little evidence to counter the MSS providers' accurate assertions. MSS also is one of the few sources of broadband access that is available to often underserved rural Americans.

Further, proponents of ATC authority discussed how MSS services played a vital role during rescue operations following the September 11 terrorist attacks and in pursuing terrorist organizations worldwide. Immediately following the attacks, MSS providers routed satellite phones to Lower Manhattan and the Pentagon. These phones aided rescue workers and emergency management agencies in a way that terrestrial networks could not. Since September 11, law enforcement and national security agencies have depended on satellite phones to assist their investigations. Moreover, on an ongoing basis, MSS providers will provide the real-time aeronautical communications services necessary to secure U.S. aircraft against potential hijackings. For example, QUALCOMM Incorporated recently unveiled a new aeronautical communications system that will use Globalstar's MSS system to provide, among other capabilities: real-time transfer of flight data and backup transponder information, including aircraft identification, speed, and altitude; dedicated communications between air marshals and the cockpit and ground; and real-time audio and video monitoring of aircraft cabins and cockpits. The ubiquitous domestic and global coverage of MSS systems and the fact that MSS systems do not rely on vulnerable concentrated terrestrial infrastructure, like terrestrial wireless and wireline networks, makes the MSS industry a crucial public safety and law enforcement tool in both man-made emergency and natural disaster situations.

Grant of ATC Authority is the Regulatory Flexibility Needed by Globalstar to Reinvigorate its MSS Operations

Consistent with Commission expectations, the Bondholders and other commenters explained that ATC authority is necessary to overcome the urban and indoor reception problems that inherently plague MSS operations. With a grant of ATC authority, Globalstar will be able to add an ATC platform to its operating MSS systems to improve the urban and indoor services that it offers subscribers. This will enable Globalstar to increase subscribership and lower prices, which, in turn, will attract sorely needed capital to Globalstar. The additional capital can be used

to develop additional industry-specific equipment and to take advantage of Globalstar's bent-pipe satellite system by upgrading ground technologies to improve service offerings. Commenters agreed that without Commission grant of ATC authority, it is unlikely that operating MSS providers will be able to launch second generation satellite systems. It also is unlikely that MSS licensees that have not yet launched MSS systems will be able to do so. Thus, the outcome of this proceeding quite literally could determine the future of the MSS industry.

The Commission Should Not Adopt Most of the ATC Restrictions Proposed by Commenters Because The Restrictions Are Unnecessary and Will Not Benefit American Subscribers

Commenters proposed that the Commission adopt a variety of different rules and restrictions to govern the operation of ATC platforms. As the Bondholders explained in their initial comments, the Commission should enact only the minimum ATC regulations necessary to accomplish two objectives: (i) continuing enforcement of MSS providers' satellite coverage requirements to ensure the ancillary nature of ATC authority; and (ii) prevention of interference—specifically the PCS-based rules proposed by the Commission and an appropriate test for determining when interference occurs.

First, the Commission should not adopt any of the various proposals that commenters claim are necessary to ensure the ancillary nature of ATC authority. The Commission merely needs to strictly enforce existing MSS coverage requirements following a grant of ATC authority, and not permit ATC operations by any MSS provider that is not in full compliance with such requirements. Enforcing MSS coverage requirements can ensure the provision of "ancillary" service by preventing the operation of an ATC platform from degrading in any way the satellite service received by MSS subscribers that are not served by the ATC platform. As long as operation of an ATC platform does not degrade an MSS providers' satellite service, there is no public interest justification to support artificially restricting ATC authority. It is not necessary to adopt additional restrictions aimed at reducing the effectiveness of ATC, which

restrictions will prevent MSS providers from achieving optimal MSS-ATC integration efficiencies.

Second, the Commission should allow technological market forces to determine the optimal method of ensuring that ATC platforms do not cause harmful interference to in-band and adjacent-band licensees. To do so, the Commission should prohibit such interference but not require MSS providers to avoid interference through particular measures. MSS providers should be provided with flexibility to use innovative means of preventing interference, including different mitigation techniques to address the different interference concerns in the three relevant MSS allocations: the 2 GHz band, in which numerous incumbent terrestrial licensees operate; the L-band, which is shared among multiple MSS licensees; and the Big LEO band, which does not share many of the interference concerns applicable to the other two bands.

For the reasons set forth herein, the Globalstar Bondholders renew their request for the Commission expeditiously to grant ATC authority to MSS providers.

Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of

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 Band	)	IB Docket No. 01-185
Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service	)	ET Docket No. 95-18

To: The Commission

REPLY COMMENTS OF
THE UNOFFICIAL BONDHOLDERS COMMITTEE
OF GLOBALSTAR, L.P.

I. INTRODUCTION

The Unofficial Bondholders Committee ("Bondholders") of Globalstar, L.P. ("Globalstar"), by its attorneys and pursuant to Section 1.415(c) of the rules of the Federal Communications Commission ("Commission"),[1] hereby submits this Reply to the comments filed in response to the Commission's Notice of Proposed Rulemaking ("NPRM") in the above-captioned proceeding.[2] In its initial comments ("Comments") in response to the NPRM,[3] the Bondholders endorsed the Commission's proposal to authorize Mobile-Satellite Service ("MSS") licensees to operate ancillary terrestrial components ("ATC") to their MSS satellite networks.

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[1] 47 C.F.R. § 1.415(c).

[2] 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 Band, Notice of Proposed Rulemaking, IB Docket No. 01-185, ET Docket No. 95-18, FCC 01-225 (rel. Aug. 17, 2001) ("NPRM").

II. WHETHER THE COMMISSION GRANTS ATC AUTHORITY MAY DETERMINE THE FUTURE OF THE MSS INDUSTRY

The importance of the instant rulemaking proceeding should not be underestimated. Commenters both endorsing and opposing Commission grant of ATC authority to MSS providers overwhelmingly agree on only one thing—the Commission's pending decision whether to grant such authority represents a choice between invigorating the MSS industry or abandoning it.[4] Contrary to the opponents of ATC authority, the Bondholders believe strongly that the MSS industry currently provides a substantial net benefit to the American public, which benefit should be preserved and can be enhanced. Commission grant of ATC authority not only will revitalize the MSS industry, but also dramatically increase the benefits that the industry provides to Americans.

A. Commenters Clearly Established the Public Interest Benefits Inherent to the MSS Industry

The Bondholders detailed in their Comments the extensive public interest benefits flowing to citizens, industries, and government organizations both in the United States and in over 100 other nations worldwide from the ubiquitous mobile voice and data services provided by Globalstar.[5] It was because of their belief in the value and potential of Globalstar that the Bondholders invested $1.5 billion of the $4.5 billion required to design, construct, and launch Globalstar's 48-saetllite Big LEO MSS constellation. Echoing the Bondholders, a variety of

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[3] Comments of the Unofficial Bondholders Committee of Globalstar, L.P., filed on October 21, 2001 ("Bondholders Comments").

[4] See, e.g., Comments of AT&T Wireless Services, Inc., at 8 (asserting that MSS may not survive even with ATC authority) ("AWS Comments").

[5] See Bondholders Comments, at 3-17; see also Comments of Globalstar, L.P. and L/Q Licensee, Inc., at 2-3 ("Globalstar Comments"); Comments of Loral Space & Communications Ltd., at 1-2 ("Loral Comments").

other MSS providers detailed in their comments the various telecommunications services that they intend to provide or on which their MSS subscribers currently rely on a daily basis.[6] Together, these descriptions portray a unique, innovative, and nascent sector of the telecommunications industry, which has the potential to mature into a vital and ubiquitous component of future telecommunications networks.[7]

1. The MSS industry is the only available mobile communications platform capable of providing adequate voice and data service to rural areas

One of the most important public interest benefits provided by the MSS industry is its unparalleled ability to serve rural Americans. Ensuring that rural Americans have access to adequate telecommunications services has been a Commission priority for decades and is equally important today.[8] The Bondholders and several other commenters explained in their initial

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[6] See Consolidated Comments of Celsat America, Inc., at 5 (stating that Celsat will offer "PCS-sized handheld phones" for voice and high-speed data communications) ("Celsat Comments"); Comments of Comtech Mobile Datacom Corporation, at 2 (stating that Comtech operates vehicle-mounted and fixed MSS terminals using L-band MSS space segment to provide a variety of messaging and location monitoring functions to government and non-government users) ("Comtech Comments"); Comments of the Mobile Satellite Users Association, at 2-3 (discussing extensively the current benefits provided by the global MSS industry) ("MUSA Comments"); Comments of Motient Services Inc., TMI Communications and Company, Limited Partnership, and Mobile Satellite Ventures Subsidiary LLC, at 9-11 (describing the public safety, industrial, and maritime uses of the MSS services that Motient provides using its U.S.-licensed geostationary L-band satellite) ("Motient Comments"); Comments of Stratos Mobile Networks (USA) LLC and MarineSat Communications Network, Inc., at 4-7 (discussing the various global MSS uses provided by Stratos) ("Stratos Comments").

[7] It is anticipated that third generation mobile wireless networks will be composed of integrated terrestrial and satellite platforms. See, infra, Section VI. A. of this memorandum.

[8] For example, prior to 1960, the Commission established the Rural Radiotelephone Service ("RRS") to supply telecommunications service to citizens living in rural areas, for whom access to traditional wireline services is unavailable or unaffordable. RRS is used to provide Basic Exchange Telecommunications Radio Service ("BETRS"), a communication service between a central office and subscribers located in rural areas where it is impracticable to connect to the network by other means. See 47 C.F.R. §§ 22.701 et seq. Subsequently, in 1986, the Commission established rural cellular service by issuing cellular licenses for multi-county groupings called rural service areas ("RSAs") for areas outside of metropolitan statistical areas. See Amendment of the Commission's Rules for Rural Cellular Service, First Report and Order,

comments that the MSS sector is the sole participant in the mobile telecommunications industry that is capable of providing ubiquitous mobile voice and data services to rural and remote locations.[9] These commenters explained that terrestrial wireless providers do not now, and will not in the future, provide adequate coverage of rural and remote areas because the price of the facilities necessary to do so far outweighs the potential to generate revenue from areas with low population densities.[10] As they leave major towns and highways and their mobile services become inadequate or cease entirely, this lack of seamless terrestrial coverage becomes apparent to Commercial Mobile Radio Service ("CMRS")[11] subscribers in the vast stretches of rural

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60 Rad. Reg. 2d (P&F) 1029 (1986).

In addition, the Commission has spent substantial resources over the past five years developing a universal service regulatory framework to rationally and transparently subsidize carriers in compliance with its statutory mandate to provide telecommunications services to rural communities. See 47 U.S.C. § 254(b)(3) ("Consumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high-cost areas, should have access to telecommunications and information services."); see also Federal-State Joint Board on Universal Service, Fourteenth Report and Order, Twenty-Second Order on Reconsideration, and Further Notice of Proposed Rulemaking in CC Docket No. 96-45, and Report and Order in CC Docket No. 00-256 (rel. May 23, 2001) ("Congress articulated a national goal that consumers in all regions of the nation, including rural, insular and high cost areas, should have access to telecommunications and information services at rates that are reasonably comparable to rates charged for similar services in urban areas.")

[9] See Bondholders Comments, at 7. See also Comments of Constellation Communications Holdings, Inc. ("Constellation Comments"), at 11; Comments of Mobile Communications Holdings, Inc. ("MCHI Comments"), at 5; Motient Comments, at 5-6; Comments of New ICO Global Communications ("New ICO Comments"), at 5.

[10] TDS cited a July 2001 FCC report on the state of the CMRS industry to suggest that the CMRS industry provides adequate mobile service nationwide. TDS Comments, at 5. As the Bondholders noted in their Comments, the FCC's report is misleading in that it assumes that an entire county is served by CMRS providers if service is available in any part of that county. Bondholders Comments, at 8 and note 10. In fact, as any CMRS subscriber will attest, even densely populated metropolitan areas have coverage gaps. Not surprisingly, then, CMRS services are only available in large towns and along highways in rural counties considered by the FCC to be served by CMRS providers. Much of the geographic area of these counties is not served by any CMRS provider.

[11] Although the term CMRS is used by the FCC to refer to a variety of mobile services other than consumer mobile telephony and data services, for purposes of this Reply Comment, the Bondholders use the term only to refer to operators of Cellular, Personal Communications

America. Despite the Commission's queries regarding the current and planned future rural coverage of CMRS networks,[12] CMRS providers that filed comments largely failed to offer evidence that they currently do, or ever will, provide adequate service to rural, remote or currently unserved areas.[13] By contrast, every MSS system is uniquely capable of providing, and is required to provide, the same high quality service to all corners of the United States.

Service ("PCS"), and Specialized Mobile Radio ("SMR") licenses that are operated on a common carrier basis.

[12] NPRM, at ¶ 26 ("We seek comment on the comparative abilities of terrestrial CMRS systems (both existing and planned) . . . to serve rural and unserved areas, and how we might quantify the differences. Furthermore, we seek comment on how service to rural and unserved areas will be provided otherwise if MSS operators cannot achieve commercial viability. We request specific information and data that demonstrates existing and planned coverage by terrestrial land mobile systems of rural, remote, and unserved areas."). CMRS providers did not effectively respond to this Commission query and generally do not publicize the substantial gaps in their coverage. Further, as noted above, the Commission's data gathering techniques do not accurately reflect CMRS coverage of remote or rural areas. Therefore, it is not possible for MSS providers accurately to quantify the number of square miles or individuals that would lose access to mobile services if MSS providers ceased operating. Nevertheless, it is clear that significant populations remain unserved by CMRS and thus would lose access to mobile services if MSS were unavailable to them.

[13] For example, no CMRS providers filed coverage maps demonstrating their current or planned rural coverage. TDS noted that certain CMRS providers offer rural service. TDS Comments, at 12. Although TDS named several regional CMRS providers that predominantly operate outside of large metropolitan areas, it is disingenuous to suggest that these CMRS providers offer anything even approaching the seamless rural coverage provided by Globalstar. Some of the "rural" CMRS providers cited by TDS provide realistic coverage maps on their websites which demonstrate how poor their rural coverage is. See, e.g., http://www.cricketcommunications.com/areas.asp; http://www.ntelos.com/ProdSvcs/ main_digpcs.html (providing coverage maps demonstrating that Leap Wireless's Cricket-branded service and NTELOS's service, respectively, only are available in large cities and along highways in rural states). Other "rural" CMRS providers provide less accurate coverage maps that suggest that they offer ubiquitous service across entire rural states and then include small-print disclaimers noting that the maps are "not a guarantee of service availability." See, e.g., http://www.cellularonewest.com/coverage.asp (suggesting that Cellular One service is available without significant gaps in many rural states). Whereas these providers actually only offer service in rural population centers and along rural highways, Globalstar's subscribers can obtain service absolutely anywhere in the United States (with the exception of urban areas until the Commission grants ATC authority).

In addition, the MSS industry also is uniquely capable of providing advanced telecommunications services to unserved and underserved populations. Since the enactment of the Telecommunications Act of 1996 (the "1996 Act"), the Commission has emphasized repeatedly the importance of meeting its statutory requirement to ensure the deployment of advanced telecommunications capability to all Americans, particularly those living in rural areas.[14] In particular, the Commission has placed special emphasis on the deployment of basic and advanced services in American Indian and Alaska Native tribal communities.[15] The Commission has identified rural Americans and Native Americans as particularly vulnerable to not having access to advanced services if deployment is left to market forces alone.[16] Rural

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[14] See 47 U.S.C. § 254(b)(3); Local Competition and Broadband Reporting, Report and Order, 15 FCC Rcd. 7717 (2000) (collecting information on the deployment of broadband services to "facilitate a more comprehensive understanding of the deployment of advanced telecommunications capabilities and broadband services, particularly in rural areas"); Federal-State Joint Conference on Advanced Telecommunications Services, Order, FCC 99-293 (rel. Oct. 8, 1999) (stating that the Commission is required by the 1996 Act to "encourage the deployment of advanced telecommunications services to all Americans . . . whether they be located in urban or rural areas").

[15] See Federal-State Joint Board on Universal Service; Promoting Deployment and Subscribership in Unserved Areas, Including Tribal and Insular Areas, Twelfth Report and Order, Memorandum Opinion and Order, and Further Notice of Proposed Rulemaking, FCC 00-208 (rel. June 30, 2000), at 20 (concluding that "unavailability or unaffordability of [basic and advanced] telecommunications service on tribal lands is at odds with our statutory goal of ensuring access to such services" for all consumers).

[16] See Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, Second Report, CC Docket No. 98-146 (rel. Aug. 21, 2000) ("706 Report") ("We identify certain categories of Americans who are particularly vulnerable to not having access to advanced services. These include low-income consumers, those living in sparsely populated areas . . . [and] Indians."); Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable And Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant To Section 706 of the Telecommunications Act of 1996, Notice of Inquiry, CC Docket No. 98-146 (rel. Feb. 18, 2000) ("There is a growing concern that Americans living in rural areas and inner cities might not have access to advanced services that are comparable to services available to people living in other areas. This lack of broadband infrastructure could limit the potential of these communities to attract and retain businesses and jobs, especially businesses

areas currently lag behind central cities and urban areas in broadband penetration at 7.3%, compared to 12.2% and 11.8%, respectively.[17] MSS represents a competitive alternative to fixed satellite service, the single broadband technology available to most rural consumers who cannot access cable or digital subscriber line ("DSL") services. The inclusion of MSS in the rural broadband services market will bring competition to the market and will enable more rural and Native American consumers to receive advanced services at reasonable cost.

2. The use of satellite phones during the September 11 attacks demonstrated the inimitable value of the MSS industry to law enforcement and emergency personnel

The characteristics of MSS that separate it from other, terrestrial mobile services have been highlighted clearly by the September 11 terrorist attacks in Lower Manhattan and the Pentagon. As discussed by several of the commenters,[18] MSS providers immediately routed satellite phones to these areas. The satellite phones satisfied the needs of rescue and medical workers, and emergency management agencies in a way that terrestrial networks could not. These phones literally saved American lives, lives that would have been lost were it not for the MSS industry. In addition, since September 11, law enforcement and national security agencies have depended on the phones to assist their investigations. Further, MSS systems will be used in the near future to improve the safety of America's airlines.

- The New York City attack destroyed the local wireline and terrestrial wireless telecommunications infrastructures, leaving rescue workers and emergency management

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that are dependent on electronic commerce. Lack of infrastructure could also restrict community access to education, health care, and recreational services.").

[17] See National Telecommunications and Information Administration (NTIA), *Falling Through the Net: Toward Digital Inclusion, A Report on Americans' Access to Technology Tools* (Oct. 2000) available at http://www.ntia.doc.gov/reports.htm.

[18] See Bondholders Comments, at 10; MCHI Comments, at 6; Motient Comments, at 10; New ICO Comments, at 13.

agencies without any type of interconnected communications.[19] MSS systems require very little terrestrial infrastructure—only gateway earth stations which can be located in remote and easily defensible locations.[20] Thus, unlike terrestrial wireless networks, MSS systems are not vulnerable to local natural and man-made catastrophes.

- Terrestrial wireless systems were overloaded with traffic in the Washington, D.C. and New York City metropolitan areas immediately after the attack on the World Trade Center and Pentagon. Thousands of PCS and cellular calls were unable to be completed due to the extra traffic caused by the attack. Satellite phones enabled emergency management agencies to overcome the terrestrial mobile phone gridlock to coordinate rescue efforts.

- In the weeks and months following September 11, law enforcement and national security agencies have spread their personnel across the globe in pursuit of terrorists and the parties that sponsor them. Satellite phones enable these agencies to securely coordinate their investigations from the most remote locations, such as Afghanistan. The phones have allowed law enforcement and national security personnel to remain in touch from these locations without having to rely on inadequate or nonexistent local wireline and wireless communications infrastructure.

- MSS systems will be used to overcome the airline security deficiencies demonstrated by the September 11 attacks by providing real-time communications between aircraft and aviation authorities. In the future, authorities will know at all times exactly what is taking place on flights and be able to react accordingly.[21] Such capabilities may have

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[19] For example, during a recent investor conference call, Verizon representatives noted that the September 11 New York City attack did between $1.7 and $1.9 billion in damage to Verizon's networks. This damage will not be fully repaired until the second half of 2002. Verizon Co-CEO: About 100% NYC Customers Have Service Restored, Most Sept. 11 Restoration Temporary, DOW JONES NEWS, October 30, 2001. MSS systems do not rely on similarly concentrated terrestrial infrastructure.

[20] Further, MSS systems can rely on redundant earth stations. Therefore, even in the unlikely event that a gateway earth station is destroyed, a redundant earth station hundreds or even thousands of miles away can ensure that satellite phone service is not interrupted.

[21] The Aviation Industry Parties argue that ATC authority may disrupt existing aeronautical safety communications. AIP Comments, at 4. To the contrary, as further discussed below, ATC authority will give MSS providers the financial wherewithal to develop aeronautical

enabled authorities to react more quickly to the September 11 hijackings and save thousands of lives. For example, QUALCOMM Incorporated recently unveiled a new aeronautical communications system which is in the final stages of Federal Aviation Administration certification. Using Globalstar's MSS system, this vital new aeronautical communications and safety system provides the following capabilities:

> "real-time video and audio monitoring of aircraft cabins and cockpits; an Air Traffic Control service to alert aviation authorities of emergency situations, allowing ground support teams to rapidly assess and respond to crisis situations; remote control of onboard aircraft cameras; transmission of real-time aircraft flight data to the ground; on-the-ground access to and possible automated real-time monitoring of flight data and cockpit voice recorders; dedicated voice communications for Air Marshals to the cockpit and ground; in-flight emergency safety and medical services; and back-up transponders with aircraft identification, altitude, speed and location information."[22]

Thankfully, catastrophes of the magnitude of the September 11 attack are rare. Nevertheless, preparedness for such violence is a vital part of our national security and recently was made a key priority of the Commission by Chairman Powell.[23] In addition Governor Tom Ridge,

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communications and safety systems that far exceed capabilities currently available. For example, the Aviation Industry Parties note that Inmarsat currently provides safety communications to an estimated 2,500 aircraft, whereas the United States' commercial aircraft fleet alone (i.e., 60+ passenger air carrier jets, cargo aircraft, and regional jet fleets) is comprised of over 6,000 aircraft, not including private aircraft. Id.; Report Predicts Air Passengers at One Billion in 10 Years: Mineta Calls on Aviation Leaders to Meet the Challenge, M2 PRESSWIRE, March 13, 2001. Clearly, current aeronautical safety communications are inadequate. The Aviation Industry Parties are correct that "[t]he terrorist attack on the United States will require additional security measure by the world's aviation community." AIP Comments, at 11. MSS systems, however, will be the solution.

[22] Press Release, QUALCOMM Introduces Technology to Enhance Aviation Safety Services: Enables Real-Time Video and Audio Communications Between Aircraft and Ground Network, QUALCOMM Incorporated, October 29, 2001, available at http://www.qualcomm.com/press/view/0,1884,680,00.html.

[23] According to Chairman Powell:

> [I]t has become imperative that the communications community come together to determine our role in ensuring homeland security. We must be aggressive in ensuring that our policies maximize the many efforts being made to make our nation safe. We will work with industry to ensure the reliability and security of our nation's communications infrastructure.

Director of Homeland Security, has emphasized in numerous press conferences the need for state-of-the-art technology to protect Americans against attack.[24] MSS systems already play a key role in U.S. prevention and response capability and, with ATC authorization, could potentially enhance the security and safety of millions of Americans. MSS systems also provide protection and response capabilities during all types of more typical, day-to-day emergency situations.

B. Commenters Demonstrated that a Grant of ATC Authority Will Revitalize the MSS Industry and Concomitantly Increase the Public Interest Benefits Provided to the American Public by the Industry

Absent Commission grant of ATC authority, the numerous and unique benefits provided by the MSS industry may cease to be available to the American public in the not too distant future.[25] Contrary to the assertions of certain commenters that argued that the MSS industry

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Chairman Michael K. Powell, Press Conference: "Digital Broadband Migration" Part II (October 23, 2001). Chairman Powell further stated that "[i]t is paramount that [the Commission] keep the increasing needs of the public safety community at the forefront of any new thinking in spectrum allocation policy." Id. Thus, the inimitable importance of the MSS industry to homeland security is a sufficient public interest justification to warrant strengthening the MSS industry through a grant of ATC authority.

[24] See, e.g., Press Release, Briefing on Homeland Security by Governor Thomas Ridge, Director of Homeland Security (Oct. 19, 2001), available at http://www.whitehouse.gov/news/releases/20011019-7.html (stating that "[e]veryday, the Office of Homeland Security is looking to enhance or improve our prevention capability and our response capability" with respect to borders, ports of entry, airports, aircraft, water supplies, power plants, dams, and other critical infrastructure).

[25] Inmarsat Ventures PLC ("Inmarsat"), and certain of its resellers, asserted that Inmarsat's MSS business is successful without a terrestrial component and syllogistically concluded based on this assertion that the remainder of the MSS industry does not require ATC authority. See Comments of Inmarsat Ventures PLC, at 2 ("Inmarsat Comments"); Comments of Telenor Broadband Services PLC, at 4, 6. Inmarsat's history and current subscriber base, however, are unique among MSS providers. Inmarsat was founded as an intergovernmental organization and primarily provides service to corporate and industrial customers, rather than to the general public.

Inmarsat was founded and funded in 1979 by a consortium of primarily government-owned telecommunications monopolies from several dozen national administrations and for over

does not support the public interest, the Bondholders strongly believe that a decline in the availability of MSS would constitute a significant loss to the American public. Such a loss is unnecessary and avoidable.

Several commenters echoed the Bondholder's assertion in their Comments that additional capital presently is not available to MSS providers.[26] Financial markets currently avoid the MSS industry because MSS providers' subscribership bases have grown more slowly than initially anticipated, due in part to the hesitance of potential MSS subscribers to purchase MSS services because of reception problems indoors and in urban areas. The recent downward trend in the U.S. economy, which has hit the technology sector and, in particular, the telecommunications industry, especially hard, has compounded this problem. Without additional capital, MSS providers will be unable to identify and further penetrate all of the potential markets that would benefit from MSS. Moreover, without inflows of new capital, MSS providers will be unable to develop and launch second generation satellite systems as their existing systems expire.

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a decade effectively held a worldwide MSS monopoly. See Provision of Aeronautical Services via the INMARSAT System, Report and Order, 4 FCC Rcd 6072 (1989) (discussing the history of Inmarsat). Although Inmarsat currently is in the process of privatizing, it did not in the past have to seek financing from private, risk-adverse capital markets or face pricing pressure from competitors. Thus, Inmarsat was able to develop a stable subscriber base over its first 15 years of operation without experiencing the financial and competitive pressures faced by younger private commercial MSS providers, such as Globalstar.

In addition, Inmarsat primarily targets industrial clients with its very expensive (i.e., $2,500 to $5,000 or more) and bulky (i.e., lap-top sized or larger) MSS equipment. Inmarsat's clients probably would gain very little benefit if Inmarsat obtained ATC authority. Due to its high cost and large size, Inmarsat's equipment primarily is utilized only in remote areas. Inmarsat's MSS offerings are far too expensive and cumbersome to be utilized by the general public for day-to-day mobile communications. By contrast, in addition to serving the same types of industrial clients served by Inmarsat, Globalstar also intends to serve the millions of members of the general public that can benefit from ubiquitous mobile service—rural and urban, indoor and outdoor. Globalstar's equipment is much more portable and less expensive than Inmarsat's. Consequently, Inmarsat's opposition to ATC authority is, in part, motivated by: (i) its lack of need for additional financing; (ii) the limited nature of Inmarsat's subscriber base; and (iii) a desire to deprive its competition of the benefits that they will obtain from ATC.

[26] See, e.g., Globalstar Comments, at 4-5.

By granting MSS licensees ATC authority, the Commission simultaneously can guarantee the continued existence of a viable commercial MSS industry and dramatically increase the public interest benefits provided to the American public by that industry.[27] Commission grant of ATC authority will cause a panoply of inter-related benefits to the MSS industry. Most importantly, ATC authority will greatly expand MSS subscribership, thereby enabling numerous additional Americans to benefit from the ubiquitous service offered by MSS providers.[28] In addition, ATC authority will: (i) improve MSS reception indoors and in urban areas; (ii) decrease MSS equipment and service prices; (iii) attract capital to the MSS industry; (iv) enable the MSS industry to more efficiently use their allocated spectrum through network integration and terrestrial reuse; and (v) enable the MSS industry to develop and utilize innovative new technologies and industry-specific applications.

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[27] Although ATC authority may be necessary to the future success of the MSS industry, it should not be viewed as a regulatory hand-out. For example, SBE argues that the proposed provision of regulatory flexibility to MSS providers is a "crutch for [a] commercial venture that cannot stand on its own." SBE Comments, at ¶ 1. This fails to recognize that the Commission's policy favoring regulatory flexibility is actually a policy of reducing regulatory constraints. ATC authority represents the removal of a regulatory restraint which formerly prevented the terrestrial use of MSS spectrum, even when such use did not interfere with other licensees. As such, ATC authority should be viewed as a form of deregulation rather than a grant of special authority.

Moreover, ATC authority is a type of a market-based spectrum allocation tool, and the award of ATC authority to MSS providers would further Chairman Powell's desire that Commission spectrum allocation policy be driven by market forces and utilize "flexible allocations that allow multiple uses so that spectrum can be put to its highest and best use." Chairman Michael K. Powell, Press Conference: "Digital Broadband Migration" Part II (October 23, 2001). ATC authority would allow MSS users to determine in any particular situation whether satellite or terrestrial spectrum use is best suited to serve market needs.

[28] See Celsat Comments, at 12-13; Constellation Comments, at 5; Globalstar Comments, at 4.

III. THERE IS BROAD AGREEMENT AMONG THE COMMENTERS THAT THE COMMISSION'S POLICY TO PERMIT FLEXIBLE USE OF ASSIGNED SPECTRUM IS IN THE PUBLIC INTEREST

The commenters uniformly and correctly recognized that the Commission's policy to promote flexible use of spectrum licenses is in the public interest.[29] As the Commission has explained in many recent proceedings, such flexible operational authority supports the public interest by enabling licensees to make the most financially efficient and spectrum-efficient use of their assigned spectrum.[30] Most commenters that discussed the matter understood that ATC authority constitutes the type of regulatory flexibility that will enable the MSS industry to realize these policy objectives. Certain commenters, however, inconsistently endorsed regulatory

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[29] See, e.g., Comments of Cellular Telecommunications & Internet Association ("CTIA Comments"), at 4 (recognizing and listing the advantages of the Commission's flexibility policy).

[30] Several commenters provided extensive discussions of the various recent proceedings in which the Commission provided spectrum licensees with additional operational flexibility. See Celsat Comments, at 10; Constellation Comments, at 7-8; Loral Comments at 7; MCHI Comments, at 9; Motient Comments at 18-20.

In addition, a recent speech by Chairman Powell outlining the policy priorities of the Commission demonstrated the importance of regulatory flexibility to the Commission's near-term objectives. According to Chairman Powell, "widespread deployment of broadband infrastructure has become the [Commission's] central communications policy objective" and minimal regulation is an important means of achieving such deployment. Chairman Powell stated that the Commission should regulate only to mitigate "anticompetitive risks and discriminatory provisioning," neither of which is implicated by a grant of ATC authority. Chairman Powell also placed a strong emphasis on designing "competition policy" to facilitate the provision of digital communications from multiple platforms. ATC authority will enable MSS to become a more universally accessible communications platform. Further, he emphasized that Commission spectrum allocation policy should be driven by market forces and utilize "flexible allocations that allow multiple uses so that spectrum can be put to its highest and best use." Finally, Chairman Powell said that the Commission "must aggressively promote spectral efficiency" and expand the "use of experimental licensing." As explained below, ATC authority will enable MSS providers to make the most efficient possible use of their assigned spectrum and will enable MSS providers to better offer the services that they believe their customers desire. Chairman Michael K. Powell, Press Conference: "Digital Broadband Migration" Part II (Oct. 23, 2001).

flexibility generally, but opposed ATC authority. As further specified below, their arguments opposing ATC authority are fallacious and without merit.

A. The Commission Can Ensure that MSS Providers Make the Most Spectrum-Efficient and Financially Efficient Use of Their Spectrum Assignments By Granting ATC Authority

Regulatory flexibility in the form of ATC authority will enable Globalstar and other MSS providers to consider a variety of alternative means of integrating ATC and MSS platforms to: (i) obtain the most capacity from their spectrum assignments; (ii) closely tailor their service offerings to market demand; and (iii) accomplish both of these goals as economically efficiently as possible. Commenters offered a variety of different integration proposals aimed at accomplishing these objectives, which clearly demonstrates the importance of regulatory flexibility at this early stage in the development of terrestrial-satellite networks.

1. Grant of ATC authority will enable MSS providers to develop the most efficient possible integrated MSS-ATC networks

Some commenters argued that MSS providers will not, in fact, operate integrated networks at all. They argued based on the lack of technical details provided by Motient and New ICO in their initial ATC requests that, if the Commission grants MSS providers ATC authority, the MSS providers merely will split their current spectrum assignments into terrestrial and MSS components.[31] These commenters fail to understand the policy rationale underlying regulatory

[31] Terrestrial wireless providers specifically attacked New ICO, which provided a very generic sketch of its ATC proposal in an ex parte that it filed with the Commission requesting ATC authority. See Ex parte Letter of New ICO Global Communications (Holdings) Ltd., IB Docket No. 99-81 (Mar. 8, 2001) ("ICO Ex Parte Request"); AWS Comments, at 4; Joint comments of Cingular Wireless and Verizon Wireless ("Cingular/Verizon Comments"), at 16; Comments of the Wireless Communications Division of the Telecommunications Industry Association, at 2 ("WCD/TIA Comments"). Note that, undercutting these attacks, New ICO describes in Appendix B to its comments two possible methods of dynamic spectrum management that it is considering implementing upon grant of ATC authority. See New ICO Comments, Appendix B, at B5-B6. Thus, although New ICO may not have outlined clearly in the ICO Ex Parte Request the manner in which it intends to share spectrum between ATC and MSS platforms, New ICO

flexibility. A grant of ATC authority should not require MSS providers to integrate ATC and MSS platforms in any one particular manner. Commission dictated integration is not flexibility at all. Rather, ATC authority is intended to provide MSS providers with the operational flexibility to individually develop, guided by efficiency enhancing market forces and public interest needs, innovative solutions to the coordination challenges raised by ATC-MSS integration.[32] Thus, as further discussed below, Commission grant of ATC authority should be implemented in a manner that provides MSS licensees with the flexibility necessary to operate integrated MSS-ATC networks in a variety of different ways based on the individual licensee's perception of market demand.[33]

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demonstrated in its comments that it does, in fact, intend to do more than merely segment its MSS spectrum. Nevertheless, it would be premature for the Commission to expect licensees to develop a technical band sharing protocol until the Commission has granted ATC authority.

[32] In fact, to the extent MSS providers have provided any detail to the Commission regarding their intended use of ATC, such use has differed dramatically among them. Implying that it intends to develop an extensive ATC network, New ICO has proposed to use either a "carrier on/off" or "admission control" dynamic spectrum management system to control MSS spectrum use by its ATC sites. The "carrier on/off" method would shift spectrum between ATC and MSS use based on local traffic demands, whereas the "admission control" method would shift spectrum between ATC and MSS use within individual satellite footprints based on projected MSS-ATC interference potentials caused by existing ATC/MSS traffic balances. Comments of New ICO, Appendix B, at B5-B6. By contrast Motient anticipates that it only will use "fill-in base stations" to provide service to approximately 1% of the United States. Application of Motient Services Inc. and Mobile Satellite Ventures Subsidiary LLC, filed on March 1, 2001, at 25 (FCC File No. SAT-ASG-20010302-00017) ("Motient Application"). See also Globalstar Comments, at 10 (not proposing any specific architecture, but stating that a MSS licensee should be permitted to "outsource" its ATC network as long as the ATC network is "integrated" with the MSS network); Comments of Progress & Freedom Foundation, at 16 (noting that ATC authority may enable "substantial synergies" to be realized by mergers between MSS and terrestrial wireless providers)). Celsat, Constellation and MCHI have not yet proposed specific ATC architectures.

[33] Existing MSS and terrestrial networks were not designed to dynamically share spectrum and very little development of dynamic spectrum sharing protocols has been undertaken. See Globalstar Comments, at 10 ("[T]here must still be study of the interaction of ATC and MSS and an analysis of the potential services that can be offered . . . ."); but see, New ICO Comments, Appendix B; Motient Application, at 25-31 (each discussing preliminary development of an integrated ATC-MSS network architecture). Thus, commenters only can offer informed suppositions regarding the efficiencies and advancements that can be accomplished by

2. MSS commenters demonstrated that commercial arrangements between MSS providers and terrestrial wireless providers are not adequate substitutes for ATC authority

Contrary to the arguments of several commenters,[34] commercial arrangements between CMRS providers and MSS providers are not an adequate substitute for a grant of ATC authority. Certain MSS providers utilize dual-band user terminals that are capable of accessing both satellite and terrestrial networks in separate spectrum bands. These handsets switch between a CMRS and an MSS network depending on individual network availability at a given moment and in a particular location. These commercial arrangements do not involve spectrum sharing between terrestrial and MSS networks and thus do not enable MSS providers to realize the efficiencies that will result from a Commission grant of ATC authority.

First, each of the MSS providers that have first-hand experience offering end user service using dual-band, CMRS-MSS handsets described in their comments the significant shortcomings of these arrangements.

- Users of dual-band handsets have separate telephone numbers for the satellite and terrestrial components of their phones. They may also receive separate bills from the CMRS and MSS provider.[35] Grant of ATC authority will enable Globalstar to develop phones that seamlessly switch between ATC and MSS platforms. This will be to Globalstar's satellite phone business what automatic transmissions were to the automobile industry.

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integrating ATC and MSS components into a single, unified mobile network. Grant of ATC authority will enable MSS providers to expend the resources necessary to develop optimal integration protocols.

[34] See AWS Comments, at 6-7; CTIA Comments, at 13.

[35] Globalstar Comments, at 14; Bondholders Comments, at 35.

- MSS providers have no direct control over the service quality, customer service, pricing or billing practices of the CMRS providers with which they enter into commercial arrangements to provide dual-band service.[36]

- CMRS-MSS phones are larger and more expensive than single-band MSS-ATC phones will be. This is due in large part to the small production runs and redundant circuitry needed for CMRS-MSS phones to receive different terrestrial and satellite frequencies.[37] In contrast, MSS-ATC phones will require only a single circuit and thus will be smaller and less expensive to produce than CMRS-MSS phones. Thus, ATC authority will allow users to purchase smaller, less expensive phones. In addition, ATC authority will expand dramatically the addressable subscriber market and thus further will drive down the price of the phones through economies of scale.

- Numerous CMRS roaming agreements must be negotiated by MSS service providers causing a user's CMRS rates to vary depending on the identity of a user's MSS service provider and the location from which a call is made.[38]

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[36] See Bondholders Comments, at 34.

[37] See id. Telenor, a reseller of Inmarsat MSS service, argued in its comments that phone size is unimportant to customers. Telenor Comments, at 6. To the contrary, handset size clearly is an important factor to the general public, which also deserves to receive ubiquitous mobile service. The highly competitive CMRS industry is driven by marketplace demands and mobile phone manufacturers continue to annually expend substantial sums to reduce the size of each new generation of handsets. Further, even Inmarsat realizes that the corporate and industrial subscribers that are typical of its subscriber base value terminal portability. Inmarsat's mini-M, a voice and low-bandwidth data terminal the size of a laptop computer, was designed by Inmarsat to offer a more compact and lightweight option for its subscribers. Since its introduction in 1997, the mini-M has become one of Inmarsat's most popular terminals. See Inmarsat reinforces market leadership as mini-M satellite phone connections soar: Terminal registrations double in two years, many with multiple users, Press Release, June 04 2001, available at http://www.inmarsat.com/news_story.cfm?id=143.

In addition, Telenor argues that ATC-MSS phones will be more expensive to produce than existing satellite phones because they will be more complex. Telenor Comments, at 6-7. In fact, ATC-MSS phones will be similar in technical complexity to existing CMRS-MSS phones and will contain less circuitry, and as explained in the text, will be significantly less expensive to manufacture.

[38] See Globalstar Comments, at 15; Bondholders Comments, at 35.

- The incentives of CMRS providers and MSS providers are not aligned and thus it is not clear that CMRS providers will participate in such an arrangement in a manner that furthers the interests of the partnered MSS provider. For example, CMRS providers have an incentive to route the most possible traffic on their own networks and use MSS networks as a last resort, thereby denying MSS providers traffic and revenue.[39]

Second, CMRS-MSS arrangements do not represent an efficient use of spectrum. By operating ATC networks centered around urban areas, MSS providers will be able to increase the use of existing, underutilized MSS spectrum. Without ATC authority, MSS spectrum will be underutilized in urban areas because of urban reception problems. A CMRS-MSS arrangement will not rectify this inefficient use of spectrum.[40] In urban areas, dual-band handsets will switch to the CMRS network to improve urban reception, leaving the MSS spectrum unused. Further, whereas an CMRS-MSS arrangement will increase urban CMRS congestion by routing MSS calls over CMRS networks in urban areas, grant of ATC authority will reduce CMRS congestion. With ATC authority, urban mobile traffic will be divided between CMRS systems using CMRS spectrum and ATC platforms using MSS spectrum. A higher percentage of the urban traffic will be originated on ATC networks than would be the case absent a grant of ATC authority, thus relieving some of the pressure on CMRS networks.[41]

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[39] See Constellation Comments, at 20; Bondholders Comments, at 35.

[40] See Celsat Comments, at 8 ("[S]pectrum will lie fallow since only the satellite operator can coordinate terrestrial reuse of the spectrum.")

[41] For this reason, SBE's claim that granting ATC authority represents a "spectrally wasteful duplication of [CMRS] services" is simply mistaken. SBE Comments, at 1. ATC platforms represent a spectrally efficient use of spectrum and such "duplication" may help relieve the urban congestion currently plaguing many CMRS networks. See, e.g., Salina Khan, Spotty Service Irks Cellphone Users: Constant Busy Signals, Choppy Transmission, Cutoff Calls Cause Frustration—And Lawsuits, USA TODAY, Nov. 6, 2000 (describing how congestion in some areas is impairing CMRS networks).

B. Contrary to the Assertions of Certain Commenters That ATC Authority Goes Beyond Flexible Use, Commission Precedent Clearly Demonstrates That ATC Authority is an Appropriate Grant of Flexible Spectrum Use

Several commenters generally endorsed the Commission's flexible spectrum use policy but argued that it is not applicable to the instant proceeding because MSS providers are seeking authority to provide a qualitatively different type of service, rather than seeking more flexibility within their existing spectrum grant.[42] Recent Commission precedent demonstrates without doubt that this position is untenable.

Several commenters noted[43] that, in the Commission's September 2001 Instructional Television Fixed Service/Multichannel Multipoint Distribution Service order,[44] the Commission took action very closely analogous to granting the request for ATC authority that is the subject of the instant proceeding. Expressly basing its ITFS/MMDS decision on its spectrum-use flexibility policy, the Commission authorized the provision of mobile terrestrial services in the spectrum assigned to ITFS and MMDS licensees, which licensees previously only had been authorized to provide fixed services.[45] Thus, the Commission authorized incumbent licensees to provide qualitatively different telecommunications services—mobile services in addition to their previous fixed services authorization. The Commission expressly refused to authorize these new services to be provided in previously assigned ITFS and MMDS spectrum by issuing new

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[42] See, e.g., CTIA Comments, at 5 (arguing that ATC represents a spectrum reallocation rather than a grant of flexibility and thus that the Commission must provide interested parties with an opportunity to compete for the resulting new authorizations).

[43] See Loral Comments, at 6; New ICO Comments, at 26-28.

[44] See Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems, First Report and Order and Memorandum Opinion and Order, ET Docket No. 00-258, RM-9911, FCC 01-256, ¶ 2 (rel. Sept. 24, 2001) ("ITFS/MMDS Order").

[45] Id. at ¶¶ 21-26.

authorizations and requiring the licensees to share spectrum with the incumbent ITFS and MDDS licensees. Instead, the Commission purposefully provided the new, flexible spectrum-use authority to the incumbent ITFS and MMDS licensees. Grant of ATC authority to incumbent MSS providers, rather than to unrelated entities through new authorizations, is fully consistent with this precedent.

Moreover, the Commission's justifications for its action in the ITFS/MMDS Order mirrors some of the policy arguments asserted by MSS providers in favor of granting ATC authority in the instant proceeding. The Commission held in its ITFS/MMDS Order that issuing new authorizations requiring band-sharing would cause interference problems for incumbents.[46] Similarly, as discussed in Section V, MSS providers have argued that authorizing new entrants to provide ATC services in existing MSS spectrum assignments is not feasible and instead would result in splitting of the spectrum assignments into separate ATC and MSS segments. In addition, rejecting an opponent's characterization of the additional flexibility as a "windfall" for incumbents,[47] the Commission noted that its ITFS/MMDS Order will help to "preserve the viability of the incumbent services." Similarly, the Commission noted in its initial NPRM that its ATC proposal was motivated by the "potential long-term benefits of MSS".[48] Commenters that suggest ATC represents a windfall to MSS providers improperly mischaracterize the benefits and their assertion should not be given any probative weight.

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[46] Id. at ¶¶ 11, 24, 27.

[47] Id. at ¶¶ 2, 27.

[48] NPRM, at ¶ 2.

IV. THE ATC SERVICE RULES PROMULGATED BY THE COMMISSION SHOULD BE AIMED SOLELY AT ENSURING UBIQUITOUS MSS COVERAGE AND PREVENTING INTERFERENCE

In their Comments, the Bondholders explained that the Commission should seek to accomplish only two objectives when promulgating service rules for ATC networks operated using MSS spectrum. Specifically, the Commission's ATC rules should aim solely: (i) to prevent diminution of rural MSS coverage; and (ii) to prevent harmful interference.[49] MSS providers will be able to gain maximum efficiencies if, consistent with Commission policy and the public interest, they are provided with the maximum possible operational flexibility in light of these objectives. Appropriate rules aimed at achieving these objectives will resolve all of the imagined harms attributed to ATC authority by opponents of such authority in their comments.

A. The Commission Can Ensure That ATC Services Remain Ancillary to Traditional MSS Services By Requiring MSS Providers to Comply With Applicable Coverage Requirements as a Condition to Implementation of ATC Authority

The Bondholders explained in their Comments that the Commission should not authorize an MSS provider to provide ATC services unless the MSS provider has satisfied all applicable coverage requirements.[50] In addition, enforcement of coverage requirements held widespread

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[49] Bondholders Comments, at 29-32.

[50] Bondholders Comments, at 30-32. The Commission proposed in its NPRM only to require MSS provider to provide continuous service to the 50 states, Puerto Rico, and the U.S. Virgin Islands. NPRM, at ¶ 32. This falls short of the actual coverage requirements applicable to Big LEO, 2 GHz, and L-band MSS providers. The Bondholders suggest the Commission instead use existing coverage requirements as an ATC authority threshold to prevent MSS providers from neglecting required coverage outside of the 50 states, Puerto Rico, and the U.S. Virgin Islands.

The coverage requirements applicable to 2 GHz and Big LEO geostationary and nongeostationary satellite systems are different. Nongeostationary systems are required to be capable of providing service: (i) to all locations as far north as 70° North latitude and as far south as 55° South latitude for at least 75% of every 24-hour period, i.e., that at least one satellite will be visible above the horizon at an elevation angle of at least 5° for at least 18 hours each day, and (ii) on a continuous basis throughout the fifty states, Puerto Rico and the U.S. Virgin Islands, i.e., that at least one satellite will be visible above the horizon at an elevation angle of at least 5° at all times. 47 C.F.R. § 25.143(b)(2)(ii)-(iii). Geostationary systems, by contrast, only are required to

support from other commenters.[51] Mere enforcement of coverage requirements is sufficient to affirm the ancillary status of ATC[52] and thereby ameliorate the concerns expressed by many commenters and the Commission in its NPRM that MSS providers' provision of ATC services will not remain ancillary to MSS services.[53] As long as Globalstar and other MSS providers operate their ATC platforms without detriment to the simultaneous operation of their satellite platforms, the "ancillary" nature of the service will be ensured.[54]

The only policy objective that the Commission should seek to accomplish by promulgating rules related to the ancillary status of ATC authority is to prevent MSS providers from reducing their MSS satellite coverage or otherwise degrading their MSS service offerings through the development of ATC platforms. This can be accomplished by enforcing existing coverage requirements without enacting additional artificial intrusions aimed at artificially

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be capable of providing service on a continuous basis throughout the 50 states, Puerto Rico, and the U.S. Virgin Islands, if technically feasible. 47 C.F.R. § 25.143(b)(2)(iv). Motient, which is the sole U.S.-licensed L-band MSS provider, is required to be capable of providing service to "all of the U.S. domestic market, including all fifty states, Puerto Rico, the Virgin Islands and U.S. coastal areas up to 200 miles." Amendment of Parts 2, 22 and 25 of the Commission's Rules to Allocate Spectrum for and to Establish Other Rules and Policies Pertaining to the Use of Radio Frequencies in a Land Mobile Satellite Service for the Provision of Various Common Carrier Services, 4 FCC Rcd 6041, ¶ 97 (1989).

[51] See API Comments, at 5, Celsat Comments, at 14, Aviation Industries Parties, at 13; Constellation Comments, at 26-27.

[52] See also Celsat Comments, at 14 and Constellation Communications, at 31 (both concurring that no additional requirements are necessary to ensure the ancillary nature of ATC):

[53] NPRM, at ¶ 30; see also API Comments, at 2; AWS Comments, at 6; Comtech Comments, at 5.

[54] CTIA asserts that the term "ancillary" should be defined to mean "subordinate, subsidiary, auxiliary, related, or supplementary." CTIA Comments, at 4 and note 5 (emphasis added). ATC services clearly are related to MSS services in that ATC services will be provided using the same spectrum assignments as MSS services. In addition, if MSS coverage requirements are enforced, ATC also would be supplementary and auxiliary to MSS in that ATC platforms would increase, the coverage of MSS networks, while not degrading MSS service in any way.

reducing ATC traffic levels below market-determined optimum levels. There is no public interest justification to warrant additional ATC restrictions to "enforce" the ancillary status of ATC.[55]

1. The Commission can use its forfeiture authority to enforce applicable MSS coverage requirements against MSS providers operating ATC networks

Several commenters argued that the Commission would be unable to enforce effectively applicable MSS coverage requirements.[56] They argued that the Commission would not revoke ATC authority provided to MSS licensees that fail to upkeep their satellite systems in compliance with such coverage requirements. These commenters suggest that requiring non-compliant MSS licensees immediately to cease offering ATC services potentially relied upon by thousands of urban subscribers is not consistent with the public interest. They conclude that mere coverage requirements are not sufficient to ensure that ATC authority remains ancillary to MSS because the coverage requirements will not be enforceable against an MSS provider that has commenced commercial ATC service. The Commission will not be willing to revoke the MSS/ATC license of such an MSS provider, thereby suddenly terminating the service of all of its ATC subscribers. Such draconian action, however, would not be necessary.

Instead, the Commission simply could impose a forfeiture against the non-compliant MSS provider. The Commission has found forfeitures to be an effective enforcement tool in

[55] Nevertheless, certain supplementary regulations, although not necessary, are not inconsistent with the policy objective of enforcing existing MSS coverage requirements to prevent degradation of MSS satellite services as a result of ATC authority.

[56] See AWS Comments, at 6 (arguing that the Commission would not revoke ATC authority for failure to continually satisfy coverage requirements due to the affect on ATC subscribers); but see Constellation Comments, at 27 (arguing that the Commission should revoke ATC authority if an MSS provider's constellation "falls below the [coverage] requirements").

other contexts,[57] and there is no reason to believe that the imposition of forfeitures would be any less effective against MSS providers. The Commission should provide, however, a mechanism by which MSS providers can avoid such penalties if their satellite systems experience unexpected technical problems that the MSS providers resolve expeditiously and in good faith, for example by maneuvering an in-orbit spare to replace a dysfunctional satellite.[58]

2. The Commission should not permit MSS licensees to commercially operate ATC stand-alone networks until the licensees have satisfied their MSS coverage requirements

Some commenters argued that the Commission should authorize the provision of ATC services prior to the launch and operation of their licensed MSS satellite system.[59] Although the Commission should permit MSS providers, at their own risk, concurrently to build and test their satellite and ATC platforms,[60] the Commission should not permit MSS providers to offer commercial ATC services until the MSS providers are in full compliance with applicable satellite coverage requirements.

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[57] See generally The Commission's Forfeiture Policy Statement and Amendment of Section 1.80 of the Rules to Incorporate the Forfeiture Guidelines, Report and Order, 12 FCC Rcd 17087 (1997) (outlining the Commission's forfeiture procedures and amounts applicable to various violations); see, e.g., Verizon Florida, Inc., Notice of Apparent Liability for Forfeiture, 16 FCC Rcd 2590 (2001) (issuing forfeiture for operating without authorization due to a failure to renew license); AT&T Wireless Services, Inc., Forfeiture Order, DA 01-708, File No. EB-00-SF-671 (rel. Mar. 19, 2001) (imposing forfeiture for failure to post ASR numbers on antenna structures); Vanguard Cellular Systems, Inc., Notice of Apparent Liability for Forfeiture, DA 01-1011, File No. EB-01-IH-00171 (rel. Apr. 24, 2001) (issuing forfeiture for failure to report number utilization and forecast data).

[58] Cf Constellation Comments, at 27 (arguing that the Commission should not require an MSS provider's system to be fully operational at all times).

[59] Globalstar Comments, at 11 (favoring permitting MSS licensees to operate ATC networks prior to launching MSS satellite systems).

[60] See Motient Comments, at 30; New ICO Comments, at 46.