Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of **Extending Wireless Telecommunications Services To Tribal Lands**	**WT Docket No. 99-266**

COMMENTS OF THE BOEING COMPANY

The Boeing Company ("Boeing"), by its attorneys and pursuant to Section 1.415 of the Commission's Rules, 47 C.F.R. § 1.415, hereby submits the following comments in response to the above-captioned Notice of Proposed Rulemaking ("NPRM").

I. INTRODUCTION

Boeing is a global leader in space and satellite technology, providing innovative design, construction, launch, and on-orbit control services for numerous government and commercial satellite networks. Boeing has pending before the Commission an application to launch and operate a non-geostationary ("NGSO") medium earth orbit ("MEO") satellite system that would operate in the Ku-band to provide broadband communication services to customers in every region of the world.[1] Boeing is also seeking authority to launch and operate a NGSO network

[1] Application for Authority to Launch and Operate a Non-Geostationary Medium Earth Orbit Satellite System in the Fixed Satellite Service, File No. SAT-LOA-19990108-00006 (Jan. 8, 1999).

that would operate in the 2 GHz mobile-satellite service ("MSS").[2] Boeing designed its 2 GHz MSS network to provide critically needed communication and navigation services to the aviation industry on a global basis.[3] In addition, Boeing has requested Commission authority to construct and operate a satellite augmentation system for the Global Positioning System ("GPS"), which could be used by aviation and other interests for worldwide navigation.[4]

As a major participant in the global satellite industry, Boeing acknowledges the Commission's goal of securing for consumers living in tribal lands the same opportunities to take advantage of telecommunications capabilities that are available to other Americans.[5] Furthermore, the Commission has noted that satellite technology is a potentially cost-effective alternative to achieve the goal of serving unserved communities, especially those in remote areas.[6] Boeing believes that the best way of achieving the Commission's goal is through the rapid licensing of satellite systems without the imposition of additional unnecessary satellite regulation that could unintentionally hamper the provision of communications services to unserved areas.

---

[2] Application for Authority to Construct, Launch, and Operate a Non-Geosynchronous Medium Earth Orbit Satellite System in the 2 GHz Band Mobile-Satellite Service and in the Aeronautical Radionavigation-Satellite Service, File Nos. 179-SAT-P/L/97(16), SAT-AMD-19980318-00021 (90-SAT-AMEND-98) (Sep. 26, 1997).

[3] *See id.*

[4] *See id.*

[5] *See* Extending Wireless Telecommunications Services to Tribal Lands, *Notice of Proposed Rulemaking*, FCC 99-205, WT Docket No. 99-266 (Aug. 18, 1999) ("*Tribal Lands NPRM*").

[6] *See id.* at ¶ 12.

II. THE RAPID LICENSING OF SATELLITE SYSTEMS WILL BENEFIT THE ENTIRE PUBLIC, INCLUDING THOSE LIVING ON TRIBAL LANDS

Satellite telecommunications are inherently able to benefit the entire public. Satellite systems, especially those employing non-geostationary orbits, are by their very nature designed to provide ubiquitous and continuous service to vast geographic areas, including extreme northern and southern latitudes.[7] The Commission has mandated that NGSO networks in the Big LEO MSS services provide global coverage.[8] Additionally, the Commission has proposed making such ubiquitous coverage of users in the United States a service requirement for 2 GHz MSS licensees[9] and for the NGSO Fixed-Satellite Service ("FSS") in the Ku-band.[10] As a result, satellite systems can be expected to provide beneficial telecommunications services that are available to all the people of the United States.[11]

As the Commission observed in the NPRM, not only can satellite systems provide service to remote areas, but they also have the potential to provide such service more cost effectively

---

[7] Both of Boeing's proposed satellite systems employ satellites in medium earth orbits that will provide truly global coverage, including the entire continental United States, as well as extreme northern and southern regions, such as Alaska and Hawaii. *See supra*, notes 1 & 2.

[8] *See* 47 C.F.R. § 25.143(b)(2).

[9] *See* Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band, *Notice of Proposed Rulemaking*, 14 FCC Rcd 4843, 4854 (1999) ("*2 GHz MSS Service Rules NPRM*").

[10] *See* Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range, *Notice of Proposed Rulemaking*, 14 FCC Rcd 1131 (1998).

[11] As noted by the Commission, the ubiquitous coverage of satellite networks includes remote and insular areas of the United States and its territories and possessions, such as Alaska, Hawaii, Puerto Rico, the U.S. Virgin Islands, Guam, and American Samoa. *See 2 GHz MSS Service Rules NPRM* at 4886. Satellite networks can also provide coverage to communities in geographically extreme areas, such as mountains and deep valleys, which are impractical to serve by cellular and standard wireline telecommunications. *See Tribal Lands NPRM* at ¶ 12.

than traditional terrestrial communications.[12] Satellite systems can provide a uniform level of service without distinction as to geographic remoteness or population density. Rural communities do not have to wait until wireless service providers build out their systems from more profitable urban centers. Communities will not be denied service because of the high fixed infrastructure costs associated with extending wireline service to regions with low population densities. Satellite systems can simultaneously provide Tortilla Flats with the same high-quality communications service—at the same fixed infrastructure investment costs—as they provide to New York City.[13] Thus, satellite communications networks can further the Commission's goal of securing for consumers living on tribal lands the same opportunity to take advantage of telecommunications capabilities that are available to other Americans.

None of these potential benefits is possible, however, until such satellite systems are licensed and operational. Therefore, the rapid licensing of satellite systems is clearly in the interest of the entire public, including those residing in unserved areas such as tribal lands.

III. ADDITIONAL REGULATION IS UNNECESSARY IN LIGHT OF EXISTING GEOGRAPHIC COVERAGE REQUIREMENTS AND MULTIPLE LICENSING SCHEME

The Commission's proposed geographic coverage requirements and multiple licensing scheme already creates market-based incentives for providing satellite service to unserved communities, including tribal lands. Imposing special provisions to encourage satellite service to unserved communities will only cause delay and uncertainty of service.

---

[12] *See Tribal Lands NPRM* at 12.

[13] The Commission points to the example of Tortilla Flats, Arizona, which has a permanent population of six persons and which relies on a satellite payphone for communication with urban centers. *See Tribal Lands NPRM* at ¶ 13, n.38.

The Commission has previously observed that market competition—not government regulation—is the best method of ensuring innovative services at low cost to the consumer.[14] Geographic coverage requirements and multiple licensing schemes will force licensees to compete against each other, as well as against terrestrial service providers, in order to earn a profit. As noted in the *2 GHz MSS Service Rules NPRM* proceeding, the competition for subscribers is likely to force service providers to focus on areas unserved by wireline or terrestrial wireless services as primary sources for MSS subscribers.[15]

Imposing special satellite provisions to encourage service to unserved communities is not only unnecessary in light of the Commission's existing regulations, but also could have the unintended consequence of hampering and delaying the introduction of satellite services. In the *Tribal Lands NPRM*, the Commission suggests adopting special satellite provisions, which include the possibility of using service to tribal lands and other unserved areas as a criterion to be considered in future spectrum assignments, the resolution of expansion band coordination disputes, and the extension of system implementation milestones.[16] None of these provisions is necessary in light of market-based incentives for satellite systems to serve traditionally unserved areas, and all could potentially have negative effects on the provision of satellite services.

In the satellite context, implementation and enforcement of additional special provisions will place additional burdens on the developing satellite industry. Additional regulation will

---

[14] *See, e.g.*, 1998 Biennial Regulatory Review — Spectrum Aggregation Limits for Wireless Telecommunications Carriers, *Report and Order*, WT Docket No. 98-205, WT Docket No. 96-59, GN Docket No. 93-252 (Sep. 22, 1999) (observing that "the operation of market forces generally better serves the public interest than regulation. As a general matter of principle, we prefer to place ultimate reliance on the market, rather than on regulation, to direct the course of development in the CMRS and other markets."); *see also* Rules and Policies on Foreign Participation in the U.S. Telecommunications Market, *Report and Order*, 12 FCC Rcd 23891 (1997) ("In the U.S. domestic market, we have found that private sector competition dramatically lowers the cost of providing service and stimulates creation of innovative services and investment in infrastructure deployment.").

[15] *See* Comments of Globalstar, L.P. on the *2 GHz MSS Service Rules NPRM* at 44 (Jun. 24, 1999).

increase delay in an already lengthy process. Satellite system applications and service rules—particularly those in the 2 GHz MSS band—already raise a plethora of challenging technical and policy questions. In particular, extension of system implementation milestones threatens the rapid deployment of satellite services to all Americans. Applicants could tie up spectrum and delay satellite service by using promises to serve tribal lands as an excuse for failing to meet construction deadlines.[17] Such delay could hamper the provision of new satellite services to all the public, including those living on tribal lands.

IV. ADDITIONAL REGULATION COULD HAMPER THE PROVISION OF SATELLITE SERVICES TO THE DETRIMENT OF UNSERVED AREAS

The imposition of new regulations could have a negative impact on the provision of new and innovative satellite service to other unserved areas. For example, Boeing is proposing to construct NGSO satellite networks that could be used to provide communications and navigation services to the aeronautical community.[18] These services are particularly needed by small, rural airports, which provide a primary means of long-distance travel and commerce for unserved communities in remote areas.[19]

Boeing's proposed satellite networks would be able to provide services that are currently unavailable to the public. For example, its satellite networks could be used to provide equipment monitoring and diagnostics of critical aircraft systems while aircraft are *en route* between airports. Boeing's networks could also provide real-time information on potentially catastrophic

---

[16] *See Tribal Lands NPRM* at ¶¶ 54-55.

[17] *See also* Comments of Globalstar, L.P. on the *2 GHz MSS Service Rules NPRM* at 45.

[18] *See supra*, notes 1 & 2.

[19] *See* Comments of The Boeing Company on the *2 GHz MSS Service Rules NPRM* at 17 (June 24, 1999).

weather anomalies, such as icing and wind shear, directly to flight crews on aircraft approaching affected areas. Other potential new public benefits include the provision of high-quality voice, Internet, broadband data transfer, telemedicine and video services, which are largely unavailable to passengers and crew aboard aircraft.

These services will benefit all Americans, including those in isolated areas underserved by wireline communications. Using the promise of satellite service to tribal lands as a criterion in the granting of expansion spectrum and future spectrum assignments could draw resources away from providing these and other necessary services. Therefore, the Commission should refrain from adopting regulations that could distort the market and hamper the development of other socially-beneficial services.

V. CONCLUSION

Boeing acknowledges the Commission's goal of securing communications services for those living on tribal lands on an equal basis with other Americans. Because satellite systems are inherently able to serve all America—including traditionally unserved areas—and because the market provides sufficient incentives to provide service to as many persons as possible at as

low a price as possible, the Commission's goal is best supported by the rapid licensing of satellite systems without the imposition of additional satellite regulations, which could unintentionally hamper provision of satellite services to other unserved areas.

Respectfully submitted,
The Boeing Company

By: /s/ David Alan Nall

David Alan Nall
Bruce A. Olcott
Stephen J. Duall
Squire, Sanders & Dempsey, L.L.P.
1201 Pennsylvania Avenue, N.W.
Washington, D.C. 20044-0407
(202) 626-6600

Its Counsel

R. Craig Holman
Office of the Group Counsel
Space and Communications Group
The Boeing Company
P.O. Box 3999, M/S 84-10
Seattle, Washington 98124-2499
(253) 773-9645

November 9, 1999