Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
Inquiry Concerning the Deployment of	)	
Advanced Telecommunications	)	
Capability to All Americans in a Reasonable	)	GN Docket No. 07-45
and Timely Fashion and Possible Steps	)	
to Accelerate Such Deployment	)	
Pursuant to Section 706 of the	)	
Telecommunications Act of 1996	)	

REPLY COMMENTS OF THE SATELLITE INDUSTRY ASSOCIATION

The Satellite Industry Association ("SIA")[1] hereby files Reply Comments in response to the *Notice of Inquiry* ("*NOI*") released by the Federal Communications Commission ("FCC" or "Commission") on April 16, 2007, in connection with the above-referenced proceedings.[2] In the *NOI*, the Commission sought comments on a number of issues including the availability of "advanced telecommunications services" or "broadband" in rural and hard-to serve areas, trends in developing technologies including satellite services, and how to define broadband services in light of the development of

[1] SIA is a U.S.-based trade association providing worldwide representation of the leading satellite operators, service providers, manufacturers, launch services providers, remote sensing operators, and ground equipment suppliers. SIA is the unified voice of the U.S. satellite industry on policy, regulatory, and legislative issues affecting the satellite business. SIA Executive Members include: Arrowhead Global Solutions Inc.; Artel Inc.; The Boeing Company; Datapath, Inc., The DIRECTV Group; Globalstar, Inc; Hughes Network Systems LLC; ICO Global Communications; Integral Systems, Inc.; Intelsat, Ltd.; Iridium Satellite LLC; Lockheed Martin Corp.; Loral Space & Communications Inc.; Mobile Satellite Ventures LP; Northrop Grumman Corporation; SES Americom, Inc.; and TerreStar Networks Inc.. Associate Members include: ATK Inc.; EchoStar Satellite LLC; EMC Inc.; Eutelsat Inc.; Inmarsat Inc.; IOT Systems; Marshall Communications Corp.; SES New Skies; Spacecom Corp.; Stratos Global Corp; SWE-DISH Space Corp; and WildBlue Communications, Inc.

[2] FCC 07-21 (Apr. 16, 2007) ("NOI").

higher speed services and new broadband platforms.[3] In response to the Comments filed in this proceeding, SIA offers these Reply Comments concerning the nationwide availability of satellite broadband, developments in the satellite industry that are enhancing satellite broadband capability, and the satellite industry's support for a definition of broadband that is consistent with Section 706 of the Communications Act, as well as broadband measurement that is based on multiple tiers.

DISCUSSION

I. Satellite Broadband Availability and Industry Advancements.

Satellite services provide reliable, ubiquitous, cost-effective and easily-installed broadband service throughout the United States. Further, satellite operators and service providers are constantly upgrading their facilities to expand their capacity and functionality to ensure that American consumers have access to the most advanced telecommunications services.

The satellite industry has a proven track record of providing reliable, yet innovative, services to American consumers. The satellite industry currently provides competitive broadband[4] services throughout the United States in the 48 contiguous states, the District of Columbia, Alaska, Hawaii, Puerto Rico and the US Virgin Islands. At the end of 2006 there were over 500,000 satellite broadband consumers throughout the United States and this number grows substantially each year and will continue to grow, especially as the cost of subscriber devices continues to decline.

[3] NOI at ¶¶ 4-16, 20-22.
[4] "Satellite Broadband" is described using the current FCC definition. See Fourth Report, 19 FCC Rcd 20540 at 20551-52.

Satellite broadband, provided by both fixed and mobile service satellites, currently offers unique characteristics which make satellites the ideal provider of broadband in rural and hard-to-serve areas of the country. Unlike terrestrial networks which require significant infrastructure, such as towers, fiber optics or coaxial cable, and excavation and installation of fiber/cable to each residence, satellite technology allows the same infrastructure to be shared by urban and rural areas and requires only customer equipment[5] for service. Satellite services are, thus, largely immune from the factors that drive up service costs in rural areas such as rough topography and low population density, and this results in a cost structure that is the same for rural areas as for urban ones. Moreover, satellite technology improvements in recent years and in spacecraft that are planned to be launched in the near future have enabled the earth terminals to be far smaller than was possible just a few years ago, making satellite-delivered services increasingly attractive to consumers. These factors make satellite broadband an essential component of broadband access for all American consumers.

Continuous developments in satellite technology will expand the quality and availability of satellite broadband services in the future. New fixed and mobile service satellite systems needed to accommodate a projected substantial increase in satellite broadband subscribers are planned for launch and deployment in the next few years. For example, several mobile satellite system operators are launching more powerful satellites

[5] Even though satellite broadband providers heavily subsidize the cost of the customer premises equipment for subscribers, today the cost to the consumer is above typical consumer electronic equipment. However, as with all other consumer-focused services, as the take up rate increases and new systems come online, these prices will be substantially reduced over time. A relevant case study is available in the direct-to-home satellite television industry, where reaching a critical mass of subscribers has enabled DirecTV and DISH Network to offer CPE for free when subscribers sign up for annual contracts. Furthermore, recent authorization of mobile satellite service with an ancillary terrestrial component enables satellite operators to take better advantage of the economies of scale for equipment. This will enable these providers to offer consumer electronic priced devices, making satellite broadband services even more affordable to American consumers.

than ever launched commercially before in order to provide integrated satellite-terrestrial services at broadband speeds. Further, fixed satellite service operators are launching new satellites that will provide substantially higher speed services using ever smaller earth station antennas. At the same time, satellite operators and customers are deploying new phased array antennas and auto-pointing systems that allow for mobile and quickly deployable portable broadband solutions. These satellites and systems will provide increased access to a wide array of broadband services in the near future and will lead to increased consumer choice and lower prices for services and equipment.

II. The FCC's Definition of Broadband Should Track Section 706.

Section 706 (c)(1) of the Communications Act[6] defines "advanced telecommunications capability" or broadband[7] "without regard to any transmission media or technology, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology." SIA urges the Commission to rely upon this statutory definition as a means of defining broadband, rather than attempting to set an artificial speed threshold that will inevitably be appropriate for some technologies, but inappropriate for others. This definition of advanced telecommunications capability contemplates the kind of services that are widely considered broadband by consumers today, and is flexible enough to make sense in evaluating different technologies and

[6] See Section 706(b) of the Telecommunications Act of 1996, Pub. L. 104-104, 110 Stat. 56 (1996) (1996 Act), reproduced in the notes under 47 U.S.C. Section 157.
[7] "Advanced telecommunications capability" and "broadband" are used interchangeably for purposes of this inquiry. See NOI, fn 3.

environments, such as mobile vs. fixed. SIA submits that setting an arbitrary speed threshold for defining "broadband" is not optimal. Speeds and capabilities change quickly as technology evolves, and it would be inappropriate to prescribe a particular speed criterion that will not work for every context, and will be obsolete before the rulemaking is completed. SIA thus supports the position taken in Comments in this Docket by CTIA-The Wireless Association ("CTIA") that establishing a specific higher speed definition than currently set "will distort measurements of the marketplace by ignoring the continued importance of 'first generation' wireless broadband services."[8]

Besides the obvious difficulties in setting a definition based on speed because of the rapid change in consumer needs and supplier technology, it is not sound policy to establish a definition of broadband based on a single speed. Speed thresholds vary too much among different services, and all of these services can be valuable offerings to consumers. For example, mobile broadband applications are likely to have slower speeds than fixed applications because of the inherent characteristics of spectrum-based offerings, yet they can be highly valued by consumers. Some consumers will choose very high speed fixed offerings and others lower speed mobile offerings. Indeed, as a general matter, consumers should have a choice of speeds and capabilities based on cost and other considerations. In short, one size does not fit all, and SIA believes that consumers should be able to choose "advanced telecommunications capability" according to their needs. The FCC should not impose a definition that limits consumer choice and industry service offerings.

Finally, while SIA does not support an approach that defines broadband according to speed, if the Commission nevertheless determines that the term "advanced

[8] CTIA Comments in GN Docket No. 07-45 at 10.

telecommunications capability" should be defined according to speed, SIA supports a tiered approach as described in Comments filed in this Docket by the Telecommunications Industry Association ("TIA")[9] and CTIA[10]. SIA strongly believes that different thresholds for mobile and fixed applications are necessary because of the inherent constraints of spectrum-based offerings.

III. Broadband Deployment Should be Measured Using Multiple Speed Tiers.

Although speed thresholds are not the best means of *defining* broadband, SIA fully supports the use of speed tiers as a vehicle for *measuring* the deployment and success of various kinds of advanced telecommunications capabilities in different customer and geographic markets. Policymakers should also monitor and evaluate the different capabilities described in Section 706, including high-speed voice, data, graphics and video, as provided either by mobile or fixed technologies or in rural or urban markets.

[9] TIA Comments in GN Docket No. 07-45 at 4.
[10] CTIA Comments at 10.

CONCLUSION

For the reasons discussed above, SIA urges the Commission to recognize the nationwide availability of satellite broadband, developments in the satellite industry that are enhancing satellite broadband capability, and the satellite industry support for a definition of broadband based on Section 706 of the Communications Act. Further, SIA urges the Commission to measure broadband deployment based on multiple speed tiers.

Respectfully submitted,

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