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

In the Matter of	)	
Wireless Broadband Access Task Force Seeks Public Comment on Issues Related to Commission's Wireless Broadband Policy	)	GN Docket No. 04-163

COMMENTS OF SES AMERICOM, INC.

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SUMMARY

The Commission's Wireless Broadband Access Task Force has requested information on wireless broadband technologies that can provide alternatives to wireline services, such as cable and DSL. In these comments, SES AMERICOM describes the important role of satellite technology in the delivery of broadband services, particularly to rural areas, and outlines the steps it is taking to make such deployment a reality.

Satellite services will be critical in the effort to meet not only the Commission's objectives of ensuring affordable broadband access for all Americans, but also President Bush's goal of universal access to broadband technology by the year 2007. As recently explained by Chairman Powell, satellite is the one technology that is "capable of reaching each and every single American, in every spot of the country, no matter how rural or remotely located they might be."[1]

SES AMERICOM believes in satellite broadband, and has made a strong commitment to develop satellite technology, and to deploy systems, specifically designed for direct-to-home broadband applications. In these comments, SES AMERICOM describes its proposed AMERICOM2Home ("A2H") platform of satellite capacity, to be used by partners to offer a broad range of innovative services directly to consumers in the United States. The platform includes capacity for both wireless broadband and Direct Broadcast Satellite ("DBS") applications, both of which will be accessible by consumers via a single consumer terminal with two-way communications capabilities. SES

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[1] Remarks of FCC Chairman Michael Powell at the FCC Rural Satellite Forum, January 27, 2004, Washington, D.C., available at http://ftp.fcc.gov/commissioners/powell/mkp_speeches_2004.html, at 1.

AMERICOM also describes its proposed AMERICOM2Office ("A2O") service, which will provide wireless broadband services on a global basis.

Satellite broadband systems under development today are far different from predecessor systems with which the Task Force may be familiar. These new satellite platforms will offer true two-way (via satellite), high-speed, affordable access, on terms that are fully competitive with terrestrial offerings. As described herein, the new A2H and A2O broadband systems are designed specifically to overcome the shortcomings of earlier satellite broadband systems, by adding all of the capabilities – in terms of affordability, speed, performance, ease of installation, overall system capacity, and network operations – necessary to compete fully with terrestrial systems.

But the satellite industry cannot achieve these goals alone, without assistance from concerned arms of the U.S. Government. Satellite broadband systems require access to scarce orbital and frequency spectrum resources. At present, the lack of authorization to use such resources – in this case, DBS capacity from a Gibraltar-licensed satellite at 105.5° W.L., mid-way between U.S. DBS assignments at 101° W.L. and 110° W.L. – is seriously delaying implementation of the A2H platform, which was originally scheduled to be deployed as early as this year.

SES AMERICOM has acknowledged that, pursuant to international procedures, it will need to coordinate its operations at 105.5° W.L. with those of operators in adjacent slots, which include DIRECTV and EchoStar. However, despite the fact that the required international coordination is ongoing, and the SES AMERICOM proposal otherwise meets all Commission rules and policies, DIRECTV has urged the Commission to initiate a rulemaking on operation of DBS satellites at reduced spacing.

As SES AMERICOM has explained in detail in other fora, current domestic and international rules and procedures already contemplate satellites at reduced spacing, and address all of the interference concerns raised by DIRECTV. The proposed rulemaking is wholly unnecessary, and will serve only to introduce further delay.

The Task Force seeks ways to accelerate wireless broadband deployment, and in this regard the Commission should make available substantially more satellite orbital and spectrum resources. One of the fastest ways to increase capacity is to permit operation of DBS satellites at reduced spacing. This will facilitate integrated, single-dish, video/broadband service offerings, and allow for more efficient use (including for broadband) of the Fixed-Satellite Service spectrum currently used for delivery of video programming.

Another way the Commission can support development of true two-way systems is to ensure that spectrum to be used by satellite broadband services is unencumbered by the presence of terrestrial users in the same bands. Finally, the Commission should aim to ensure that satellite applications are eligible for any funding authorized by Congress for rural broadband efforts, and should take the lead in recommending to Congress a host of new measures, outlined in these comments, intended to ensure the availability of rural broadband.

New satellite broadband systems promise to be fully competitive with terrestrial offerings in terms of connectivity and cost, with the additional advantage of being able to reach efficiently every American, no matter how remotely located. The satellite industry, led by SES AMERICOM, has done its part to make these systems a reality; the Commission must now do its part.

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COMMENTS OF SES AMERICOM, INC.

SES AMERICOM, Inc. ("SES AMERICOM"), by its attorneys, hereby submits these comments in response to the Public Notice (the "*Public Notice*") released by the Federal Communications Commission ("FCC" or "Commission") in the above-captioned proceeding.[2] In the *Public Notice*, the Commission's newly-created Wireless Broadband Access Task Force (the "Task Force") requested comment on wireless broadband platforms that can provide alternatives to wireline broadband services, such as cable modem and DSL, and on how federal wireless broadband policies can facilitate deployment of such systems.[3]

I. INTRODUCTION

While the *Public Notice* appears to focus on terrestrial wireless Internet service providers ("WISPs"), the Task Force should not lose sight of the important role of satellite platforms for delivering broadband services, particularly to rural and remote areas not easily served by cable or DSL. Satellite services will be play a critical role not

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[2] *Public Notice*, GN Docket No. 04-163, DA 04-1266, rel. May 5, 2004 ("*Public Notice*").

[3] *Public Notice* at 1-3.

only in meeting the Commission's objectives of ensuring affordable broadband access for all Americans,[4] but also in achieving President Bush's recently announced goal of "universal affordable access for broadband technology by the year 2007."[5] As recently explained by Commission Chairman Powell, "there is one communications technology – satellite – that is capable of reaching each and every single American, in every spot of the country, no matter how rural or remotely located they might be."[6]

In these comments, SES AMERICOM describes the critical role of satellite services in the deployment of broadband services, and outlines the steps it is taking to make such deployment a reality. As these comments make clear, satellite

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4 *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, *Notice of Inquiry*, GN Docket No. 04-54, FCC 04-55, rel. March 17, 2004 ("*NOI*"). *See also* Comments of SES AMERICOM, Inc., GN Docket No. 04-54, filed May 10, 2004, and Reply Comments of SES AMERICOM, Inc., GN Docket No. 04-54, filed May 24, 2004.

5 George W. Bush Delivers Remarks on Homeownership – News Event, Political Transcripts by Federal Document Clearing House, March 26, 2004, LEXIS, Nexis Library, Political Transcripts file.

6 Remarks of FCC Chairman Michael Powell at the FCC Rural Satellite Forum, January 27, 2004, Washington, D.C., available at http://ftp.fcc.gov/commissioners/powell/mkp_speeches_2004.html ("Powell Rural Satellite Forum Remarks"), at 1. Chairman Powell later noted that "story after story" at that Forum demonstrated that "satellites are providing basic and advanced services in rural and remote areas throughout our country." Remarks of FCC Chairman Michael Powell at the 2004 Satellite Leadership Dinner, March 2, 2004, Washington, D.C., available at http://ftp.fcc.gov/commissioners/powell/ mkp_speeches_2004.html ("Powell Satellite Leadership Remarks"), at 4. More recently, at the Wireless Broadband Forum related to the instant proceeding, Chairman Powell stated: "A satellite cares very little about . . . demographic differences. Wireless can bridge distances that wireline functions can't." Remarks of FCC Chairman Powell at FCC Wireless Broadband Forum, May 19, 2004, Washington, D.C., available at http://ftp.fcc.gov/commissioners/powell/ mkp_speeches_2004.html.

broadband systems under development today are far different from predecessor systems with which the Task Force may be familiar. These new satellite platforms will offer true two-way (via satellite), high-speed, affordable access, on terms that are fully competitive with terrestrial offerings. But the satellite industry cannot achieve this critical goal alone, without assistance from concerned arms of the U.S. Government.

II. DEPLOYMENT OF SATELLITE BROADBAND SERVICES IS CRITICAL TO ACHIEVING THE GOAL OF BROADBAND SERVICES TO ALL AMERICANS.

The "last mile" connection is the critical link for rural Americans. Current terrestrial, wire-based networks are either not broadband, or do not reach most rural Americans. Moreover, build-out of such systems is slow and costly in rural areas. Terrestrial wireless solutions can provide faster build-out, but are still inefficient in areas of low population density. Therefore, for economic reasons, rural America is unlikely to be well-served by terrestrial broadband systems.

Satellite solutions, however, can reach every corner of America with the same effort used to reach cities. Moreover, the delivery cost to serve a rural consumer is exactly the same as the cost to serve a city-dweller; a "bit" traveling by satellite costs the same whether it lands on a farm or in a city apartment. Only with satellite solutions will rural Americans have access to broadband and entertainment services at the same time, and for the same cost, as all other Americans.[7] As Chairman Powell has remarked, "[t]he

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[7] Even in cities, satellite solutions are an attractive "last mile" option. Delivery of video entertainment via satellite currently competes well with cable offerings, both in cities and rural areas. The same can be expected for two-way broadband services, particularly when bundled with entertainment packages, as with cable entertainment/cable modem offerings.

ubiquity of satellite signals has long held the potential to deliver advanced communications anywhere and everywhere in America."[8]

Historically, a drawback of satellite services has been the cost to the subscriber (wherever located), including both the cost of satellite time (a function of throughput on the satellite) and the cost of customer-premise equipment ("CPE"). However, industry-wide efforts, to which SES AMERICOM has contributed significantly, are changing this picture. As discussed below, technological advancements will make satellite delivery of broadband services much more affordable and competitive in the near future, with the added advantage of being able to serve customers on the same terms at every location in the United States.

III. SES AMERICOM IS COMMITTED TO DEVELOPING AND IMPLEMENTING SATELLITE-BASED BROADBAND SOLUTIONS.

SES AMERICOM is the largest supplier of satellite services in the United States. The company currently operates a fleet of 14 spacecraft in geosynchronous orbital positions, providing services throughout the Americas.[9] As a member of the SES

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[8] Powell Rural Satellite Forum Remarks at 1.

[9] For most of its 25 years of operation (first as RCA American Communications, Inc., then as GE American Communications, Inc.), SES AMERICOM has provided service to broadcast and cable television programmers, as well as to the federal government and others. SES AMERICOM established one of the first cable satellite "neighborhoods" more than 15 years ago, and today virtually every U.S. cable and DBS household receives some of its programming via the SES AMERICOM fleet. Through SES AMERICOM's wholly-owned subsidiary, AMERICOM Government Services, dozens of specialized satellite-based communication networks have been designed, installed, maintained and serviced by SES AMERICOM for governmental organizations as diverse as NASA, NOAA, and the U.S. Armed Forces, as well as for commercial customers. The company also has a long history of providing communications for the telephone industry, and, more recently, SES AMERICOM's satellites have been used for data communications, VSAT services, and Internet transmissions. As the demand increases for high-quality telecommunications, SES

GLOBAL family, SES AMERICOM is able to provide end-to-end telecommunications solutions to any region in the world.[10]

SES AMERICOM believes in satellite broadband, and has made a strong commitment to develop satellite technology and deploy systems specifically designed for direct-to-home broadband applications. As the Commission is aware, over two years ago, in April 2002, SES AMERICOM announced a plan to provide a platform of satellite capacity – known as "AMERICOM2Home" ("A2H") – for others to offer a broad range of innovative services directly to consumers in the United States.[11] This platform will use both Fixed-Satellite Service ("FSS") and Direct Broadcast Satellite ("DBS") orbital locations and spectrum. In addition to a new DBS satellite described below, the platform will employ, in the FSS bands, SES AMERICOM's AMC-2 satellite currently operating at 105° W.L., new AMC-15 and AMC-16 Ku/Ka-band hybrid satellites,[12] and additional

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AMERICOM's technical experts continue to develop innovative and cost-effective solutions to address customers' evolving needs.

[10] SES GLOBAL owns SES ASTRA, a leading European satellite provider. SES ASTRA provides transponder capacity and associated communications services through which television companies make available free and subscription television programming, as well as other services, to the general public and closed user groups across the European continent.

[11] *See* SES AMERICOM Files FCC Petition for New Satellite Television and Internet Platform, April 25, 2002, http://www.ses-americom.com/media/25_apr_02.html (the "AMERICOM2Home Press Release"). SES AMERICOM, while providing FSS and DBS transponder capacity to third parties, will not itself offer any retail or consumer services. *Id.*

[12] *See* FCC File Nos. SAT-LOA-20030219-00013 (AMC-15, Ku-band); SAT-LOA-20030214-00011 (AMC-15, Ka-band); SAT-RPL-20040227-00024 (AMC-16, Ku-band); and SAT-MOD-20040227-00022 (AMC-16, Ka-band).

high-capacity Ka-band satellites being planned to meet the requirements of the unserved rural markets. A2H consumer services are planned to commence in the United States in 2005 (by A2H service partners), assuming availability of satellite capacity sufficient to justify a high-volume program.

As part of the A2H platform, SES AMERICOM intends to offer satellite capacity for direct-to-home services in the United States from a DBS satellite licensed by the Government of Gibraltar at 105.5° West Longitude ("W.L.").[13] The platform will also include capacity for two-way Internet and broadband services via the AMC-15 satellite operating in the FSS Ku- and Ka-bands at 105° W.L., permitting integrated broadband/DBS service offerings.[14] From the perspective of the consumer, the integration of DBS television and satellite Internet services would be seamless, and would be accomplished using a *single consumer terminal* with two-way communications capabilities. This integration of services is important in making satellite delivery of entertainment and broadband services competitive with similarly-bundled terrestrially-delivered offerings.[15]

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[13] SES AMERICOM, Inc., Petition for Declaratory Ruling To Serve the U.S. Market Using BSS Spectrum from the 105.5° W.L. Orbital Location, SAT-PDR-20020425-00071, April 25, 2002 (the "SES AMERICOM Petition").

[14] *See* AMERICOM2Home Press Release; SES AMERICOM Petition at 2.

[15] In furtherance of this goal, SES AMERICOM announced last year a multi-year service agreement to provide satellite capacity to EchoStar Communications Corporation ("EchoStar") on a new Ku/Ka-band FSS hybrid satellite to be placed in the 105° W.L. orbital slot. EchoStar plans to use this FSS capacity to seek ways to offer a combination of satellite TV programming bundled with satellite-delivered, high-speed, Internet services. *See* SES AMERICOM to Provide Satellite Capacity to EchoStar, March 26, 2003, http://www.ses-americom.com/media/03_26_03.html. SES AMERICOM is also devoting substantial resources, along with EchoStar, toward

SES AMERICOM also plans to offer an AMERICOM2Office ("A2O") service – on a global basis – from several SES AMERICOM satellites, including the AMC-9 satellite at 83° W.L.,[16] the AMC-12 (WORLDSAT 2) satellite at 37.5° W.L., and the AMC-23 (WORLDSAT 3) satellite at 172° E.L.[17] A2O services will commence in the United States this year, and then roll out globally as satellite and other assets become available.[18]

IV. NEW SATELLITE BROADBAND SYSTEMS WILL OFFER TRUE TWO-WAY CONNECTIVITY, WITH COST, SPEED AND PERFORMANCE COMPETITIVE WITH TERRESTRIAL OFFERINGS.

Satellite technology is fully capable of providing two-way connectivity directly to the home or office, with both the forward and return communication channels

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developing an enhanced broadband system that will compete with terrestrial-based systems in both performance and capital cost per subscriber.

[16] SES AMERICOM has a pending application before the Commission to operate AMC-9 at 83° W.L. File No. SAT-AMD-20040319-00041.

[17] SES AMERICOM's wholly-owned subsidiary, Columbia Communications Corporation, holds a license to launch and operate the AMC-12 replacement satellite at 37.5° W.L. File No. SAT-LOA-20000407-00080. SES AMERICOM has an application pending to launch and operate the AMC-23 replacement satellite at 172° E.L. File No. SAT-LOA-20031218-00358. WORLDSAT is a subsidiary of SES AMERICOM. *See* SES AMERICOM Increases International Focus with WORLDSAT, January 15, 2004, http://www.ses-americom.com/media/2004/1_15_04.html.

[18] SES AMERICOM has entered the broadband market in other ways as well. For example, SES AMERICOM recently announced an agreement to provide satellite capacity, via its WORLDSAT subsidiary, for the Connexion by Boeing system. *See* SES AMERICOM Increases International Focus with WORLDSAT, January 15, 2004, http://www.ses-americom.com/media/2004/1_15_04.html. The Connexion system offers broadband connectivity to aircraft passengers. For this venture, a new satellite is being built by SES AMERICOM, featuring a customized Ku-band payload designed to address the unique requirements of broadband communications for, in this case, the transpacific traveler.

transmitted via satellite. Some older satellite-based systems employed or proposed a terrestrial return path. That is, a broadband satellite link was used to download bandwidth-intensive Internet content and large files to the user, while a slower land-line connection was used to transmit commands from the user to the Internet service provider. While the asymmetrical data flow of such a technique mirrors, to some extent, actual usage patterns, the use of a terrestrial return path was dictated primarily by constraints in available spectrum. More recent services and proposed systems do not follow the same model, freeing satellite systems from dependence on a land-line. However, these systems still suffer from a number of drawbacks, including insufficient return channel capability, high costs for CPE, lack of scalability, and high support costs.

The early systems described above were extensions of existing technologies that were never intended to be employed for broadband delivery. The new A2H and A2O broadband systems are being designed specifically to deliver competitive broadband services. The SES AMERICOM A2H broadband development team undertook, in early 2001, to design a system that overcame all of the shortcomings of earlier satellite broadband systems, by adding all of the capabilities necessary to allow satellite technology to compete fully with terrestrial systems (DSL and cable modem). These capabilities are highlighted below:

- **Affordability** – The factor that most affects consumer acceptance of broadband services is the initial cost of the subscriber equipment. For A2H services, SES AMERICOM expects to be able to lower the cost of CPE to under $250 by the time that service commences in mid to late 2005.[19] This price point, combined with hub capital costs of under $30 per subscriber,[20]

[19] This is half of the $500 price for consumer CPE today.

[20] Hub capital costs relate to the transmission equipment at a hub location that scales with subscriber growth.

mean that the satellite technology employed by SES AMERICOM will offer broadband service providers an initial cost per subscriber that will allow these A2H service partners to offer service at a retail price of less than $50 per month, with no required up-front investment. SES AMERICOM similarly expects A2O service offerings to be equivalent in cost to comparable terrestrial options, for both up-front and recurring charges.[21]

- **Speed** – Connection speed is the performance measure most visible to the consumer. The CPE for the A2H service has been designed to support transmit speeds of up to 5 Mbps, and receive speeds of 10 Mbps or higher. This will allow A2H service providers to offer speeds equal to DSL and cable modem.[22]
- **Performance** – The actual performance delivered to the subscriber is a key element of broadband service, directly affecting customer satisfaction and ultimately the longevity of the subscriber. SES AMERICOM is implementing several improvements that will allow satellite service, even with its inherent delay (approximately 500 msec), to compete effectively with terrestrial alternatives. The service will always be on, and will perform well on all Internet applications (with the possible exception of "high-twitch" on-line gaming). Furthermore, SES AMERICOM plans to use the multicast capabilities of satellite technology to out-perform terrestrial delivery for some Internet entertainment applications, thus creating a competitive performance advantage that will be difficult for DSL and cable modem systems to emulate.
- **Installation** – Installation is a key issue for satellite broadband. The need for professional installation of a satellite dish adds a significant cost element, not generally required of terrestrial broadband service providers (although a high percentage of terrestrial connections are professionally installed). SES AMERICOM has focused considerable attention in this area, and has developed installation procedures – employing automatic dish alignment techniques and specialized test equipment – that should guarantee on-site installation in less than one hour, without any involvement by central operations. This process is highly scalable, and will support installation of over one million subscribers per year.[23]

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[21] Achievement of these targets is highly dependent on the availability of adequate spectrum for broadband applications, as well as on the ability of SES AMERICOM and its partners to obtain sufficient volume commitments from service providers.

[22] It will also eliminate one of the drawbacks of current broadband satellite systems, which transmit back to the hub at speeds only slightly greater than dial-up connections (even when via satellite). Typical DSL and cable modem service providers offer receive speeds of 1 Mbps and transmit speeds of 256 kbps.

[23] In addition, this process has been designed to avoid the need for software to be resident on a subscriber's personal computer, which is expected to reduce

- **System Capacity** – Significant effort has been expended in the development of new satellite technologies that significantly increase system capacity and availability of services to the subscriber. One innovation in this area is the implementation of techniques that modify information coding and transmission rates as the interference environment changes, resulting in more efficient use of the spectrum. These improvements result in much higher data flow in the same amount of bandwidth, and are expected to allow satellite operators to serve more than three times the number of customers on the same satellite transponder, as compared to currently available satellite broadband systems. In addition, capacity is further increased through frequency re-use. Use of spot-beams, and the associated re-use of the same frequencies, allows the number of subscribers supported by a given satellite payload to increase significantly. Finally, the satellite platform is also capable of using the same uplink and downlink bandwidths for both hub and CPE communications, thereby providing additional economies because the subscriber return channel bandwidth is essentially "free."

- **Operations** – The information technology systems (network management system, operational support system, and business support system) to be employed by the A2H and A2O systems have been designed to support millions of subscribers, on either a wholesale or direct-retail basis.

V. THE COMMISSION CAN ACCELERATE DEPLOYMENT OF BROADBAND SERVICES BY TAKING STEPS TO INCREASE SATELLITE ORBITAL AND SPECTRUM RESOURCES.

Satellite broadband systems require access to scarce orbital and frequency spectrum resources. Identifying and securing rights to such resources is one of the principal challenges facing any satellite provider. At present, the lack of authorization to use available spectrum is seriously delaying implementation of the A2H platform, which was originally scheduled to be deployed as early as this year.[24]

The use of DBS frequencies at 105.5° W.L., in combination with the FSS frequencies, is critical to the A2H platform. Provision of integrated video/broadband

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substantially the customer service problems experienced by earlier two-way satellite systems.

[24] *See* AMERICOM2Home Press Release at 2; SES AMERICOM Petition at 12.

service, received via a single dish, is currently constrained by the lack of available DBS frequencies between 101° W.L. and 119° W.L. The SES AMERICOM-proposed DBS satellite at 105.5 W.L. will allow the nearby FSS Ku- and Ka-band slots to be used more efficiently, including for broadband services with automated installation procedures. Use of DBS and FSS slots in close proximity will permit single dish solutions that will lower the cost disadvantage of satellite broadband as compared to self-provisioning terrestrial systems.

However, this critical element of the A2H platform – DBS capacity at 105.5° W.L. – remains unsettled from a regulatory standpoint more than two years after SES AMERICOM first proposed its use. In accordance with Commission rules, SES AMERICOM filed with the Commission, in April 2002, a Petition requesting a declaratory ruling that it is in the public interest for SES AMERICOM to offer such capacity to third parties that will provide direct-to-home services to consumers in the United States and certain British Overseas Territories in the Caribbean.[25] The Petition demonstrated that the SES AMERICOM proposal fully satisfies all Commission rules and policies for market entry by a foreign-licensed satellite, and is ripe for grant.

At the same time, SES AMERICOM acknowledged that, pursuant to international procedures established for the subject frequencies, SES AMERICOM will need to coordinate its operations with those of operators in adjacent slots, which include

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[25] *See* SES AMERICOM Petition at 1-2. The Petition was placed on Public Notice, *see Public Notice*, Report No. SAT-00110, May 17, 2002, and a pleading cycle was concluded. *See* SES AMERICOM Consolidated Reply, SAT-PDR-20020425-00071, July 3, 2002 ("SES AMERICOM Consolidated Reply").

the U.S. operators DIRECTV and EchoStar.[26] Each of these service providers operates satellites located 4.5° away from 105.5° W.L. orbital location proposed to be used by SES AMERICOM. Those coordination proceedings, under the auspices of the International Telecommunication Union, are underway.

Despite the fact that the SES AMERICOM proposal meets all Commission rules and policies, and international coordination is ongoing, DIRECTV has urged the Commission to initiate a rulemaking on operation of DBS satellites at reduced spacing.[27] As SES AMERICOM has explained in detail, current domestic and international rules and procedures already contemplate satellites at reduced spacing, and address all of the issues raised by DIRECTV.[28] In particular, the international coordination requirements serve to protect neighboring satellites, such as DIRECTV's,

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[26] *See* SES AMERICOM Petition at 8-12; SES AMERICOM Consolidated Reply at i, 4-5, 22-32. This situation is no different than that faced by most U.S.-licensed satellites. Due to the fact that modern DBS satellites depart significantly from the parameters adopted in the original international band plans, proposals for new satellites generally trigger coordination under international rules with at least some neighboring satellites. The Commission routinely licenses satellites pending such coordination. *See, e.g.,* Loral Spacecom Corporation, *Order*, DA 03-2624 (Aug. 8, 2003), ¶ 15 ("The Commission has held that it is not necessary to complete international coordination before a satellite system can be authorized to provide service in the United States. [footnote omitted] It is sufficient for purposes of the *DISCO II* framework that coordination has been initiated. . . .")

[27] *See* Petition of DIRECTV Enterprises, LLC For a Rulemaking on the Feasibility of Reduced Orbital Spacing in the U.S. Direct Broadcast Satellite Service, RM No. 10804, Sept. 5, 2003 (the "DIRECTV Petition"); *Public Notice*, Report No. SPB-196, December 16, 2003; Comments of SES AMERICOM, Report No. SPB-196, January 23, 2004 ("SES AMERICOM Rulemaking Comments"); and Reply Comments of SES AMERICOM, Report No. SPB-196, February 13, 2004 ("SES AMERICOM Rulemaking Reply Comments").

[28] *See* SES AMERICOM Rulemaking Comments at 5-13, 16-27; SES AMERICOM Rulemaking Reply Comments at 3-10.

from interference.[29] Finally, coordination of individual satellites to prevent interference, as prescribed by international rules, leads to the more efficient use of the spectrum than "one-size-fits-all" rules.[30] Initiation of a rulemaking would serve only to delay action on the SES AMERICOM Petition and to delay conclusion of the coordination proceedings.

The Task Force seeks ways to accelerate wireless broadband deployment. One thing the Commission should do is to make available substantially more satellite orbital and spectrum resources. And one of the fastest ways to increase DBS capacity is to permit operation of satellites at reduced (4.5°) spacing, such as at 105.5° W.L. In addition to facilitating integrated, single-dish, video/broadband service offerings (currently constrained by the lack of available frequencies between 101° W.L. and 119° W.L.), this will have the added benefit of allowing for more efficient use (including for broadband) of the FSS spectrum currently used for delivery of video programming.

The existing domestic and international procedures provide the fastest and most effective route for evaluating and licensing DBS satellites at reduced spacing. The Commission should not attempt to overlay on top of the existing regulatory framework additional rules that could constrain creative spectrum-sharing solutions, and hinder (or discourage altogether) services that are a critical component of broadband service offerings. Instead, the Commission should actively support ongoing coordination efforts, with a view to permitting maximum use of scarce orbital resources.

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[29] *See* SES AMERICOM Rulemaking Comments at 8-9; SES AMERICOM Rulemaking Reply Comments at 3-8.

[30] *See* SES AMERICOM Rulemaking Comments at 14-15; SES AMERICOM Rulemaking Reply Comments at 16-19.

Another way the Commission can support development of true two-way systems is to ensure that spectrum to be used by satellite broadband services is unencumbered by the presence of terrestrial users in the same bands. This avoids additional interference to consumer receivers from terrestrial links. It also avoids the unworkable delays inherent in individual coordination of CPE at each customer site, which would be required to protect adequately against such interference, as well as to protect terrestrial operations from CPE uplink transmissions. The Commission has already taken significant steps to ensure that Ka-band FSS spectrum is available for broadband service, by removing the terrestrial allocations in the 18.3-18.8 GHz bands.[31] It should continue to take this important consideration into account in regulating other bands to be used for satellite broadband applications.

Finally, the Commission should seek ways to promote more actively the deployment of broadband in rural areas. In particular, the Commission should aim to ensure that satellite applications are eligible for any funding authorized by Congress for such efforts. The Commission should, moreover, take the lead in recommending to Congress a host of new measures intended to ensure the availability of rural broadband, such as:

- Targeted grants that would serve as "seed money" for investment in new approaches and new technologies for rural broadband development;

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[31] *See* Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use, *Second Order on Reconsideration,* IB Docket No. 98-172, FCC 02-317, rel. Nov. 26, 2002.

- Quantity guarantees for satellite broadband CPE, thereby enabling manufacturers immediately to ramp up the kind of production volumes that lead to affordable customer pricing; and

- A loan guarantee program for satellites with a dedicated mission (at least in substantial part) of delivering rural broadband services of a quality and at a price comparable to urban terrestrial offerings.

VI. CONCLUSION

As demonstrated above, new satellite broadband systems promise to be fully competitive with terrestrial offerings in terms of connectivity and cost, with the additional advantage of being able to reach efficiently every American, no matter how remotely located. The satellite industry, led by SES AMERICOM, has done its part to make these systems a reality; the Commission must now do its part.

Respectfully Submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Comments of SES AMERICOM, Inc. was served this 3rd day of June, 2004, via e-mail on the following:

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