



Satellites: Broadband Access for All Americans

Satellite Technology Needed to Achieve U.S. Universal Broadband Access

- Satellite-delivered broadband services are essential to fulfillment of the national policy of providing broadband access to all Americans.
- Satellite-based broadband delivery systems offer:
 - Nation-wide ubiquitous broadband service;
 - Cost-effective service that allows the number of users to increase with demand;
 - Reliable and quality access including during emergencies; and
 - Ease of installation and use in fixed and mobile applications.
- Satellite systems provide broadband services not otherwise available to America's most rural and remote areas, coastal and inland waterways, and offshore territories.
 - Satellite systems provide broadband access to users in more zip codes in the United States than any other technology. Presently, satellite systems provide competitive broadband services throughout the 48 contiguous states, the District of Columbia, Alaska, Hawaii, Puerto Rico and the U.S. Virgin Islands.
 - Satellite broadband service is available in areas that cannot be served using terrestrially-based wired technologies (*e.g.*, cable and DSL) or wireless technologies (*e.g.*, the emerging WiMAX offering).
 - Satellite systems provide broadband services to users at fixed locations or in motion on land, rail, sea, and in the air.

Satellite Broadband Offers Critical Consumer Choice and Service Competition

- The market for broadband satellite services has hit critical mass, and is poised for explosive growth.
 - As of September 2008, an estimated 780,000 consumers relied on satellite-delivered broadband throughout the United States.
 - An overview of service offerings from satellite broadband providers is included in the Annex to this paper.
 - Consumers are increasingly choosing satellite-delivered broadband services, responding to new and innovative high-capacity satellite broadband alternatives.
 - Satellites now deliver broadband at speeds ranging from 200 kbps to 5 mbps for fixed offerings, and from 200 kbps to 500 kbps for mobile offerings.
 - These speeds allow full e-mail, large file transfer, and Internet access, providing users with significant broadband capability wherever they may be located, unlike a traditional 56K dial-up connection.
 - Even higher speeds are planned as next-generation satellites now under construction enter into service.
 - Through the launch and deployment of several new fixed and mobile satellite systems, the satellite industry is making the substantial investments needed to provide increased access to an array of services to support the anticipated increase in satellite broadband subscribers.
- Satellite-based broadband systems offer unique scalability, allowing rapid increases in subscriber numbers simply by adding affordable and easy-to-install remote terminals at user locations once a satellite system is launched and operational.
 - In contrast, expansion of the user base in most terrestrial networks requires significant costly infrastructure investments (laying of fiber optic cable or installation of towers and access nodes).
 - As the “take up” rate increases for satellite broadband services, and as new systems come on line, economies of scale dictate that equipment prices will become even more affordable and competitive than they are today.

Satellite Broadband Must Be Considered in Developing U.S. Broadband Policies

- Universal broadband access cannot be achieved through the use of terrestrial systems alone.
 - Terrestrial wired and wireless networks have been deployed primarily in urban and more densely populated areas; satellite platforms offer broadband access to nearly 100 percent of the U.S. geographic territory.
 - In 2008, an estimated 11 million households throughout the United States were unserved by terrestrial technologies; satellite platforms reach almost every one of these households today.
 - Only satellite system can bring broadband on-the-move access to most ships, planes, and vehicles.
- Satellite systems providing broadband access embrace and embody the policy objectives of content neutrality and advance the ideal of an open and interconnected public internet.
- SIA encourages regulatory policies that properly recognize that there are many approaches to broadband delivery, rather than one-size-fits-all regulatory strategies that would erase these distinctions.
- Broadband definitions should not impose an arbitrary data rate threshold that would exclude satellite-delivered broadband services and the ubiquity they offer.
 - Any such exclusion would harm consumers by limiting their choices.
 - All wireless broadband offerings are subject to the limitations inherent in spectrum-based services, and are generally not able to offer speeds that go as high as wireline offerings.
- Any metrics that assess the coverage and extent of broadband deployment should be developed to reflect both the inherent wide-coverage capabilities and attributes of satellite broadband systems on the one hand, and the population-density-based coverage tendencies of terrestrial broadband approaches on the other.
 - Measures and metrics adopted to encourage and track the expansion of terrestrial coverage of underserved and unserved areas and groups may not

- be suitable for application to satellite broadband services.
- SIA supports an approach that defines and measures broadband services in categories that provide more rather than less information, as the FCC did in its recent Broadband Data ruling that established tiers of advanced data offerings starting at 200 kbps, on up to higher speeds.
 - This tiered approach could also consider costs and geographic availability of the broadband offering, enabling consumers to choose what type of broadband service best suits their particular needs.
 - Assessments of the reasonableness of network traffic management practices for satellite broadband delivery systems must recognize the unique technical challenges that satellite operators face as compared with their terrestrial counterparts, and afford satellite operators flexibility to impose content-neutral technical policies that ensure a high level of service quality for all their subscribers and customers.

Annex: Current Satellite Broadband Providers/Offerings (as of November 2008)

Satellite Broadband Company / Service Offering	'Up to' Upload Speed	'Up to' Download Speed	Monthly Service Price¹
HughesNet Offerings²			
Home	128 Kbps	1.0 Mbps	\$59.99
Pro	200 Kbps	1.2 Mbps	\$69.99
ProPlus	250 Kbps	1.6 Mbps	\$79.99
Elite	300 Kbps	2.0 Mbps	\$119.99
ElitePlus	300 Kbps	3.0 Mbps	\$189.99
Elite Premium	300 Kbps	5.0 Mbps	\$349.99
StarBand Offerings³			
Nova 1000	128 Kbps	1 Mbps	\$69.99
Nova 1500	256 Kbps	1.5 Mbps	\$99.99
WildBlue Offerings⁴			
Value Pak	128 Kbps	512 Kbps	\$49.95
Select Pak	200 Kbps	1.0 Mbps	\$69.95
Pro Pak	256 Kbps	1.5 Mbps	\$79.95
Inmarsat Offerings⁵			
BGAN	492 Kbps	492 Kbps	Pricing depends on individual distributor's offering and what value-added services are included

¹ The monthly service price is the lowest list price for the package reflecting the referenced service speeds. Providers offer a variety of equipment, contract term, activation, installation, and promotional options to their customers that will impact the net service price for the particular offering. Please contact the service providers directly (web addresses are provided below) for the specific satellite broadband service offerings now available.

² The HughesNet plans are described at <http://go.gethughesnet.com/plans.cfm>.

³ The StarBand plans are described at <http://www.starband.com/services>.

⁴ The WildBlue plans are described at <http://www.wildblue.com/getWildblue>.

⁵ The Inmarsat plans are described at <http://www.inmarsat.com>