



June 30, 1998

The Hon. William E. Kennard  
Chairman, Federal Communications Commission  
1919 M Street, N.W.  
Washington, D.C.

Dear Mr. Chairman:

Last week, you spoke on the future of the communications revolution. In your speech, you issued a visionary challenge. You spoke of "bringing the best of the Information Age into every home in America." You identified the potential for "new horizons for entertainment, information, and communications services for all Americans." And you acknowledged the tremendous benefits in jobs and economic output to be gained from "e-commerce"--doing business over the Internet--from \$20 billion this year to \$350 billion four years from now.

But you were not only visionary. You were also realistic. You recognized that a huge obstacle must be overcome before that great vision can be made a reality. On the one hand, the Internet has "plenty of capacity to pump data all over the country very quickly." On the other hand, when the data "reaches that last mile, the copper phone line that runs into [the] house is a lot like [a] garden hose. It can't handle the amount . . . that needs to be pumped through to fill up [the] computer screen quickly."

In short, the vast majority of Americans are not yet seeing the potential benefits of the Internet in their homes.

Mr. Chairman, my company, SkyBridge, agrees with you wholeheartedly and applauds you for your vision. You were right on target in identifying the problem; but you mentioned only a part of the solution. Telephone companies and cable companies, you said, should provide broadband access to the home by replacing their old copper phone lines with lines that can transmit data digitally "at lightning speed."

Installing new high-speed digital lines, however, will take time, and these lines may never reach rural areas. It will take many years for the telephone and cable companies to bring all of the benefits of the Internet to all American homes. But there is another technology with great potential for high-speed, low-cost, local and world-wide communications: the satellite technology called SkyBridge.



.....  
an Alcatel company

My company -- at its core and by design -- is a "last mile" broadband access solution. Built around a constellation of low earth orbit satellites and gateway earth stations, SkyBridge will by 2001 provide the infrastructure for a full range of broadband services, including Internet access and high-speed data communications. It will serve local areas according to their needs and preferences and will complement local networks, with all switching and routing controlled and customized by the gateway stations. And SkyBridge will be inexpensive, because it uses a combination of state of the art technology for local access, and the existing terrestrial fiber network -- the "huge water mains" to which you referred -- for long-haul connections.

Perhaps most importantly, Mr. Chairman, SkyBridge offers competition -- another way, besides telephone and cable lines, to "bring consumers more services, better quality, and the lowest prices." We also offer the potential for universal service; from day one of our system operations, we will be able to provide the rancher in Montana with the same quality of high-speed Internet access, at the same price, as we will provide to the banker in Chicago.

With all of its advantages, SkyBridge is an integral part of any solution to the broadband problem. Mr. Chairman, in fulfilling your visionary goal of bringing the benefits of the Internet to all Americans, let SkyBridge help you.

Respectfully yours,

A handwritten signature in black ink, appearing to read "Pascale Sourisse".

Pascale Sourisse  
President and CEO

**STATEMENT OF**

**DAVID FINKELSTEIN**

**Senior Vice President**

**SkyBridge Limited Partnership**

**Hearing on Bandwidth Issues**

**Before the**

**Subcommittee on Communications  
Committee on Commerce, Science and Transportation**

**U.S. Senate**

**April 22, 1998**

Thank you for granting me this opportunity to speak to you today. My name is David Finkelstein, and I am Senior Vice President of SkyBridge, which is a U.S. company proposing to bring interactive broadband telecommunications to the entire globe. SkyBridge plans to establish a network of 64 satellites in low-earth orbit to provide fiber optic-like connectivity to almost all areas on earth; we will provide Internet access, multimedia services, videoconferencing, and other advanced communications applications. SkyBridge has obtained financial and strategic backing from several major players in the satellite and communications industries, including Alcatel, Loral, Toshiba, Sharp and Mitsubishi.

But I am not really here to talk about SkyBridge. I am here to make you aware of the tremendous potential of the satellite technologies being pioneered by SkyBridge and several others in the satellite industry, including Teledesic and Celestri. As we usher in the new Millennium, these technologies promise to bring about a dramatic advance in the way we view the quality, availability and accessibility of broadband telecommunications infrastructure in the United States and around the world.

I would like to talk to you about how exciting new satellite technologies can provide three major benefits to Americans and to citizens of the world:

- **First, the availability of broadband telecommunications to literally everyone;**
- **Second, the opportunity to create true competition and universal service in local telecommunications; and**
- **Third, increased services through efficient use of that scarce resource, radio frequency spectrum.**

## I. Broadband Capacity for All

I start with a simple, virtually unchallengeable proposition: access to telecommunications networks for the transmittal of voice and data communications has brought immense benefits to individuals and businesses. The enhancement of our day-to-day lives, and the enrichment of our social, economic and educational welfare, that have accompanied the recent growth in access to telecommunications services and the proliferation of global communications over the Internet and wide-area corporate networks, are facts to be celebrated by us all.

But even as we celebrate, we must be cognizant that not all is rosy in this picture. The truth of the matter is that our increased access to telecommunications infrastructure and bandwidth has occurred in a discriminatory manner. I am not just talking about economic discrimination between the haves and the have-nots. Certainly, this form of discrimination does exist, and is being addressed. What I am talking about is actually a more prevalent form of discrimination, one that threatens to render meaningless, for millions of Americans, programs such as Universal Service. I am speaking of geographic discrimination.

The terrestrial, wire-based telecommunications network that today serves as the backbone for the lion's share of voice and data communications in the United States either does not extend to numerous geographic areas, or serves those areas inadequately. The reasons why we have unserved and underserved areas in the U.S. and around the globe are complex, but basically come down to numbers. It costs substantially more

money to pass a rural home with a telephone wire than it does to pass an urban home, and in some remote or mountainous regions the cost has sometimes proven prohibitive.

For this reason, the existing telecommunications infrastructure does not reach certain remote, less-populated or mountainous areas of this country. Local Internet service over these copper wires cannot be purchased in countless difficult-to-reach rural areas in the United States as easily and cheaply as it can be bought in New York City or Washington, DC. And advanced communications applications, such as tele-medicine services that can save lives, are simply not possible in numerous unserved areas around the nation.

Fortunately, basic telephone services are available to the vast majority of Americans -- which is not the case for the rest of the world. But almost everywhere, the existing copper-based infrastructure cannot adequately support advanced broadband data communications, one of the fastest growing segments of the telecommunications industry. To be sure, massive improvements are being made to the existing terrestrial infrastructure, such as fiber optic networks, ISDN services and other digital upgrades, which are designed to improve the network for voice communications and to create the bandwidth necessary for the so-called information superhighway. Such improvements, however, have not yet made their way to many small businesses and residents, even in most major metropolitan areas, let alone to the rural or remote communities of our nation.

Given the current pace, cost, and difficulty of these expansions and improvements, the stark reality is that an acceptable grade and quantity of terrestrial, wire-based communications bandwidth may never be available to currently unserved regions --

and in any event, certainly not on a widespread basis. Even in areas that now have some, but inadequate, access to the existing network, the expansion of the available terrestrial bandwidth to accommodate advanced data communications may take decades.

I believe America should ensure that every citizen, wherever he or she is, can have a high-speed on-ramp to the information superhighway, to take advantage of the shift from the Industrial Age to the new Information Age. Among other things, by moving in this direction, we will be ensuring that every citizen can choose where to live and where to work -- without that choice depending on whether he or she will have access to the information superhighway.

The fact that some people have a somewhat peculiar view of what "choice" is all about reminds me of the time, not too long ago, when I was driving through the great state of Texas. I drove by a roadside diner that had a big sign announcing "Texas BBQ + choice of vegetables: \$9.95." I drove in, sat down and ordered my steak medium-rare. The waitress then told me that that day's vegetable was creamed corn. When I asked what was the choice, she replied "Do you want 'em or not?"

Now that's not my idea of choice. America should aim to give every citizen a choice of service providers, wherever possible, because choice and diversity is what has made this country strong. Choice in this economy generally means competition (which, by the way, is why there have been some not-too-subtle complaints heard from current players about the arrival of these new satellite technologies); I would suggest, however, that choice is very much in the public interest.

I am here to talk about one solution to this problem that promises to bring about geographic nondiscrimination and to provide everyone with greater choice. Indeed, our company and others like it are risking billions of dollars in capital to realize this promise. The solution we are proposing is very near at hand and will make available to all Americans, in all parts of the country -- in areas urban or remote, flat or mountainous, icy or arid -- equal access to advanced communications service. This giant leap forward is being brought about by satellite technology, such as that being pioneered by my company.

While terrestrial networks discriminate geographically, the sky does not. A copper or fiber optic network has to be painstakingly and expensively installed along every route-mile, over or through every intervening mountain or valley, into every single home, business, school, library or hospital. But a constellation of satellites can provide the very same communications bandwidth to all rural, remote, mountainous, and sparsely populated areas that it provides to New York, San Francisco, and Chicago. Satellites can simultaneously and without much localized effort provide the same grade of service and capacity to Ethiopia, Peru, Siberia and Indonesia as they provide to Britain, Japan and Canada. This communications bandwidth can effortlessly extend to the tops of mountains, the bottom of valleys, the middle of deserts, the center of oceans, to the same extent that it is available in Times Square, Beverly Hills, and Monaco.

With such technology, a farmer in the Midwest will be able to sign up for lightening speed Internet service to enable him to check grain prices, identify potential buyers, sell his wares, and even read the New York Times, in the same way as a banker in

New York will be able to sign up for Internet service to track stock prices for her portfolio.

A doctor in a remote town can have immediate access to communications infrastructure that will allow him to transmit x-rays and live video feeds of his sick patient during a teleconference with a team of specialists in Los Angeles, and can be guided in conducting a complex operation, as if the L.A. doctors were in the room peering right over his shoulders.

As another an example, small rural colleges would gain access to communications channels that will allow them to participate live in lectures being conducted at larger universities around the country. And teachers in local high schools in hard-to-reach areas will be able to disseminate assignments, reading materials, and interactive multimedia presentations to those students who cannot make the tough journey, and to other students during storms or other weather conditions that make traveling to school impossible.

This technology will also be available to all users -- in all locations and with the same quality of service -- from day one of a satellite system's operation. Once the satellites of a SkyBridge-type system are in orbit, they provide immediate global coverage -- and will provide services that are just as accessible in a remote area with one user, as in an urban metropolis with over a million users. Unlike a terrestrial system, in other words, we are not talking here of an incremental buildout over many years, but rather of "instant infrastructure" for everyone from the outset.

There are thus a vast range of benefits that global satellite technology will bring to all areas of this country and the rest of the world. And these benefits can be brought about without replacing the existing wire-based infrastructure. Indeed, SkyBridge and other similar systems can only work as an extension of the public telephone system. SkyBridge will be entirely dependent upon national and international fiber optic back-bone networks. These satellite systems will create access to the network for geographic areas not reached by it today, and simply provide "last-mile" connectivity to remote locations, thus preserving the huge financial investments that have already been made in existing terrestrial networks.

I truly believe that satellite technology promises to make the next century one in which the information superhighway can become more than just a concept or an ideal. Instead, it will be made into reality for the millions of Americans living in rural, high-cost, hard-to-reach, sparsely populated, and geographically unfriendly areas, all of whom will realize enormous economic, quality-of-life, and educational benefits from equal access to infrastructure for advanced communication. Rather than feeling pressured to migrate to the cities to participate in the information revolution, these citizens will suddenly have access to services unimaginable just a few years ago.

## **II. Promotion of Competition and Universal Service**

Not only will global satellite telecommunications technology improve the well-being of all citizens and increase the success of businesses; such technologies will also go a long way in fostering full-blown competition in the local and long distance telephone markets in the United States, and with respect to the U.S. portion of the Internet

backbone. Such technology will also help bring about universal service, as dictated by the Telecommunications Act of 1996.

At the heart of the far-reaching '96 Act was the fundamental objective of promoting competitive telecommunications services in the United States. The '96 Act promised to usher in a world of competitive local and long-distance offerings, as well as universal service. Unfortunately, establishing competition has proven more difficult than expected in an industry where, in most geographic areas, one monopoly owns almost all of the wires going into the homes and businesses. The conventional wisdom these days appears to be that the '96 Act is failing.

But the Act need not fail. With respect to local competition, global satellite technology promises an ideal alternative to the traditional "last mile" of the local loop. By creating instant bandwidth that is easily accessible from any point on the globe, while still being connected to the public switched network, a satellite network can help to infuse competition by transmitting local voice and data communications from any home to the facilities of any local exchange carrier, incumbent or competitor alike. By breaking down the barrier to competition caused by the bottle-neck at the "last mile" of the local loop, satellite technology can help achieve the '96 Act's competition ideal.

Similarly, with regard to universal service, satellite technology is perhaps the most workable, soon-to-be-available way to turn universal service into a reality. Regardless of the amount of money contributed to the Universal Service Fund -- and by whom -- it is unlikely that these subsidies alone will make it feasible for carriers to provide the sorts of high speed, broadband services to certain remote, high-cost areas that are

necessary for the residents of those areas to become full participants in the Information Age. A global satellite network can overcome inherent limitations of terrain and distance without additional infrastructure costs, thus making it possible to have service that is truly "universal."

### **III. A Final Observation - Spectrum Efficiency**

As the members of this Subcommittee know better than most, the radio-frequency spectrum is a resource limited by the laws of physics. It is this resource that enables satellite systems to bridge the gaps in the terrestrial infrastructure. Given the large number of different types of services and entities vying to use this resource -- microwave, paging, cellular, DTH TV, you name it -- it is necessary for the government to administer this asset in a manner that benefits all segments of the public. SkyBridge, in an effort to maximize the efficiency with which this scarce resource is used, has proposed an efficient and non-interfering protocol for sharing portions of the frequency spectrum already being used for other services. This proposal represents a forward-looking attempt by one company to use technological innovation to provide global access to advanced informational services, while assuring full continuity of all existing services.

Government support for such technological advancements will help to take us full-speed into the 21st century, and will bring about an information superhighway with the potential for entrance and exit ramps into virtually every house, cottage, hut, igloo, tent, business, school, college, hospital, clinic, government office or other structure in the United States and on the rest of planet. This Congress has already recognized the great importance of advanced telecommunications technology for the creation of broadband

communications infrastructure. In Section 706 of the Telecommunications Act of 1996, Congress directed the FCC to take steps during this year to "accelerate deployment" "to all Americans" of "high speed, switched, broadband telecommunications capability that enables users to originate and receive high quality voice, data, graphics, and video telecommunications using any technology." SkyBridge stands ready to help fulfill this mandate.

### Conclusion

The changes taking place in the telecommunications industry are nothing short of breathtaking. Likewise, in an equally exciting but less visible way, the satellite industry is going through a radical transformation. Creating the best legal and regulatory environment to favor these simultaneous developments will not be easy. But satellite companies can and will make an enormous contribution to achieving the ideals of competition, universal service, and spectrum efficiency. We will create the expanded bandwidth, higher quality, readily and universally available communications channels being demanded by businesses and individuals. By using innovative satellite technologies such as that being developed by SkyBridge, our companies will provide instant global bandwidth for advanced communications, thus making the information superhighway accessible not just to major urban areas, but to all locations in all parts of this country and the rest of the world.

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

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter of )  
)  
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 )

CC Docket No. 98-146

REPLY COMMENTS OF SKYBRIDGE

SKYBRIDGE L.L.C.

Phillip L. Spector  
Laura B. Sherman  
Kira A. Merski  
Paul, Weiss, Rifkind, Wharton & Garrison  
1615 L Street, N.W., Suite 1300  
Washington, D.C. 20036  
Telephone: (202) 223-7300  
Facsimile: (202) 223-7420

Its Attorneys

October 8, 1998

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

In the Matter of	)	
	)	
Inquiry Concerning the Deployment of	)	
Advanced Telecommunications	)	
Capability to All Americans in a Reasonable	)	CC Docket No. 98-146
and Timely Fashion, and Possible Steps	)	
to Accelerate Such Deployment	)	
Pursuant to Section 706 of the	)	
Telecommunications Act of 1996	)	

**REPLY COMMENTS OF SKYBRIDGE**

SkyBridge L.L.C. ("SkyBridge"), by its attorneys, hereby submits these reply comments in response to the comments filed with respect to the Notice of Inquiry ("NOI") released by the Federal Communications Commission (the "FCC" or "Commission") in the above-captioned proceeding.<sup>1/</sup> In the NOI, the Commission requested comment on how best to effectuate its mandate to "encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans," as established by Congress in Section 706 of the Telecommunications Act of 1996.<sup>2/</sup>

SkyBridge filed comments in the instant proceeding ("SkyBridge Comments"), explaining that broadband satellite systems, such as the SkyBridge system, will provide an

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<sup>1/</sup> FCC 98-187, CC Docket No. 98-146 (Aug. 7, 1998).

<sup>2/</sup> Pub. L. 104-104, Title VII, §706, Feb. 8, 1996, 110 Stat. 153, reproduced in the notes under 47 U.S.C. §157.

expeditious and cost-effective means of delivering advanced telecommunications services to all Americans -- whether in urban, suburban, rural or extremely remote areas -- on an equal basis. Many commenters similarly recognized the urgent need for rapid deployment of broadband capacity<sup>3/</sup> and the ability of satellite systems to provide such capacity.<sup>4/</sup>

In these reply comments, SkyBridge further discusses the acute need for advanced telecommunications services in rural areas, and the fact that satellite systems are an efficient means of delivering those broadband services in a cost-effective and timely manner. SkyBridge also urges the Commission to fulfill the Congressional mandate by allowing the most efficient use of spectrum that is technically feasible.

I. There is an Urgent Need for Broadband Services in Rural Communities that Satellite Systems, such as the SkyBridge System, Are Uniquely Situated to Fulfill.

The current need for access to broadband services in rural areas was noted by a number of commenters.<sup>5/</sup> The Rural Telephone Group, for example, noted that "rural communities need broadband capability that can support high-speed Internet access and data services, and rural communities need advanced graphics and video capabilities and services

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<sup>3/</sup> See, e.g., Comments of the Rural Telecommunications Group ("RTG Comments"); Comments of the Rural Policy Research Institute, Rural Telecommunications Panel ("RUPRI Comments") at 2; Comments of United Homeowners Association, *et. al.* at 5 ("United Homeowners Comments").

<sup>4/</sup> See Comments of Teledesic LLC at 2-5 ("Teledesic Comments"); Comments of PanAmSat Corporation at 2 ("PanAmSat Comments"); Comments of BellSouth Corporation at 26 ("BellSouth Comments").

<sup>5/</sup> See, e.g., RTG Comments at iii; United Homeowners Comments at 6.

because they are more dependent on telecommunication services than other communities.<sup>6/</sup>

Further, the Rural Policy Research Institute expressed concern about meeting the short- and long-term broadband needs of rural America.<sup>7/</sup>

In the NOI, the Commission identified two sets of challenges associated with meeting the current demand for broadband telecommunications capacity: bandwidth and coverage. With respect to bandwidth, the Commission noted that the copper wire infrastructure terminating in the homes of Americans -- the "last mile" -- "is not broad or fast enough to be called advanced."<sup>8/</sup> With regard to geographic coverage, the Commission recognized that the terrestrial, wire-based broadband "backbone" either does not serve numerous geographic areas, or serves those areas inadequately.<sup>9/</sup> These challenges are particularly difficult to overcome in rural and hard-to-reach areas.

As SkyBridge demonstrated in its comments, however, the SkyBridge system provides one of the most effective means of addressing the needs of rural America identified by commenters. SkyBridge pointed out that broadband satellite technology can overcome the existing technical barriers to the provision of advanced telecommunications capability, addressing both the "last mile" and the "high-cost area" obstacles in both urban and rural areas, more rapidly and efficiently than traditional terrestrial networks. SkyBridge will offer

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<sup>6/</sup> Id.

<sup>7/</sup> RUPRI Comments at 8.

<sup>8/</sup> NOI at ¶ 3.

<sup>9/</sup> Id.

a solution to the "last mile" problem by transmitting high-bandwidth data from its satellites directly to user terminals inside homes, schools, and businesses. The SkyBridge system will address the "high-cost area" problem by creating access at reasonable cost to broadband networks for rural, high-cost, and sparsely populated areas that do not presently have access to broadband capacity.

SkyBridge will offer instant global access to broadband services, including high-speed Internet access and on-line services, video-conferencing, multimedia entertainment services, and infrastructure links for telephony, wireless local loops and mobile communications. The system will also offer narrowband services for voice, video-conferencing, data transmission and backup longhaul connection. Thus, the SkyBridge network will allow Americans in every part of the country to receive the benefits of services such as telemedicine and distance learning, and to have access to essentially unlimited information databases.

Other commenters recognized the benefits associated with broadband satellite systems, and pointed out that satellite technologies offer a practical solution to the "last mile" problem.<sup>10/</sup> For example, Teledesic noted that "[w]ireless technologies offer a solution to the 'last mile' problem. The cost of accessing wireless services is largely indifferent to location. This is especially true for satellite services, which can cover vast regions without the need to

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<sup>10/</sup> See Teledesic Comments at 3; BellSouth Comments at 26; PanAmSat Comments at 2 ("systems are suited to provide a wide variety of broadband and interactive services, including satellite-delivered Internet services, and can be used with small antennas that make direct-to-home transmission both economical and practical").

install terrestrial transmitting equipment.”<sup>11/</sup> In addition, BellSouth Corporation noted that “satellite services can offer inherent technological advantages such as low-cost transmission rates, broad geographic coverage areas, and low operational costs.”<sup>12/</sup>

In order to ensure that all Americans are able to realize the benefits of broadband satellite systems, the Commission needs to streamline the licensing process and devote the necessary resources to authorize expeditiously satellites providing broadband services.<sup>13/</sup> Delays in processing satellite license applications jeopardize the rapid build-out of the systems and the economic viability of providing full geographic coverage. For example, SkyBridge’s application<sup>14/</sup> seeking authorization to establish a new broadband nongeostationary orbit (“NGSO”) fixed satellite service (“FSS”) system has been pending since February 1997, and its related petition for rulemaking<sup>15/</sup> has been pending since

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<sup>11/</sup> Teledesic Comments at 3.

<sup>12/</sup> BellSouth Comments at 26.

<sup>13/</sup> See also, Teledesic Comments at 5-6 (the Commission could promote the public interest by eliminating regulatory hurdles when possible, and by acting expeditiously on applications and other requests pending before it).

<sup>14/</sup> See Application of SkyBridge for Authority to Launch and Operate a Global Network of Low Earth Orbit Communications Satellites Providing Broadband Services in the Fixed Satellite Service, File No. 48-SAT-P/LA-97, filed Feb. 28, 1997; Amendment, File No. 89-SAT-AMEND-97, filed July 3, 1997; Further Amendment, filed June 30, 1998 (“SkyBridge Application”).

<sup>15/</sup> See SkyBridge’s Petition for Rulemaking: Amendment of the Commission’s Rules to Permit Operations of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the 10.7-2.7 GHz, 12.75-13.25 GHz, 13.75-14.5 GHz, and 17.3-17.8 GHz Bands, and to Establish Technical Rules Governing NGSO FSS Operations in these Bands, RM No. 9147, filed July 3, 1997.

July 1997. If the Commission is fully to effectuate its Congressional mandate to make advanced telecommunications capacity available to all Americans, it must act swiftly and decisively to authorize the deployment of systems capable of providing such services.

II. Reasonable Band Sharing Can Increase Broadband Availability, Rather than Constrain It.

Making the most efficient use of the radio spectrum is absolutely essential if the Commission is to effectuate the Congressional mandate to make advanced telecommunications services available to all Americans.<sup>16/</sup> Where technology allows sharing of spectrum, the Commission should not stand in the way. SkyBridge urges the Commission to support sharing not just domestically but at the ITU and other international fora in order to maximize usage of bands and access to advanced telecommunications services.

Both PanAmSat and Teledesic argue that NGSO sharing of spectrum will undermine development of the geostationary ("GSO") FSS broadband systems.<sup>17/</sup> They point to the Commission's conclusions in the 28 GHz Proceeding as evidence that band sharing is not possible.<sup>18/</sup> But the Commission's conclusion not to allow frequency sharing in the 28 GHz band was based upon its specific finding that GSO systems were not capable of sharing

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<sup>16/</sup> See *e.g.*, 47 U.S.C. §§ 157, 303(g).

<sup>17/</sup> PanAmSat Comments at 3-4; Teledesic Comments at 8. Both PanAmSat and Teledesic refer specifically to sharing in the Ka-band. Their arguments have no validity either for Ka- or Ku-band.

<sup>18/</sup> PanAmSat Comments at 3; Teledesic Comments at 7 (citing Rulemaking to Amend Parts 1, 2, 21 and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, and to Establish Rules and Policies for LMDS and for FSS, 11 FCC Rcd 19005 (1996) ("28 GHz Proceeding")).

because of their design.<sup>19/</sup> Thus, the outcome of the 28 GHz Proceeding does not provide precedent for other bands where the facts differ significantly or for even the 28 GHz band, if technology has evolved.

SkyBridge urges the Commission to recognize that the ability of a given satellite system to share spectrum with any other satellite or terrestrial system is largely a function of the system's architecture. As SkyBridge has demonstrated in the context of its license application, a satellite system can be designed from the start to be capable of sharing with existing systems, both GSO and terrestrial.<sup>20/</sup> The SkyBridge satellites do not require either a new allocation or an exclusive license to operate. Rather, SkyBridge proposes to operate systems at both the Ka- and Ku-band, on a non-exclusive basis. Because of its system design, the SkyBridge system will not degrade the quality of service or availability of GSO or terrestrial links, and will impose no operational constraints on operators of GSO or terrestrial systems.

With respect to sharing with GSO systems, the NGSO operator must design its constellation to ensure that it can avoid interference to GSO customers while still providing uninterrupted service to its own customers. The SkyBridge system architecture represents one example of how this can be accomplished at relatively low cost. With respect to

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<sup>19/</sup> 28 GHz Proceeding, 11 FCC Rcd at 19016 ("Co-frequency sharing between either GSO/FSS or NGSO/FSS ubiquitously deployed terminals and LMDS with its ubiquitously deployed subscriber terminals is not feasible at this time").

<sup>20/</sup> SkyBridge Application at Section V; Opposition of SkyBridge to Petitions to Deny at Sections V and VI (filed Jan. 20, 1998).

terrestrial sharing, while parties such as Teledesic<sup>21/</sup> are correct that it is different for "ubiquitous" user terminals to share spectrum with terrestrial systems, that problem does not preclude operation of NGSO systems. As SkyBridge has proposed -- and as the Commission has recognized in a recent notice of proposed rulemaking<sup>22/</sup> ubiquitous user terminals generally should be restricted to bands with little or no terrestrial use, while non-ubiquitous "gateway" terminals can share spectrum with terrestrial systems with little or no inconvenience to one another.

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<sup>21/</sup> Teledesic Comments at 8.

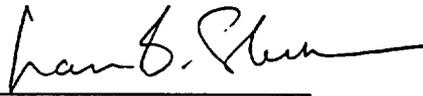
<sup>22/</sup> Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the Frequency Bands for Broadcast Satellite Service Use, FCC 98-235 (rel. Sept. 18, 1998).

## II. CONCLUSION

By supporting the development and market entry of new satellite-based technologies such as the SkyBridge system, the Commission will spur competition in the broadband industry and can thereby meet the challenge of accelerating the deployment of advanced telecommunications capability to all Americans on an equal basis. Such capabilities will undoubtedly prove beneficial to citizens across the country, and demonstrate the United States' global leadership in the information revolution.

Respectfully submitted,

SKYBRIDGE L.L.C.

By: 

Phillip L. Spector  
Laura B. Sherman  
Kira A. Merski  
Paul, Weiss, Rifkind, Wharton & Garrison  
1615 L Street, N.W., Suite 1300  
Washington, D.C. 20036  
Telephone: (202) 223-7300  
Facsimile: (202) 223-7420

Its Attorneys

October 8, 1998