Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Inquiry Concerning the Deployment of	)	CC Docket No. 98-146
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	)	

REPLY COMMENTS OF THE
TELECOMMUNICATIONS INDUSTRY ASSOCIATION

Pursuant to Section 1.415 of the Commission's Rules,[1] the Telecommunications Industry Association (TIA) hereby replies to the comments submitted in response to the *Third Notice of Inquiry* in the above-captioned proceeding.[2] TIA is the principal industry voice for communications and information technology manufacturers and suppliers. As the companies designing, building, and deploying the technologies that are driving the broadband revolution, TIA members will be impacted directly by any Commission decisions made as a result of this inquiry.

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[1] *See* 47 C.F.R. § 1.415.

[2] *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,* CC Docket No. 98-146, Third Notice of Inquiry, FCC 01-223 (rel. Aug. 10, 2001)("*Third NOI*").

I. INTRODUCTION.

1. TIA includes among its membership over 1,000 large and small companies that manufacture and provide communications and information technology products, materials, systems, distribution services, and professional services in the United States and around the globe. TIA represents its members on the full range of public policy issues affecting the telecommunications industry, forges consensus on industry standards, and organizes and co-owns SUPERCOMM, the world's largest annual communications exhibition and conference.

2. TIA member companies have substantial interests in issues surrounding the deployment of technologies that support advanced telecommunications capability. They offer for sale a wide range of landline and wireless technologies, both terrestrial and satellite, that enable high-speed and broadband access to the Internet for commercial and residential users. TIA members sell to all classes of providers holding the potential to provide these types of services. TIA's views thus are necessarily both technology-neutral and service provider-neutral, affording a unique perspective from which to advise the Commission.

3. TIA continues to believe that advanced telecommunications capability is not being deployed to all Americans in a reasonable and timely fashion, as mandated by Section 706 of the Telecommunications Act of 1996.[3] In the comments that follow, TIA urges the Commission to take action, both immediately where it can and through a new comprehensive rulemaking, to remove regulatory impediments to the deployment of current generation and next-generation technologies capable of providing advanced telecommunications services.

[3] § 706 of the Telecommunications Act of 1996, Pub. L. 104-104, 110 Stat. 56 (1996), reproduced in the notes under 47 U.S.C. § 157.

II. THE COMMISSION'S DEFINITION OF ADVANCED TELECOMMUNICATIONS CAPABILITY IS WOEFULLY INADEQUATE TO CAPTURE THE INTENT OF SECTION 706.

4. The Commission has requested comments on its proposal to continue defining "advanced telecommunications capability" Under Section 706 as it has in its First and its Second Reports.[4] In these Reports, the Commission used a transmission speed of 200 kilobits per second (kbps) downstream and upstream to define advanced telecommunications capability. TIA urges the Commission to recognize that under Section 706's explicit language, "advanced telecommunications capability" must be construed to reflect a substantially higher transmission speed.

5. The statutory definition of advanced telecommunications capability specifically requires that the capability allow for the bi-directional transmission of high quality voice, data, graphics, and video. The statute defines the capability "[a]s high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology."[5]

6. As a number of parties stated in their initial comments, the 200 kbps data transfer speed does not conform to the statutory definition of advanced telecommunications capability because it is not capable of supporting interactive high-quality video transmission.[6] Clearly, no

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[4] *Third NOI*, ¶¶ 5-7.

[5] § 706(c)(1).

[6] *See, e.g.*, Comments of Intel Corporation at 1-2 ("Given the importance of video-rich applications to the development and growth of broadband deployment, . . . the Commission should consider whether multiple providers are deploying advanced telecommunications capability at speeds in excess of 6 Mbps to a majority of U.S. households by the end of 2002"); Comments of The National Grange of the Order of Patrons of Husbandry at 2-3 ("'Advanced Service,' which includes full motion video, requires speeds of 1.5 megabits per second and higher");

standard video transmission is possible at 200 kbps even if it is compressed. The statutory requirement that advanced telecommunications capability enable the user to originate and receive high-quality video signals could suggest a minimum transmission speed of 4 Megabits per second (Mbps) (a standard compressed television signal requires 4 to 6 Mbps of transmission capacity). In its comments, Intel essentially suggests 6 Mbps as a target.[7] Regardless of the exact speed the Commission sets as the minimum, clearly it should be well above 200 kbps. Whereas the capability to transmit and receive at 200 kbps allows a user to experience somewhat quicker downloading of web page images and a *slight* improvement in rudimentary video streaming, advanced telecommunications capability is meant to refer to an entire new experience of connectivity that will enable yet to be seen content-rich applications and completely new functionalities.

7. TIA believes that the definition of "advanced telecommunications capability" used thus far in the Section 706 docket reflects the Commission's unspoken yet apparent uneasiness in adopting a definition that could exclude technologies available today that would provide for a noticeable upgrade over dial-up Internet access connections. TIA believes, however, that if the Commission is going to include bandwidth levels in its definition of this term, it is important that it "raise the bar" at least to a level that minimally allows for a substantial increase in the quality of video that can be sent and received, as well as much faster file download times. TIA therefore could not envision that an upgrade in the Commission's definition of "advanced

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Comments of Intertainer, Inc. at 1 ("The present definition of 200 kilobits per second does not provide any real advance over dial-up (56 KBPS) as it is incapable of supporting streaming video of any quality.").

[7] Comments of Intel Corporation at 2.

telecommunications capability" would include anything *less* than a reference to a bandwidth capability exceeding 1.5 Mbps. This of course is a moving target that will continue to rise.

8. Should the Commission update the bandwidth requirement in its definition of "advanced telecommunications capability" as TIA and others suggest, it is important to recognize that even that should be viewed only as a transitional definition to get this nation beyond the low-speed dial-up connections now prevalent. The high-speed Internet service offerings in the marketplace today are not the target that industry ultimately is aiming for. "Broadband" is a term that is being used widely today and has become almost meaningless insofar as it oftentimes is being used to refer to almost any service offering that exceeds 56 kbps dial-up Internet access. Broadband does have real meaning, however, and its widespread availability will have profound consequences for the industry and, more importantly, for the national economy. Broadband reflects the next-generation of communications capability. In its comments in response to the Commission's *Cable Open Access Inquiry*, TIA stated that:

> Residential "broadband" Internet access, using the most pure meaning of the term . . . involves Internet access over technologies that allow for the transmission of information in all its forms: voice, data, graphics, and high-quality full motion video, including full motion video on an interactive basis. . . A high-speed network is capable of providing data, audio, and some video applications. A broadband network is necessary to transmit data applications at Ethernet speeds and full-motion video applications. If broadband access thus is a capability that will enable users to originate and receive information in all its forms, then a minimum of 10 Mbps bi-directionally defines it.[8]

[8] Comments of the Telecommunications Industry Association in Response to the Notice of Inquiry in GN Docket No. 00-185, *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities* (filed Dec. 1, 2000) at 15-16 (hereafter *TIA Open Access Comments)* (available at www.tiaonline.org/government/filings/tia_openaccess_comments-final.pdf).

9. Even 10 Mbps connections will not be the stopping point, as next-generation technologies continue to expand what is feasible, both technically and economically. To that end, TIA supports a national goal that essentially all consumers in the United States should have access to 100 Mbps networks by the year 2010.[9]

III. ADVANCED TELECOMMUNICATIONS CAPABILITY IS NOT BEING DEPLOYED IN A REASONABLE AND TIMELY FASHION.

10. Under Section 706, the FCC is required to "[d]etermine whether advanced telecommunications capability is being deployed to all subscribers in a reasonable and timely fashion."[10] TIA continues to believe that the answer to that question is that it is not, as was argued by various parties in the initial comment round.[11]

11. The deployment of current-generation high-speed Internet access technologies has not progressed satisfactorily, as actual deployments even fall short of levels projected widely only a year ago. That conclusion seems clear when one considers the approximate 9 percent penetration rate for current generation high-speed Internet access technologies, principally DSL and cable modems.[12] Moreover, commentors already have pointed out the dangers in relying on

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[9] TIA recently sent a letter to U.S. President George W. Bush, urging his Administration to establish such a national vision for broadband deployment. *See* Letter to the Honorable George W. Bush, President, United States of America, from Matthew J. Flanigan, President, Telecommunications Industry Association (dated October 4, 2001) (made available in the record of this proceeding by way of attachment to these reply comments).

[10] § 706(b).

[11] *See*, *e.g.*, Comments of The Alliance for Public Technology and The World Institute on Disability at 3 ("The simple answer to this question is **no**") (*emphasis original*); Comments of Intertainer, Inc. at 1 ("advanced telecommunications capability in the 'Last mile' is not being deployed in a reasonable and timely fashion") (*emphasis original)*; Comments of The National Association of the Deaf at 1 (stating that the current "level of penetration is rather modest"); Comments of Intel Corporation at 8-11; Comments by Alcatel USA, Inc. at 2.

[12] Satellite offerings (such as those of direct broadcast service (DBS) providers) and fixed wireless services (*i.e.* MMDS and LMDS) also have penetrated the residential market for high-speed Internet access. Advanced terrestrial mobile services, including the general packet radio service (GPRS) and forthcoming third-generation (3G)

the obviously higher passby statistics.[13] Even more disturbing than the current penetration or passby rates is the fact that deployment of the necessary supporting systems and equipment is slowing. For example, SBC's "Project Pronto" delays are well documented. Meanwhile, companies have not begun to deploy in any meaningful way the next generation of technologies that will enable the higher-speed and broadband capability required to really capture the meaning of "advanced telecommunications capability" envisioned by Section 706, in particular the ability to send and receive high-quality video. As a case in point, in new build and plant rehabilitation situations, incumbent local exchange carriers (ILECs) for the most part are continuing to lay copper instead of investing in new high-bandwidth fiber solutions even at cost parity.

IV. THE COMMISSION MUST ACT TO REMOVE REGULATORY BARRIERS THAT ARE SLOWING THE DEPLOYMENT OF ADVANCED TELECOMMUNICATIONS CAPABILITY.

12. TIA believes that regulation appears to be impeding investment in facilities by certain categories of potential providers of advanced telecommunications capability - in particular, those that rely on the traditional landline telecommunications infrastructure. TIA therefore agrees with commentors who argued in the initial round that Section 706 mandates that the Commission take "immediate action" to encourage the deployment of facilities capable of supporting advanced telecommunications capability.[14]

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wireless systems, offer mobile Internet access at increasingly higher speeds. While all of these technologies hold tremendous promise, they are in the early stages of their deployments and consequently none of them have achieved very high penetration levels. TIA does believe that a variety of these wireless technologies will play an important role in bringing advanced telecommunications services to the public, especially in rural and hard-to-reach areas where market and geographical conditions may make terrestrial infrastructure impractical.

[13] *See* Comments of Intel Corporation at 9-10.

[14] *See, e.g.*, Comments of Intel Corporation at 2 ("Tentatively, the Commission should propose deregulating all new, last mile broadband investment to encourage the fastest possible deployment of the highest speed

13. Incumbent local exchange carriers (ILECs) are by far the largest class of facilities-based residential "last mile" telecommunications service providers. They control "essential" facilities, conduits and rights-of-way, and hence really are the "gatekeepers" of the national, local wired telecommunications infrastructure. Recognizing of course that a wide variety of communications companies contribute to the functioning and upkeep of the telecommunications network, in the end it is critical for the ILECs to make the investments needed to equip their networks with the capability to meet the increasing demand for broadband connectivity. And an upgraded telecommunications infrastructure is essential to its usability as an important competitive alternative to the high-speed networks of cable operators, the other primary communications "pipe" into most American homes at this point in time.

14. Investment in the local access portion of the telecommunications network, however, is at unsatisfactory levels. ILECs clearly are hesitating to upgrade their networks to enable remote subscribers to have access to DSL services at least in part because of regulatory obligations and uncertainty surrounding unbundling, pricing, and collocation obligations. Further, the ILECs continue to lay copper in new builds and total plant rehabilitations when bandwidth-rich fiber solutions can be deployed at cost parity. This investment behavior also appears to be due at least in part to the unbundling, resale, and pricing rules that reduce the ILECs' return on investment and increase their risks, thereby undermining the incentive to

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technology."); Comments of Verizon at 18 (the Commission "should declare that its mandate under section 706 can best be accomplished by allowing all providers to offer such services free of regulatory restraints"); Comments of SBC Communications Inc. at 15 ("By eliminating ILEC broadband regulation the Commission will ensure increased broadband services for millions of Americans."); Comments of BellSouth Corporation at 13 ("the Commission must abandon any notion of unbundling advanced services equipment."); Comments of The United States Telecom Association at 9-13.

innovate. The unfortunate result is a lost opportunity to begin "future-proofing" the U.S. telecommunications infrastructure.

15. As a result, it becomes clear that the Commission should take action, as envisioned by Section 706, to remove regulatory impediments to investment in advanced telecommunications facilities. TIA supports a regulatory structure that encourages all competitors to invest in new facilities, an important national goal, both economically and technologically. TIA also supports, as a general principle, that emerging technologies in markets too nascent for the existence of excessive market power should not be dragged down by heavy handed regulation. For that reason, TIA consistently has urged lawmakers and regulators not to *mandate* open access to cable operators' high-speed communications networks.[15]

16. TIA renews its standing call for the Commission to immediately forbear from applying the unbundling obligations in instances where the network provider (*i.e.* an ILEC) installs next-generation broadband loop facilities in new build and total rehab situations.[16] TIA believes that the Commission could take immediate action to implement this proposal due to its limited scope and the fact that legacy facilities would no longer be implicated.

17. Moreover, TIA further suggests that the time has come for the Commission to address the regulatory barriers to new investment in terms of the deployment of current-generation high-speed technologies to all residences. Extending high-speed Internet capability to all Americans must be an important national priority. Regulations that are having the practical

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[15] See TIA Open Access Comments, *supra* note 8.

[16] *See* Letter to the Honorable William E. Kennard, Chairman, Federal Communications Commission, from Mathew J. Flanigan, President, Telecommunications Industry Association, filed in CC Docket No. 96-98, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996* (Aug. 2, 1999).

effect of halting network operators from extending out further the DSL-capability of their networks need to be re-examined. For advanced services to be available to a substantial number of consumers, fiber is going to have to be pushed out further and further into the telecommunications network, *i.e.* first to remote terminals and eventually beyond, and electronics components upgraded. The Commission must address whether the collocation, unbundling and pricing rules are impeding this investment, and remove or substantially modify them if that's the case. For example, as the Commission is aware, ILECs are making it quite clear that the prospect of having to make their advanced service network components available to competitors at prices based on TELRIC (total element long run incremental cost) is diminishing their appetite for making the costly investments necessary to upgrade their networks in order to make high-speed Internet access services available ubiquitously. TELRIC of course is an incremental, forward-looking cost for a hypothetical, ideally efficient, state-of-the-art network. The problem is that in most cases, it appears to be below historical and actual cost. Thus, mandated TELRIC pricing for its competitors threatens to undermine the network operator's incentive to invest in new facilities that support advanced telecommunications services.

18. TIA recognizes that the issues are quite complex. TIA has long been, and continues to be, a proponent of the Telecommunications Act of 1996 and it's goal of facilities-based competition among telecommunications service providers. TIA continues to support implementation of the 1996 Act's provisions to enable competitive service providers to access the local loop. Nonetheless, as substantial and risky new investment in advanced telecommunications facilities is required, it is less clear whether *all* of the regulations applicable to the traditional voice-over-copper telephone network should apply to investment in new last mile broadband facilities.

19. TIA therefore supports the Commission commencing a broad-ranging proceeding to review and potentially eliminate or modify all regulations that discourage any class of provider from making new risky and expensive investments in broadband facilities.[17] Many of the Commission's regulations (*i.e.* regarding unbundling, resale, pricing), as well as the Telecommunications Act of 1996, were crafted in light of concerns over existing monopoly ILEC facilities used to provide local telephone service. The Commission should closely examine, consistent with the wording and spirit of Section 706, whether reasonable and timely deployment of advanced telecommunications capability will be frustrated and thwarted by application of these regulations to deployment of new broadband-capable facilities.

V. CONCLUSION

20. The deployment of advanced telecommunications capability to all Americans was an express goal of Congress in enacting Section 706 and the Telecommunications Act of 1996. Achieving it, however, ultimately depends upon whether substantial investment is made in the necessary new advanced facilities, another goal of the 1996 Act. Regulation, and the uncertainty surrounding it, appears to be a real impediment to such investment in at least one important national infrastructure, the "last mile" of the landline telecommunications network. Accordingly, TIA believes that the Commission must act promptly to promote the deployment of facilities that support advanced telecommunications capability. The Commission should take all appropriate action to remove regulatory obstacles to broadband deployment by all classes of service providers, including the timely opening of a broad ranging rulemaking. Moreover, the

[17] *See, e.g.,* Intel Comments at 14-15.

Commission can encourage investment in next-generation broadband technologies in new builds and total rehabs of last mile telecommunications infrastructure by immediately adopting TIA's existing proposal to exempt such qualifying investment from unbundling obligations.

Respectfully submitted,

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Attachment:
Letter to the Honorable George W. Bush, President, United States of America, from Matthew J. Flanigan, President, Telecommunications Industry Association (dated October 4, 2001)