

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
Inquiry Concerning the Deployment of) GN Docket No. 14-126
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, as Amended)
by the Broadband Data Improvement Act)
)

COMMENTS OF THE TELECOMMUNICATIONS INDUSTRY ASSOCIATION

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EXECUTIVE SUMMARY

For the *Tenth Report*, the Commission should not continue to discount the role mobile wireless plays in making broadband services more accessible to many Americans. Today, wireless mobile service accounts for a significant portion of the broadband marketplace. Wireless mobile broadband service is highly desired by a large number of consumers who seek the freedom of mobility, often without any sacrifice with respect to other features.

Fixed broadband service in the United States has also experienced advancements that meet modern Internet subscriber needs by enabling them to access the Internet with faster, more secure connections that easily facilitate consumer's growing high bandwidth needs. Fixed broadband subscription in the U.S. has continued to expand but it has happened at a slow rate as there are significantly fewer non-broadband households in the United States. These facts show that providers of fixed broadband, in addition to mobile wireless, are deploying and investing in broadband connections that meet modern user needs and thus, advanced telecommunications capability is being deployed in a reasonable and timely fashion.

The Commission's *Tenth Report* should not continue to focus exclusively on speed characteristics in defining broadband service. This approach has provided a narrow and incomplete view of the landscape for broadband deployment. Thus, the Commission must change its approach to one that is technology neutral and considers the nuances of the marketplace with respect to provision and adoption of services.

History and experience have shown that the bulk of the investment that leads to wider broadband penetration comes from the private sector. The most effective way for the Commission to achieve its goal and improve the broadband situation for all Americans is to adopt policies with a light, flexible regulatory approach.

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COMMENTS OF THE TELECOMMUNICATIONS INDUSTRY ASSOCIATION

The Telecommunications Industry Association (“TIA”)¹ hereby submits comments to the Federal Communications Commission (“Commission”) in the above-captioned proceeding.² TIA aims to promote and facilitate the adoption of information and communications technologies thereby improving the lives of all Americans. Therefore, TIA’s broadband goals generally align with the Commission’s by favoring increased deployment and adoption of advanced broadband capabilities. TIA member companies provide products and services that both enable and utilize advanced telecommunications capabilities.

¹ The Telecommunications Industry Association (TIA) represents the global information and communications technology (ICT) industry through standards development, advocacy, tradeshow, business opportunities, market intelligence and worldwide environmental regulatory analysis. Telecommunications Industry Association (TIA), supported by approximately 500 participating members, is a trade association representing the ICT manufacturer, vendor, and supplier interest. With roots dating back to 1924, TIA enhances the business environment for broadband, mobile wireless, information technology, networks, cable, satellite and unified communications. Members’ products and services empower communications in every industry and market, including healthcare, education, security, public safety, transportation, government, the military, the environment and entertainment.

² *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket No. 14-126, Notice of Inquiry, FCC 14-113 (rel. Aug. 5, 2014) (“NOI”).

TIA supports the goals of Section 706 of the Telecommunications Act of 1996 and the responsibility the statute allocated to the Commission to evaluate the reasonable and timely deployment of advanced telecommunications capability across the United States.³ Broadband Internet creates and facilitates a vast number of benefits for consumers and the American economy. Congress recognized that, as the nation’s expert agency on telecommunications, the Commission is particularly well-suited to conduct regular inquiries into the status of broadband deployment. TIA is pleased to assist the Commission by responding to its *NOI* to inform the findings in the *Tenth Broadband Progress Report* (“*Tenth Report*”).

I. THE COMMISSION’S *TENTH REPORT* MUST TAKE ACCOUNT OF THE GROWING IMPORTANCE OF MOBILE WIRELESS SERVICES.

Today, mobile wireless service accounts for a significant portion of the broadband marketplace. Mobile wireless service is highly desired by a large number of consumers who seek the freedom of mobility, often without any sacrifice with respect to other features. In the *NOI*, the Commission specifically notes that while it has “included an expanded discussion of mobile deployment” in previous reports, the Commission ultimately decided that mobile “should not affect the ultimate statutory deployment determination.”⁴ In the *Eighth Report*, the Commission cited concerns about latency, usage caps, and quality of available data as part of the decision not to consider mobile wireless deployment in its determination.⁵ In the *NOI*, the Commission inquires about whether these concerns are still valid reasons not to include mobile wireless in its assessment.⁶

³ 47 U.S.C. § 1302. Section 706 of the Telecommunications Act of 1996, Pub. L. No. 104-104, § 706(a),(b), 110 Stat. 56, 153, as amended by the Broadband Data Improvement Act, Pub. L. No. 110-385, 122 Stat. 4096 (2008)

⁴ *NOI* ¶ 34.

⁵ *See id.* n. 81,82 (referencing the discussion on why mobile wireless would not be included in the *Eighth Broadband Progress Report*)

⁶ *NOI* ¶ 34.

For the *Tenth Report*, the Commission should not continue to discount the role mobile wireless plays in making broadband services more accessible to many Americans. The Commission simply cannot develop an accurate report on the state of advanced telecommunications capability deployment without considering both fixed and mobile wireless service offerings. While TIA, as discussed in Section II below, has concerns about the Commission’s narrow benchmarking approach, TIA believes it is necessary for the Commission to consider all broadband platforms, including mobile wireless, in whatever approach it adopts.

Today’s mobile wireless offerings have functionality that enables consumers to access “high-quality voice, data . . . and video”⁷ similar to fixed broadband. The market for mobile wireless broadband services has experienced significant growth, and in recent years, the market seems to be on track to outpace fixed broadband as noted by the Commission in its *2013 Internet Access Report*.⁸ Wireless mobile broadband offers capabilities that are used by consumers in ways that are comparable to fixed broadband. The traditional components of U.S. wireless transport spending — voice and text messaging — are declining, while spending on wireless data is surging.⁹ Spending on wireless data rose 22 percent in 2013. TIA forecasts that in 2014, wireless subscribers will spend more on data than on voice. In 2013, U.S. mobile wireless consumers used an average of 1.2 GB of data per month.¹⁰ Additionally, in 2014, two-thirds of

⁷ Cf. § 706(d)(1) (defining the characteristics of an “advanced telecommunications capability”).

⁸ See Federal Communications Commission, Wireline Competition Bureau, *Internet Access Services: Status as of June 30, 2013* (June 2014) at 4 (stating that from June 2012 to June 2013, mobile services had subscriptions had increased 18 percent while fixed only increased 5 percent).

⁹ This data, as well as all other projections and statistics provided in this document which are not cited to otherwise, are derived from the TIA’s *2014-2017 ICT Market Review & Forecast (MR&F)*, a proprietary annual publication from TIA containing distilled data and analysis on information and communications technology industry trends and market forecasts through the end of 2017. This document is available for purchase at <http://www.tiaonline.org/resources/market-forecast/>.

¹⁰ See Chetan Sharma Consulting, *2013 - A Year in Mobile*, ALWAYS ON REAL-TIME ACCESS, (Dec. 23, 2013), <http://www.chetansharma.com/blog/2013/12/23/2013-the-year-in-mobile/>.

adults reported using their mobile phones to access the Internet with one-third of these individuals saying a mobile phone was their primary means of Internet access.¹¹

In response to this surge in demand for data, and to facilitate faster data transmission, mobile wireless carriers have been rapidly investing in and upgrading their networks to offer faster, 4G that are, in many ways, on par with fixed connections. Carriers are now providing unlimited voice and text as well as offering tiered data packages where subscribers pay more for larger data allocations. LTE networks that can accommodate more data were launched in 2012 and significantly expanded in 2013. The mobile wireless service offered by the four major U.S. providers is more advanced with faster speeds that cover larger parts of the country.¹² Furthermore, all these providers also offer service with speeds that match the current 4 Mbps download benchmark, and a few meet the 10 Mbps/1Mbps proposed in the *NOI*, that the Commission uses to assess fixed broadband.¹³

To accommodate the growth in data traffic, carriers are investing in and upgrading wireless infrastructure by adding cell sites, installing new stations, and enhancing backhaul capacity. Spending on wireless infrastructure equipment rose 11.7 percent in 2013 following an

¹¹ See *The Web at 25 in the U.S.*, PEW RESEARCH CTR., 13 (Feb. 27, 2014), “The Web at 25”, http://www.pewinternet.org/files/2014/02/PIP_25th-anniversary-of-the-Web_0227141.pdf.

¹² See Verizon Coverage, <http://www.verizonwireless.com/wcms/consumer/4g-lte.html> (last visited Aug. 27, 2014) (noting that their 4G network is 100% LTE and covers most Americans); AT&T Wireless Connections & Coverage, <https://www.wireless.att.com/businesscenter/plans/network-coverage/wireless-connections-coverage.jsp> (last visited Aug. 27, 2014) (discussing their broad, expanding 4G network and efforts to further build out LTE coverage); See Sprint America’s Newest Network is here, <http://www.sprint.com/netdotcom/> (last visited Aug. 27, 2014) (highlighting that Sprint now offers 4G LTE in more than 470 markets and also introduced a more advanced LTE capability called, Sprint Spark); T-Mobile Great Network News for Our Customers, http://multimediacapsule.thomsonone.com/t-mobileusa/blog_great-network-news-for-our-customers (last visited Aug. 27, 2014) (noting that T-Mobile had deployed nationwide LTE coverage by Sept. 2013 and plans to upgrade their 2G network to provide LTE in many rural areas).

¹³ See, e.g., Verizon 4G LTE Speeds vs. Your Home Network, <http://www.verizonwireless.com/insiders-guide/network-and-plans/4g-lte-speeds-compared-to-home-network/> (last visited Aug. 21, 2014) (“Verizon 4G LTE wireless broadband is . . . able to download speeds between 5 and 12 Mbps and upload speeds between 2 and 5Mbps.”); Sprint Your Plan Options, http://shop.sprint.com/modals/4g_lte_plan_details.html (noting that with their 4G LTE customers can get 2-3 Mbps upload and 6-8 Mbps download);

18.9 percent increase in 2012, reflecting the stepped-up LTE rollouts of the past two years. During the past two years, overall wireless equipment and infrastructure spending totaled \$63.7 billion. In addition, wireless carriers increased spending by 9.8 percent on services in support of wireless infrastructure.

While the faster speeds have been critical to the rapid consumer adoption of mobile wireless broadband, there are other functionalities that these connections provide that have facilitated the extensive rate of adoption of growth. The most important characteristic that influences consumer preference is mobility—anytime, anywhere access to Internet. Wireless mobile broadband delivers service to subscribers wherever they are within the coverage area, a benefit beyond what is offered by the fixed broadband platforms on which the Commission’s Section 706 broadband deployment reports have focused. Also, significant innovation in the mobile device and equipment market has exponentially increased the benefit and convenience derived from mobility and facilitated the rapid growth in mobile wireless broadband data use.

Today’s mobile devices have significantly faster processing capabilities that, in conjunction with the faster mobile broadband Internet access speeds, have made mobile connections a much more convenient means of communication. Manufacturers now offer smartphones with an array of features like advanced cameras that enable users to take high quality photo and video; more efficient battery/power options; high resolution screens; and touch screen capabilities. These hardware features have transformed mobile phones from a simple calling device to something that many consumers use as a mobile alternative, or a complete substitute, for devices that traditionally offered these functionalities separately. These small, powerful devices enabled with mobile broadband offer consumers the ability to conduct a range

of personal and professional tasks like running word processing applications, browsing social media sites, and banking that involve content creation and consumption.

With mobile broadband, Americans have the ability to substitute their fixed connections with on the go access to desktop applications as well as highly valued features that are only specific to mobile connections like turn-by-turn navigation. The growing value of mobile wireless broadband to Americans is indicated by the fact that smartphone sales doubled between 2010 and 2012 and then rose an additional 21 percent in 2013. TIA expects that 88 percent of handset unit sales will be smartphones by 2017 as full exploitation of mobile wireless broadband capabilities continue to grow.

The above facts provide strong evidence of the magnitude of mobile wireless' role in the broadband marketplace and value to many Americans. Therefore, in the *Tenth Report*, the Commission must consider the state of mobile wireless broadband deployment in order to make an accurate assessment that shows the full picture.

II. THE *TENTH REPORT* SHOULD FIND THAT BROADBAND IS CURRENTLY BEING DEPLOYED IN A REASONABLE AND TIMELY FASHION.

In addition to the continued growth in mobile broadband, fixed broadband service in the United States has experienced advancements and investments that meet modern Internet subscriber needs by enabling them to access the Internet with faster, more secure connections. Due to these innovations, the reach and adoption of fixed broadband has grown significantly. Thus, TIA believes the *Tenth Report* should find that broadband is being deployed in a reasonable and timely fashion, regardless of whether the Commission maintains its prior approach or takes a more inclusive view of broadband service as discussed in *Section III*.

Government funding through efforts like the *American Recovery and Reinvestment Act* (ARRA) has facilitated increased fixed deployment in rural areas. As a result of ARRA funding, infrastructure investment experienced about a 34 percent increase, which has fallen slightly as these build-out projects are nearing completion. Improved broadband availability funded by ARRA boosted broadband subscriptions a total 21 percent in the past four years. Further, TIA forecasts that as fixed broadband connections reach more rural areas, broadband subscriptions will increase as will the U.S.'s broadband penetration rate.

In addition to investments to get access to fixed broadband to more American homes, fixed broadband providers overall have invested in upgrading their infrastructure to provide connections that can easily facilitate consumer's growing high bandwidth needs. Access infrastructure spending increased by 7 percent in 2013 due to growth in deployment of fiber-to-the-home and advanced cable modem equipment. The backbone infrastructure market has begun expansion to accommodate the need for more bandwidth to meet the growth in data traffic.

In the cable market, providers have rolled out the DOCSIS 3.0 specification with channel bonding that has increased maximum possible speeds and DOCSIS 3.1 is expected to be fully adopted in 2014, which would enable speeds of up to 10 Gbps downstream and 1 Gbps upstream without the need to run fiber to the home (FTTH). Telephone providers are now investing in bringing fiber closer to the premises and using DSL as the last mile connection, which enables faster connection speeds because data transmissions spend less time traveling over the copper lines. Some telephone providers are now offering FTTH service and have begun to transition some DSL subscribers to this faster, high capacity service.

Satellite internet providers also continue to provide a valuable fixed broadband service option that has experienced significant investments. In previous broadband reports, the

Commission made the flawed decision to exclude satellite internet in its determinations about the status of advanced telecommunications capability deployment.¹⁴ The Commission's *Tenth Report* should consider satellite internet offerings in its determination because satellite Internet has served as a viable broadband option for many rural consumers. Significant investment has resulted in new satellites that provide faster speeds and more capacity to meet consumer demand making the service much more attractive to many Americans. In 2013, the number of satellite Internet subscribers increased 25 percent and this number is expected to continue to grow.

All of these facts indicate that providers of fixed broadband, in addition to mobile wireless, are deploying and investing in broadband connections that meet modern user needs. Therefore, the Commission should find that advanced telecommunications capability is being deployed in a reasonable and timely manner.

III. THE COMMISSION SHOULD ADOPT A MORE NUANCED APPROACH TO ASSESSING BROADBAND DEPLOYMENT THAT ACCOUNTS FOR DIFFERING TECHNOLOGIES, NEEDS, AND USAGE.

In the *NOI*, the Commission seeks comment on whether it should use a multi-factored approach that considers not only speed but “other core characteristics that affect what consumers can with their broadband service.”¹⁵ TIA applauds the Commission for heeding concerns highlighted in previous Section 706 comments by inquiring in the *NOI* about whether characteristics besides speed should be factored into the assessment of whether advanced telecommunications capability is being deployed in a reasonable and timely fashion. As stated in the *NOI*, “[s]ince the Commission began issuing the broadband progress reports, it has used a

¹⁴ *NOI* n. 72.

¹⁵ See *NOI* ¶ 5.

speed benchmark.”¹⁶ The Commission should not continue to focus exclusively on speed characteristics in defining broadband service. This approach has provided a narrow and incomplete view of the landscape for broadband deployment in the United States. Thus, the Commission must change its approach to one that is technology neutral and considers the nuances of the broadband market with respect to provision and adoption of services.

The broadband Internet marketplace is a dynamic and complex ecosystem that is composed of different types of services that serve various consumer needs that are constantly evolving. There are a number of broadband Internet characteristics that contribute to the consumer’s experience and use. Fiber connections are the leading secondary broadband technology and are very appealing because of its huge capacity and fast speeds. Alternately, satellite broadband Internet provides access to the same advanced services and is a ideally suited for consumers living in rural areas that are not reached by cable or DSL. Satellite broadband plays an important role in delivering broadband to all Americans, and there is no reason to exclude it from the report as it has in the past. Furthermore, as the Commission has recognized previously, users consider many characteristics when evaluating the purchase of broadband services, including download/upload speed, mobility, and the “always on” nature of broadband connections.¹⁷ Additionally, factors like latency, reliability, and security may factor into a user’s decision. For example, as consumers start to engage with the “Internet of things” including connected home or vehicle services they will want more reliable fixed as well as mobile connections. A particular user’s needs may vary based on the circumstances and needs, e.g. the desire to have email access means a user may be willing to trade on speed and even security.

¹⁶ *NOI* ¶ 5.

¹⁷ See Federal Communications Commission, *CONNECTING AMERICA: THE NATIONAL BROADBAND PLAN*, released Mar. 16, 2010, at 40-41 available at <http://www.broadband.gov/plan/>.

TIA believes that the Commission’s *Tenth Report* must adopt a more nuanced assessment standard that considers the varied factors and features that go into the consumer’s decision regarding the type of broadband service they will use. The *Tenth Report* must evaluate broadband as consumers experience it—relative to function, location, and needs. A key first step towards that would be adoption of a multi-tiered approach to assessing speed, rather than simply raising the speed benchmark¹⁸, particularly if the Commission continues to make this the main benchmark.¹⁹ This will allow the Commission to accord proper recognition to Internet service through the range of broadband technology platforms. However, as mentioned above, TIA strongly believes that speed must not be the sole consideration in the *Tenth Report*’s findings.

The Commission’s analysis must take a holistic view to properly judge the nation’s “advanced telecommunications capability” coverage and availability. With this approach, the Commission will be able to see that, while investment and enhanced deployment are always positive things, at present, advanced telecommunications capability is being deployed in a timely and reasonable manner.

IV. TO PROMOTE DEPLOYMENT, THE COMMISSION SHOULD PURSUE POLICIES THAT MAXIMIZE PRIVATE INVESTMENT INCENTIVES WHILE LEVERAGING PUBLIC RESOURCES

In the *NOI*, the Commission seeks comment on actions it can take to help accelerate broadband deployment and availability.²⁰ TIA is a strong advocate for increased broadband deployment and adoption. History and experience has shown that the bulk of the investment that

¹⁸ In the *NOI*, the Commission seeks comment on whether the Commission should adopt a higher download benchmark speed of 10Mbps. *NOI* ¶ 14.

¹⁹ *Cf.* *NOI* ¶ 22 (discussing the possibility of taking a multiple speed benchmark approach).

²⁰ *See NOI* ¶ 49-50.

leads to wider broadband penetration comes from the private sector. Therefore, the most effective way for the Commission to achieve its goal and improve the broadband situation for all Americans is to adopt policies with a light, flexible regulatory approach.

Private sector companies will be incentivized to invest further in broadband when there is certainty about the future of the industry, which is facilitated by policies that enable, rather than restrict, providers' options to economize their business. Although broadband deployment continues to be on the rise, the Commission must continue efforts to remove barriers to, and provide incentives for, facilities-based entry into the broadband market. It can pursue these goals by adopting policies that encourage investment in intelligent network infrastructure, foster competition in the broadband industry, promote consumer access to information and connectivity of devices, and allow the market, instead of the government, to choose winners and losers.

- ***Apply the Open Internet Rules in a way that Affords Providers Flexibility to Manage Their Networks.*** The Commission must pay attention to the cycle of private investment and consumer demand which influence the Internet's development. Private sector investment and innovation in broadband depends on certainty in the marketplace and the ability to recoup investments made on broadband infrastructure. The Commission must adopt a regulatory regime for broadband Internet access that is technically feasible and legally stable that will prevent the chilling of investment, which would have an effect, counter to the Commission's goal, of diminished broadband deployment.
- ***Facilitate the Removal of State Barriers to Make City-Specific Assessments Concerning Whether Municipal Broadband Provision is Needed.*** In certain

circumstances, government entities may identify public interest needs for broadband that are best served by government only or a partnership with the private sector. Nationwide, municipalities are considering ways to promote broadband networks in their communities with these goals in mind. Because circumstances vary across municipalities, there is no one-size-fits-all prescription. Accordingly, no statewide statutory barriers to municipal participation, whether explicit or de facto, should be erected. The Commission can facilitate this by using its Section 706 statutory authority to preempt a state to the extent that it finds that such regulatory barriers exist.

- ***Facilitate the transition from legacy transmission platforms to Internet Protocol (IP) networks.*** Data from TIA's *MR&F* publication²¹ confirms that the transition to IP networks is happening at a rapid pace. This underscores the need for the Commission to enable this transition by analyzing it and trying to ensure it occurs in an organized manner. Facilitating this transition is one of the most significant steps the Commission can take to affirmatively help promote broadband deployment and infrastructure investment that will serve the public interest. The Commission should not adopt a policy that requires the indefinite retention of dual IP and PSTN networks. As the Commission considers how best to structure the transition to IP platforms, its review should be guided by these goals: (1) encouraging investments in intelligent network infrastructure; (2) fostering competition in the IP industry; (3) allowing the market, rather than the government, to reflect consumer choice; and (4) accelerating broadband infrastructure investment.

²¹ *MR&F*, *supra* note 7.

- ***Modernize E-rate program to ensure schools and libraries can access the Internet at modern speeds.*** The Commission’s E-rate program is the major tool for assisting schools and libraries get connected to the Internet at speeds that allow state-of-the-art learning through the use of advanced applications and content. The Commission should provide these institutions flexibility in the E-rate program to select the solutions they need, consistent with a general principle of technological neutrality. At the same time, the Commission should provide incentives for these institutions to proceed efficiently in designing and implementing broadband connections for students and library users, while simplifying and increasing the transparency of the E-rate application process.

V. CONCLUSION

For the reasons set forth above, TIA urges the Commission to include mobile broadband service and adopt an approach that properly recognizes the value of the differing broadband technologies in its analysis of broadband deployment and availability for purposes of the *Tenth Report*. Having done so, the Commission should find that “advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion.” The Commission should also continue to facilitate this timely deployment by adopting light-touch regulatory policies while enabling local efforts where necessary.

Respectfully submitted,

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