Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act	)	GN Docket No. 09-47
	)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
	)	
Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion	)	GN Docket No. 09-137

COMMENTS – NBP PUBLIC NOTICE #26
OF
THE TELECOMMUNICATIONS INDUSTRY ASSOCIATION

INTRODUCTION

The Telecommunications Industry Association (TIA) hereby submits comments to the Federal Communications Commission (Commission) in the above-captioned proceeding.[1] TIA lauds the Commission for its ongoing evaluation of methods to provide much-needed spectrum for wireless broadband services, and welcomes the opportunity to provide insight into factors the Commission should consider when evaluating benefits of spectrum being used for over-the-air television broadcasting or for wireless broadband.

[1] Data Sought on Uses of Spectrum (NBP Public Notice #26), Public Notice, DA 09-2518 (rel. Dec. 2, 2009) (Public Notice 26).

The Telecommunications Industry Association (TIA) represents the global information and communications technology (ICT) industry through standards development, advocacy, tradeshows, business opportunities, market intelligence and world-wide environmental regulatory analysis. Its 600 member companies manufacture or supply the products and services used in the provision of broadband and broadband-enabled applications. For over eighty years, TIA has enhanced 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.

SUMMARY

The expansion of next-generation wireless broadband is vital to our nation's economic, healthcare, education, security, public safety, transportation, defense, and environmental priorities. For this reason, the Commission's examination of existing spectrum usage is crucial, given the recognized wireless broadband spectrum shortfall our nation faces as demand for terrestrial wireless broadband continues to dramatically increase.[2] TIA echoes Chairman Genachowski's statement that, in order for America to lead the world in innovation, the Commission must have the strength to make difficult choices that serve

[2] Julius Genachowski, Chairman, Federal Communications Commission, Remarks at CTIA Wireless IT & Entertainment: America's Mobile Broadband Future, 5 (Oct. 7, 2009) (Chairman Genachowski CTIA Remarks) (stating that, "We are fast entering a world where mass-market mobile devices consume thousands of megabytes each month. So we must ask: what happens when every mobile user has an iPhone, a Palm Pre, a Blackberry Tour or whatever the next device is? What happens when we quadruple the number of subscribers with mobile broadband on their laptops or netbooks? The short answer: we will need a lot more spectrum.").

the public interest through increased wireless broadband service, device, and application availability.[3]

With effective spectrum management policies that make sufficient spectrum available for wireless broadband, the skyrocketing demand for wireless broadband data services, applications, and devices will provide a boon to our nation's economy. Similarly, wireless network infrastructure investment could rebound with the availability of new services and greater opportunities for cutting-edge network deployment. Thus, the time is right for a thorough examination of how best to provide scarce spectrum resources for wireless broadband services. TIA urges the Commission to create a new, innovative, and technology-neutral spectrum band plan, and commends its focus on evaluating the relative public benefits of spectrum allocations for over-the-air broadcast television versus those of wireless broadband.

The Commission must examine the current uses of spectrum and inventory each in order to assess the potential for spectrum repurposing. Concurrently, it must examine technologies and methodologies that can maximize existing spectrum used for other

[3] Julius Genachowski, Chairman, Federal Communications Commission, "Innovation in a Broadband World," Remarks at the Innovation Economy Conference (Dec. 1, 2009), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-294942A1.pdf (last visited Dec. 18, 2009) ("Much of what we see suggests that mobile broadband can be the preeminent platform for innovation in the next decade. To be a global leader in innovation 10 years from now, we need to lead the world in wireless broadband…. In order to support the full flowering of innovation, and to keep the U.S. globally competitive, we will need to find ways to free up new spectrum for mobile broadband. This will require examining old allocation decisions – often decades old – and evaluating them against current technologies and consumer demand. This won't be simple. There are no easy pickings on the spectrum chart. It will be a test for our commitment to long-term innovation policy for the U.S. – but we have to meet the challenge."); Chairman Genachowski CTIA Remarks; Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B) to Ensure Timely Siting Review and to Preempt Under Section 253 State and Local Ordinances that Classify All Wireless Siting Proposals as Requiring a Variance, *Declaratory Ruling*, FCC 09-99 (rel. Nov. 18, 2009) (Statement of Chairman Julius Genachowski) ("We must ensure that America leads the world in mobile.").

purposes that serve the public interest and simultaneously increase spectrum availability for commercial services.

By swiftly and decisively identifying opportunities to bring next-generation wireless broadband to all Americans through increased wireless broadband spectrum allocation, the Commission will enhance our economy, meet our nation's societal goals, and continue to advance the public interest.

DISCUSSION

I. INCREASED WIRELESS BROAD SPECTRUM IS ESSENTIAL TO RENEWED ECONOMIC GROWTH.

In Public Notice 26, the Commission seeks input on factors the Commission should consider when evaluating benefits of spectrum used for over-the-air television broadcasting and spectrum used for wireless broadband.[4] Further, the Commission wishes to determine the impact to the U.S. economy if insufficient additional spectrum were made available for wireless broadband deployment.[5]

As a threshold matter, TIA believes that wireless broadband services have significant public benefits relative to over-the-air television broadcasting, including telehealth, distance learning, enablement of the smart grid, intelligent transportation, improved public safety, and teleworking. Over-the-air television broadcasting is of benefit to many. However, TIA asserts that these benefits are overshadowed by the significant public benefits of increasing spectrum for wireless broadband, especially considering

[4] *See* Public Notice 26 at 1.

[5] *See id.*

methods available to make broadcaster's use of spectrum more efficient. These benefits should be crucial factors weighed when considering allocating additional spectrum for wireless broadband.

The consequences of not making sufficient spectrum available for wireless broadband could be severe. Data indicates that the U.S. could experience growth in many areas of wireless service provision, applications, and devices in the coming years. Conversely, wireless telecommunications equipment spending could slow in the near future. These trends, however, can be significantly impacted by the Commission's decisions on wireless broadband spectrum management.

Increased broadband spectrum will fuel economic growth in the wireless industry. Unsurprisingly, services providing wireless data over broadband could be the primary revenue driver between 2008 and 2012, accounting for 92 percent of the overall increase in wireless services revenue.[6] Data-related revenue more than doubled during the past two years, rising to nearly $33 billion in 2008 from only $12.3 billion in 2006.[7] Wireless broadband data revenue is projected to expand at a 24.6 percent compound annual rate during the 2009 – 2012 period, compared with only 0.9 percent compound annual growth for wireless voice revenue. [8]

This potentially remarkable growth in data revenue could drive demand for new wireless broadband applications and sales of broadband equipment and devices. Sales of

[6] *See* 2009 TIA Market Review & Forecast ("TIA Market Review") at 4-1.

[7] *See id.* at 4-5 – 4-6.

[8] *See id.*

smartphones in 2012 are forecast to increase by 23.5 percent over sales in 2008.[9] Additionally, in 2012, annual revenues in the United States from wireless devices will have increased by $2.2 billion, a 2.5 percent increase compared to 2007.[10]

Conversely, investment in advanced wireless networks is forecast to decline. Wireless telecommunications equipment spending may total an estimated $15.4 billion in 2012, down from $16.5 billion in 2008, a 1.7 percent compound annual decline.

These investment and economic forecasts are directly linked to the level of spectrum available for wireless broadband services in the near-term. Terrestrial wireless networks are speeding toward deployment readiness, but their rapid availability to consumers will be deeply impacted by a lack of spectrum availability. The International Telecommunications Union (ITU) has estimated that the United States will need approximately 840 MHz of spectrum to satisfy demand for broadband in 2010, and approximately 1,720 MHz by 2020.[11] Yet the United States only has a fraction of that spectrum currently available for such use.[12]

Wider bandwidth allocations – in at least 20 to 30 MHz blocks – are needed for future data-intensive wireless broadband services and will offer performance advantages that

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[9] *See* 2009 TIA Market Review & Forecast ("TIA Market Review") at 4-21.

[10] *See id*. at 4-23.

[11] *See* International Telecommunication Union, *Report ITU-R M.2078: Estimated Spectrum Bandwidth Requirements for the Future Development of IMT-2000 and IMT-Advanced*, at 25, Table 25 (2006).

[12] For example, only approximately 410 MHz of spectrum is currently allocated for commercial wireless use. *See* Letter from Christopher Guttman-McCabe, Vice President, Regulatory Affairs CTIA – The Wireless Association® to Marlene H. Dortch, Secretary, Federal Communications Commission at 9 (May 12, 2009).

will allow resources to be pooled among users. This, in turn, will enable service providers to support more bandwidth-intensive services for more users, driving demand and revenue. Yet without these larger allocations in the coming years, provision of the data services consumers demand cannot be realized. As a result, consumers will not have access to the broadband services and applications that will drive smartphone and other broadband equipment sales. Thus, the failure to provide wider bandwidth spectrum allocations for wireless broadband services will have a "domino effect" that will severely chill revenues forecast to drive the wireless industry's revenue growth. Conversely, increased spectrum in wider bandwidths will likely reverse the expected decline of advanced wireless network investment. With increased wireless broadband spectrum available, advanced wireless networks will be deployed to meet the rapidly increasing consumer demand for advanced services, devices, and applications.

II. TO MAKE SUFFICIENT SPECTRUM AVAILABLE FOR WIRELESS BROADBAND, THE COMMISSION AND FEDERAL AGENCIES SHOULD EXAMINE ALL SPECTRUM USES AND TECHNOLOGIES TO MAXIMIZE SCARCE SPECTRUM RESOURCES.

To mitigate the economic threats that continued lack of sufficient wireless broadband spectrum allocations presents to the U.S. economy, consumers, and the health and welfare of all Americans, the Commission should create a spectrum band plan that allocates new spectrum in contiguous and larger blocks to support deployment of next-generation wireless broadband networks.

To start this process, TIA urges the Commission to conduct a spectrum inventory to identify non-Federal spectrum bands that can support next-generation terrestrial broadband networks. The Commission should also identify advanced technologies and

spectrum management methodologies that can maximize spectrum that continues to serve the public interest and also makes more spectrum available for wireless broadband. Further, TIA urges that the Commission consider a market-based initiative to encourage broadcasters to repurpose spectrum to wireless broadband. Market-based incentives can decrease delays caused by extended transition periods, which will expedite making spectrum available for broadband services.

Such an approach will recognize various public benefits of a host of spectrum bands and uses, the tremendous opportunity increased wireless broadband spectrum offers Americans, and the dangers associated with maintaining insufficient levels of wireless broadband spectrum.

CONCLUSION

For the reasons detailed above, TIA urges the Commission to promptly repurpose broadcasting spectrum for wireless broadband services consistent with the recommendations set out above.

Respectfully submitted,

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