

STATEMENT OF

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Federal Communications Commission

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“Next Steps for Spectrum Policy”
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I. Introduction

Chairman Walden, Ranking Member Eshoo, and Members of the Subcommittee, we thank you for the opportunity to share our thoughts on the *Next Steps for Spectrum Policy*.

Wireless is an engine of economic growth and progress in the United States. It enables the transfer of information and ideas anywhere, at any time. It has stimulated significant technological innovation, from networks, to devices, to software and apps. It creates new jobs and sustains entire industries, not just in telecommunications or IT, but increasingly in other areas of the economy like health care, transportation, and energy.

Spectrum, as the Members of the Subcommittee know, is an essential input to wireless connectivity. The United States is the world leader in wireless broadband thanks in part to the bipartisan pursuit of a comprehensive spectrum agenda.

We jointly represent the many outstanding professionals who assist the Commission in its development of spectrum policy. Our testimony will focus on efforts to help meet the wireless needs of consumers and industry, and ensure that the United States continues to lead the world in wireless.

II. Meeting the Nation’s Wireless Broadband Demand

Historically, the process of identifying spectrum, developing rules, and conducting an auction has taken many years – typically a decade or more. Prior to late last year, the last major spectrum auction occurred in 2008 when the Commission completed the 700 MHz auction, following the AWS-1 auction in 2006. These auctions made a substantial amount of spectrum newly available for wireless broadband, and these bands are integral to today’s wireless networks.

Although these new bands provided a launch pad for fourth-generation wireless networks, it soon became clear that more action was required. The mobile economy was undergoing seismic change. The proliferation of new smartphone, tablet, and increasingly, machine-to-machine platforms was causing demand for wireless broadband to accelerate rapidly toward an inflection point. The need to provide more spectrum – more bandwidth – to meet the broadband demands of consumers was evident. Yet, the Commission had no plans to bring new spectrum to market. We had to act quickly.

In response to a statutory directive from Congress, the Commission developed the National Broadband Plan, released five years ago. Among other things, the Plan set out to accelerate the Commission's spectrum efforts. It established two spectrum goals: to make 300 megahertz available for wireless broadband by 2015 and 500 megahertz by 2020. It also set out a series of recommendations to help meet these goals.

Since the Plan was released, the Commission:

- Made 30 megahertz in the long-fallow Wireless Communications Service useable for wireless broadband;
- Created new service rules and auctioned rights to 10 megahertz of spectrum in the H Block;
- Granted new flexible use terrestrial rights to 40 megahertz of spectrum in AWS-4, which was previously usable only for the Mobile Satellite Service; and
- Worked collaboratively with Congress and numerous federal agencies, with input and assistance from the wireless industry, to make 65 megahertz available for broadband in AWS-3, 40 megahertz of which was made available on a shared basis with incumbent federal users.

The Commission has also recognized the critical role unlicensed spectrum plays in the wireless ecosystem and the economic benefits unlicensed spectrum generates. We believe that unlicensed spectrum is an essential component of an effective spectrum strategy. We have continued to support development of advanced unlicensed sharing techniques in the white spaces in the TV bands, including exploring additional opportunities for unlicensed use of the new 600 MHz band guard bands following the Incentive Auction. Last year the Commission also took action to greatly improve the utility of 100 megahertz of unlicensed spectrum in the 5 GHz band.

The Commission has used a variety of spectrum tools authorized by Congress to achieve these spectrum gains. Specifically, it has used traditional auctions, relied on spectrum sharing, worked with industry to develop technical solutions to complicated coexistence problems, and removed restrictions to promote flexible use policies.

When it comes to making additional spectrum available for commercial use, the experience of the past five years demonstrates we must rely on an all-of-the-above approach.

The Commission's spectrum efforts have benefited greatly from the bipartisan support and encouragement of Congress. The Middle Class Tax Relief and Job Creation Act of 2012 was a watershed: it laid the groundwork for the successful AWS-3 auction, triggered ongoing work to make available additional spectrum in the 5 GHz band, and gave the Commission authority to design and run the world's first Incentive Auction.

Bipartisan leadership from members of Congress and their staff was instrumental in making the 1755-1780 MHz portion of the AWS-3 band newly available for commercial use, while protecting important federal missions. The resulting auction (Auction 97) generated an unprecedented \$41.3 billion in net bids, reflecting spectrum's enormous value to the economy on an ongoing basis. As a bonus, this revenue will support important Congressional priorities, including funding the Nation's first nationwide broadband public safety network, supporting critical public safety and 911 research, and contributing more than \$20 billion towards deficit reduction.

While the revenues from auctions may generate the headlines, the Commission is also focused on the important responsibility of issuing and administering more than two million spectrum licenses, certifying devices, and otherwise fulfilling our obligations under the Communications Act to manage the spectrum.

III. Keeping the Pipeline Flowing

According to one estimate, the volume of mobile data traffic in 2019 will be equivalent to 210 times the mobile data traffic in 2009. We are hard at work on ongoing initiatives and are looking to the future with a focus on maintaining a spectrum policy to meet this continuing growth in wireless broadband demand.

In the near term, we are establishing new rules for the 3.5 GHz band, moving forward with the Incentive Auction, and working toward making more spectrum available in the 5 GHz band. We have started a proceeding to open new "spectrum frontiers" – including the millimeter wave bands, which some are touting for "5G" – that advances in technology are making viable for mobile broadband use. We are examining new ways to make the rules for existing spectrum bands more flexible so users can adapt to changes in technology and market needs. And we are working with our federal partners to identify additional spectrum that might be reallocated or made available on a shared basis.

Incentive Auction

We plan to begin accepting applications for the Incentive Auction this fall and are on track to conduct the auction in the first quarter of 2016. Exercising the authority Congress provided in the Middle Class Tax Relief and Job Creation Act, the Commission has adopted service rules for the 600 MHz band and we have teams working aggressively on the auction procedures and final recommendations for all of the rules and procedures necessary to implement the world's first Incentive Auction.

The Incentive Auction is an opportunity to use a market-based mechanism to make highly-valued 600 MHz spectrum newly available for wireless broadband. The 600 MHz band is uniquely situated on the spectrum chart to meet both capacity and coverage needs. The Incentive Auction Task Force has held extensive discussions with broadcasters across the country, and we believe there is strong broadcaster interest in participating in the auction.

Moving forward with the Incentive Auction next year is essential to meet the continuing need for spectrum, especially sub-one gigahertz spectrum. The recently-concluded AWS-3 auction confirmed the strong market demand for more spectrum. We believe that carriers have ample interest and financial capability to participate vigorously in the Incentive Auction.

3.5 GHz

We are in the final stages of crafting new rules for the 3.5 GHz band. This proceeding is an opportunity to enable a contiguous 150-megahertz band useable for wireless broadband. Through new innovative sharing technologies and policies, the Commission can make this spectrum available for a variety of commercial use cases while continuing to protect important federal missions and other incumbent users. By supporting ultra-dense small cell networks, this band could provide an important boost to our Nation's wireless capacity needs. It could also support broadband deployment in important industrial applications like manufacturing and health care.

5 GHz

We continue to work with our federal counterparts and industry to explore and develop sharing techniques to enable coexistence between unlicensed and other uses in an additional 195 megahertz in the 5 GHz band. We appreciate Congress's continued interest in this band, and we will continue to press towards finding sharing solutions to make available this additional spectrum for "gigabit Wi-Fi" and other unlicensed uses.

Spectrum Frontiers

In the fall of 2014, the Commission unanimously initiated a proceeding to explore the feasibility of using bands above 24 GHz for mobile wireless broadband and other wireless applications. The Commission is taking a proactive approach to examine the future evolution of wireless broadband technologies and determine what steps to take to create a flexible regulatory environment in which these technologies can flourish.

III. Conclusion

The Nation's leadership in wireless, and our ability to meet the wireless needs of consumers, depends in large part on spectrum resources. We will continue to pursue effective spectrum policies, leveraging the tools Congress has provided. We will also look to this Subcommittee for assistance and guidance in developing new, innovative approaches to spectrum management, and stand ready to work with Congress and our federal partners towards these important goals.