

**Prepared Remarks of
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Good morning, everyone. Thank you to the organizer of this event, Sylvia Syracuse, for inviting me to speak, and to all of you for coming out to discuss such an interesting set of topics.

I hope people enjoyed the three-day weekend. After the Downton Abbey finale, I know many of us needed that recovery day.

I appreciate the opportunity to share what the FCC has been and will be doing to make mobile broadband available to all Americans and to facilitate a robust mobile wireless marketplace.

Mobile is an enormous driver of innovation and economic growth – it comes as no surprise to anyone here that our use of, and the need for, mobile data is growing by leaps and bounds. The National Broadband Plan in 2010 identified the spectrum gap driven by rapid growth of mobile broadband use, and that growth has only continued. Cisco's recently updated Visual Networking Index Mobile Data Traffic Forecast – a very rich and interesting report – predicts that U.S. mobile data traffic will increase nine-fold within the next four years.

When we released the National Broadband Plan, we anticipated that rapid growth in demand for mobile broadband would similarly increase demand for spectrum. We also anticipated that it would be important to make unlicensed as well as licensed spectrum available.

These slides from the Cisco Forecast highlight the importance of having a strategy that frees up spectrum for both licensed and unlicensed uses.

This slide [slide #1] shows the enormous projected growth in mobile network data traffic through 2017. Now, you may look at this slide and recognize that Cisco has revised its projections downward from last year's Forecast, and I'll get to that in a minute. The basic trend remains – and that's the trend the Commission staff, looking at projections from Cisco and others, identified in 2010. We projected that mobile data traffic would grow almost 1200% from 2009 to 2012, and our estimate was slightly conservative; mobile data traffic grew approximately 1275% in that timeframe.

But back to Cisco's Forecast. My understanding is that the unexpected significant increase in offloading to Wi-Fi networks caused Cisco to reduce its predictions of the growth in macrocell traffic. Providers use macrocells outdoors, and when people are moving, for example in cars. But inside – at home, or in the local Starbucks – the mobile broadband device often switches to Wi-Fi. We've all experienced this in person – this slide [slide#2] shows the effect.

I draw two conclusions. First, as our early work on the spectrum crunch predicted, providers are doing a lot to use licensed spectrum efficiently, including looking to unlicensed options. Second, driven by the proliferation of mobile broadband devices, demand for licensed and unlicensed spectrum is still increasing rapidly.

What's happening? We now have more mobile wireless connections – over 315 million – than people living in the United States [slide #3]. That doesn't mean everyone has a mobile device; but I'm willing to bet that a lot of the people in this room have two smartphones, plus a tablet, and maybe a laptop with a dongle as well.

And the number of smartphones is increasing [slide #4].

A majority of all mobile subscribers now have smartphones. And we expect that number will continue to increase because we see that the percentage of smartphones among recent acquisitions is even higher – two-thirds of recently acquired devices are smartphones.

And we know that more smartphones translates into greater demand for spectrum – smartphones can generate as much as 50 times the data traffic compared to a basic feature phone [slide #5]. Last year's Cisco Forecast pegged that disparity at 35 times – so the demand generated by smartphones is increasing, likely due to the spread of mobile broadband networks, including LTE networks.

We can see the shift from voice to data in other numbers. For example, this chart [slide #6] shows total wireless industry revenues and the split between voice and data. Total revenues are increasing, but voice revenues are actually declining, and data is more than picking up the slack. In other words, all this data about data shows the growth in mobile broadband.

Unless we bring more licensed spectrum online, there will be a gap between demand and availability. That is true even if you assume that providers use other techniques at their disposal – offloading to Wi-Fi, increasing efficiency by deploying new spectrum efficient-technologies such as LTE, and refarming 2G spectrum – plus all of the other engineering and business strategies that we see companies using on daily basis.

Our focus at the FCC has centered on the concept of “more” – that is how can we get more mobile broadband to more people in more of the places where they work, travel, and live? And how can we accomplish these goals while continuing to foster a robust, competitive marketplace that yields lower prices, greater innovation, and more choice for American consumers?

More Spectrum

More mobile broadband requires more spectrum, both licensed and unlicensed. We've already laid the groundwork with the Commission's actions to free 40 megahertz of spectrum in AWS-4; 30 megahertz in WCS; up to an additional 10 megahertz through the PCS H-Block proceeding; and varying amounts of low-band unlicensed “white spaces” in the TV bands. In addition, the Middle Class Tax Relief and Job Creation Act of 2012 (commonly referred to as the Public Safety Spectrum Act) requires the Commission to license an additional 55 megahertz by February 2015, and I expect the Commission to launch a proceeding on those bands in the months to come. And tomorrow the Commission is expected to initiate action to make available up to 195 megahertz of unlicensed 5 GHz spectrum that is suitable for “gigabit” Wi-Fi.

We've also expanded our toolbox to include innovative policy approaches such as those laid out in the 3.5 GHz small cell proceeding, and the other ongoing work with the federal government on sharing.

Of course, a centerpiece of the Commission's efforts to repurpose spectrum will be the broadcast incentive auction. While we can't know exactly how much spectrum it will yield, given the desirable location of this spectrum, we expect and invite broad participation.

The broadcast incentive auction will be a success if it does three things. First, if it allows the United States to lead the world in a new generation of wireless technologies and services. Second, if it alleviates spectrum constraints to economic growth and development. And third, if it funds the objectives laid out in the statute, including FirstNet. The path to success in the incentive auction is a balanced approach that frees up spectrum for licensed and unlicensed uses, promoting competition and enabling efficient, innovative, and productive use of one of the Nation's most valuable spectrum bands.

Our goal is to have the policies in place that enable the private sector to continue to drive innovation and economic growth. Today's smartphone- and tablet-powered apps economy did not exist in June 2008. It did not exist. But as of last June, Apple's App Store and Google's Play Store had a collective 3 billion downloads. That is a remarkable story.

At the FCC, our role in supporting such tremendous growth goes beyond spectrum. And we're not alone in our efforts to foster this growth. We work with other federal agencies on a variety of issues from spectrum, to infrastructure, to promoting a competitive wireless marketplace. And we work closely with states and localities to facilitate the deployment of wireless infrastructure across the country.

Last month, for example, we released guidance clarifying technical provisions in the Public Safety Spectrum Act regarding local review of requests to modify existing wireless towers. We also launched a proceeding to expedite placement of temporary cell towers – cells on wheels and cells on light trucks. Continuing to remove barriers to broadband build-out requires a comprehensive approach, so we're working on a broader rulemaking that could look at additional issues arising from the collocation provisions in the Public Safety Spectrum Act, as well as efforts to streamline deployment of distributed antenna systems and small cells. We're also interested in working with our state and local partners on best practices and model facility siting rules.

To More of the Country

Notwithstanding our unrelenting focus on spectrum and infrastructure, those are not the only constraints on the widespread availability of mobile broadband. In some parts of the country, there is plenty of spectrum, but no mobile broadband.

The next two charts illustrate why we worry. The proportion of people without mobile broadband in rural areas is much higher than in non-rural areas [slide #7]. And when you look at road miles covered by mobile broadband, the differences between rural and non-rural areas are even greater [slide #8].

So what are we doing about it?

First, on the Universal Service Fund front, this past year saw our first-ever reverse auction with Mobility Fund I – aimed at areas of the country that currently lack 3G coverage. Bringing competitive forces into the distribution of Universal Service support in this country was a major innovation. Lots of people doubted whether it could be done. But in fact the 2012 Mobility Fund I auction was a big success. We provided \$300 million of one-time support, and will be providing an additional \$50 million for Tribal

Lands in September of this year. We're encouraged by the level of interest and participation in the September 2012 Mobility Fund I auction, as well as the results. Our funding provided for an additional 83,000 road miles covered – with winners in over 30 states.

Next up on the Mobility Fund front will be an order on Mobility Fund II, which provides for ongoing support, and a larger budget. We expect the Commission to take that up in the coming months.

At tomorrow's agenda meeting, the Commission will consider an item on signal boosters that will help consumers everywhere gain access to wireless services. This will help consumers located in rural areas that may not have as many cell sites as in urban areas or in environments that may be hard to serve because of density or location.

Signal boosters can increase signal strength in small towns in southwestern Virginia by three-fold and improve public safety communications here in Washington, D.C. All four national carriers, along with smaller, rural carriers, have agreed to allow use of technically compliant boosters on their networks, and the major trade associations support our approach as well. We've been working toward this for three years, and because of some terrific industry leadership and consensus-building, tomorrow will be a great day for consumers.

In More Places

And as we think about places where people don't have broadband, we're not tied to the earth. We are interested in bringing the benefit of access to wireless data services everywhere, even on planes. Travelers, possibly even many of you, have wondered why they can't use their smartphones and tablets with their wireless data service enabled while airborne (though we also recognize that some of you may have been grateful for the reprieve). Still, anyone that has connected to onboard Wi-Fi and tried to do much more than simple web browsing or email can surely appreciate the capacity constraints facing wireless data links to and from aircraft. We have been taking a look at our rules and industry proposals to examine common sense actions that we can take to facilitate use of wireless data services while flying. We will coordinate this effort closely with the Federal Aviation Administration.

These are some of the ways in which we are furthering the FCC's broader goal of promoting deployment of mobile broadband services to as many people as possible throughout the country and in the airspace above it.

And as mobile broadband speeds increase, people start to ask questions about the extent to which consumers see mobile broadband as a substitute for fixed broadband.

We know that there is a lot of substitution on the mobile voice side [slide #9]. These are the so called "cord cutters" and "cord nevers."

But will the same thing happen for broadband? And if so, when? When we discuss this topic, one of the questions raised is whether the current structure of data allowances for mobile broadband means that mobile broadband may not really be a substitute for fixed broadband. I am not taking a view on whether data allowances are appropriate, or whether they may be driven by spectrum constraints or other business decisions. I'm simply noting that data allowances that make it very costly to download video affect whether at least some consumers perceive mobile broadband as a substitute for fixed. This is an

important discussion happening right now in many sectors, including with respect to a petition filed by AT&T late last year seeking to trial wireless-only broadband solutions in its rural footprint. The answers are not clear-cut.

I have talked about a dozen different proceedings, all aimed at removing obstacles to the growth of mobile broadband.

Now why does this matter?

We aren't trying to get mobile broadband to more people for some abstract reason. We're doing it because we believe that the widespread availability of mobile broadband contributes to economic growth and U.S. global competitiveness. And because that same widespread availability helps ensure that this economic growth occurs in small towns and large cities, for boomers and millennials alike. I look forward to continuing to make sure the opportunities provided by the expansion of mobile broadband are available to, and benefit, as many people as possible.

In closing, I thank you for your time, energy, and thoughtfulness on these issues and look forward to working with you in reaching these goals.