

**Prepared Remarks of Chairman Julius Genachowski
Federal Communications Commission**

FCC Spectrum Summit

“Unleashing America’s Invisible Infrastructure”

**Washington, D.C.
October 21, 2010**

Good morning. Thank you all for coming to the FCC’s Spectrum Summit.

Thank you Julie and Ruth for that welcome and for your tremendous work leading our Spectrum Task Force.

Thank you to all our participants. In particular, thanks to our moderators Jason Furman and Tom Wheeler, our luncheon speaker Aneesh Chopra, and my fellow Commissioners Robert McDowell and Meredith Baker, who delivered a terrific speech on encouraging 4G deployment earlier this week.

It is clear that all five members of the Commission share a strong commitment to smart spectrum policy.

And thank you to the members of the FCC team who have worked to make this event possible – Josh Gottheimer, John Leibovitz, Leon Jackler, Roger Goldblatt and his team, Rob Alderfer, Tom Peters, and many other staff throughout the commission.

We hold this summit at a critical time.

Our economy is struggling. People are hurting. The number of Americans living in poverty is the highest in recorded history. More than half of U.S. households have someone who is unemployed at some point in the past year.

At the same time, we face increasing global competition. Newsweek recently ran a cover story ranking the best countries in the world. The not-so-funny punch line -- We’re #11.

As President Obama said last week, to create jobs today and lay the foundation for economic growth and U.S. competitiveness in the future, “We need ... a smart system of infrastructure equal to the needs of the 21st century.”

History confirms the benefits of smart infrastructure policies – from the Erie Canal in the 1820s to the transcontinental railroad in the 1860s to rural electrification in the 1930s to the Interstate Highway System in the 1950s.

Smart infrastructure policies not only sustain commerce, they strengthen our communities. As President Eisenhower said, “Together, the uniting forces of our communication and

transportation systems are dynamic elements in the very name we bear — United States. Without them, we would be a mere alliance of many separate parts.”

In today’s world, that connecting and uniting force is broadband.

And communications technologies in general – and broadband in particular – are key parts of a successful economic engine for the 21st century. This sector represents about one-six of our economy; it is key to the American dream, key to a bright future for the United States and for all of our people

Since the moment I arrived at the FCC, we have focused on the extraordinary opportunity of communications technology. This is a transformative moment we must seize.

That’s why we put the time and effort into producing the most comprehensive and dynamic broadband plan in the world.

One of the most important components of the National Broadband Plan is that it recognizes how central *wireless* broadband is to our future.

The facts – we all know them – are plain: A little more than a decade ago, there were 61 million mobile subscribers in this country. Now there are 293 million.

Today, there are 61 million Americans with smartphones. I think we see where that number is headed.

Then we get to iPads and the coming wave of tablets. Who doesn’t think they will follow the same trajectory?

What does this mean? It means that in addition to the importance of our physical infrastructure of fiber and cable, we must also have a laser-like focus on our “invisible infrastructure” – spectrum.

Many people don’t realize that every time they make a call on their mobile smartphone; download a document onto their aircard-connected laptop; open an app on their wireless tablet, or use any remote control or listen to the radio, they are utilizing the power of our electromagnetic spectrum.

Spectrum is what beams from the cellular, radio, and TV towers and enables the mobile devices that have become increasingly essential to our daily lives – which, in my case would be two smartphones and a tablet, which is what I’m using to read this speech.

Though you can’t see it, spectrum is the oxygen of our mobile communications infrastructure and the backbone of a growing percentage of our economy.

Spectrum enables wireless innovation that will grow our economy and create jobs of the future.

The mobile revolution has spawned the “apps economy,” with tens of thousands of developers and companies, including many startups creating new jobs, inventing more than 250,000 apps, driving 4 billion dollars in sales last year alone.

And consider the potential for ecommerce. EBay’s iPhone app has been downloaded 12 million times, and eBay sales on smartphones are expected to top \$1.5 billion this year.

Now, Ebay sellers are largely a collection of small businesses, many online only, and many traditional offline businesses that have added online sales. Small businesses are the biggest engine of new job creation in our country. They are using the mobile platform to start, to grow their businesses, to expand their markets, to create new jobs.

As I heard from the founder of the popular Cakelove chain of bakeries, which even in this economy has grown its business and created jobs, “I need to go where my customers are: online and on their smartphones.”

Mobile has tremendous potential to grow our *global* economy, opening new markets for U.S. businesses. More than 90 percent of the world’s population has access to mobile networks.

Our invisible infrastructure also supports breakthrough tools to improve education and health care such as ever-updating e-readers that can replace outdated textbooks, and remote monitoring devices that help diabetes patients track their glucose levels.

But we are at an inflection point.

The explosive growth in mobile communications is outpacing our ability to keep up. If we don’t act to update our spectrum policies for the 21st century, we’re going to run into a wall – a spectrum crunch – that will stifle American innovation and economic growth and cost us the opportunity to lead the world in mobile communications.

Spectrum is finite. Demand will soon outpace the supply available for mobile broadband.

This is not the first time I’ve said this. And it won’t be the last. The coming spectrum crunch is a vital strategic and economic issue for our country, and a vital consumer issue since increased congestion will lead to growing consumer frustration with their mobile devices.

We need to focus on the spectrum crunch and employ all our levers to unleash the opportunities of mobile.

Today, the FCC is releasing a white paper that offers new insights into the looming spectrum crunch.

First, the report quantifies the size of our spectrum deficit. What did we find? Based on leading industry forecasts, we are likely to see a 35X increase in mobile broadband traffic over the next 5 years.

Next, the white paper finds that even if spectrum and device efficiency doubles and the number of cell towers continues to grow at its current pace, we will need around 300 additional megahertz of spectrum by 2014 to accommodate this growing demand. 300 megahertz is the near-term spectrum deficit.

Few people outside this room know what a megahertz is, but everybody knows the value of a dollar. The white paper puts the importance of this debate in perspective by assessing the economic value of this spectrum, which it estimates to be as high as \$120 billion.

It's clear: We are standing at a crossroads. We are looking at two potential futures.

If we act thoughtfully and execute on a strategic vision to ensure the highest and best use of this precious national resource, we can drive billions of dollars in private investment, fueling world-leading innovations, creating millions of new jobs, and enabling endless new products and services that can help improve the lives of all Americans.

If we don't, we will put our country's economic competitiveness at risk, and squander the chance we now have to lead the world in mobile. We will read more stories like the one about Applied Materials, which moved its CTO and advanced solar R&D operations from Silicon Valley to China, because it believed China was a more attractive market for solar energy.

How many technology companies need to move their CTOs overseas before we declare a crisis?

Imagine if Lincoln had not led the effort to build a railroad across our continent.

Imagine if FDR had not pushed through the Rural Electrification Act, which brought millions of Americans out of the dark – and lit up one small business after another.

Imagine if Eisenhower had left large swaths of the country in the slow lane, bypassed by the commercial activity our highways enabled.

Think of the economic opportunities we would have missed. The human potential that would have gone untapped. The ideas left fallow. The jobs left on the table.

The choice is clear: We have to pick the path that promises jobs and economic growth, innovation and opportunity. We must close the spectrum gap.

We can build a national invisible infrastructure appropriate for the digital age – with government acting as the catalyst for private sector investment.

That's how Lincoln built the transcontinental railroad, with performance-based government bonds, grants of government-owned land, and competition among the major rail companies.

As Larry Summers, the President's National Economic Advisor recently put it, "Public action. Private investment ... Infrastructure is constructed here in the United States by American workers; it cannot be relocated... If transportation infrastructure was and remains a key source of

competitive advantage in the industrial economy, digital infrastructure will be a key source of competitive advantage in the knowledge economy.”

The good news is we have a head start on mobile broadband.

We completed our DTV transition before other countries, and we are poised to begin reaping the benefits of our digital dividend. U.S. companies are ahead of the pack on 4G, having invented the technology and having already invested billions in next-generation networks.

In the not too distant future, millions of Americans will be enjoying mobile connections on their smartphones at speeds we are used to on our desktops.

But a head start does not guarantee a win. Global leadership is not a given. It must be earned.

We had an early lead in the mobile revolution in the 1990s, but fell behind. We don't want to lose our edge again.

Historically, it takes between 6 and 13 years to repurpose licensed spectrum for new uses. We need to get moving now. We don't want to find ourselves in a spectrum crunch with consequences we can predict – frustrated innovators, frustrated investors, and frustrated consumers with the choice of lousy service or sky-high prices.

That's why we've convened this Spectrum Summit -- to highlight the opportunities of mobile broadband, to put the challenges on the table, and to identify how we can best utilize our spectrum for the benefit of our country.

Knowing that it would be difficult for our participants to solve this massive problem in half a day, we've been working around the clock to come up with some ideas to kick-start this conversation.

The National Broadband Plan's spectrum recommendations rest on two pillars: one, making more spectrum available, and, two, using the market and technology to ensure more efficient and effective use of our spectrum. We are moving aggressively on both fronts.

The Broadband Plan sets a goal of unleashing 500 megahertz of spectrum for broadband over the next 10 years, and 300 over the next five.

President Obama, who has long advocated unleashing the opportunities of spectrum, issued in June an executive memorandum directing federal agencies to work together to unleash more spectrum. Among these efforts is the FCC's close collaboration with NTIA, which is working hard to find ways to make more federal spectrum available for mobile broadband.

At the FCC, we have already recovered 25 megahertz previously used for WCS – wireless communications services -- and have proposed rules that would make available 90 megahertz of mobile satellite spectrum so it can be used for terrestrial broadband.

We've released the TV "white spaces," the most significant amount of unlicensed spectrum in 25 years, robust spectrum that will bring innovations like Super Wi-Fi and increased access in both urban and rural communities.

We need to do more, and innovation in policy will be required to accomplish our spectrum goals. Historically, we have led the world in spectrum policy innovation, and the Nation Broadband Plan contains a new, big idea -- "incentive auctions."

In these two-sided auctions, we propose that current spectrum licensees, such as TV broadcasters, could voluntarily relinquish spectrum; the FCC would then auction spectrum for flexible wireless broadband, and some portion of the proceeds would be shared with the old licensee.

In the case of TV broadcasters, under our plan they could either continue to broadcast, share spectrum with one or more stations, return their spectrum, or move to VHF.

I'm pleased that broadcasters are thinking seriously about what this value proposition means to them, how it can help their business. I appreciate the constructive engagement we've had with broadcasters on how we can make an incentive auction work.

These incentive auctions have the chance to be what the very first FCC auctions were at the end of the last century. Revolutionary.

It's a win-win-win. The country can benefit from freeing up spectrum for mobile use. Taxpayers can benefit from billions in auction revenue. And the current holders of spectrum -- including local television stations -- can receive a capital infusion and still be able distribute their programming by sharing with other stations, or through other platforms such as cable and satellite.

Earlier this year, President Obama endorsed this proposal, and it is the basis of bipartisan bills in both the Senate and the House.

Swift action to authorize incentive auctions will be a critical step toward more efficient spectrum use, and ensuring that wireless broadband can meet its potential for economic growth and job creation.

Incentive auctions are a big idea, but our spectrum challenges are so great and the stakes for our economy so high, that we must proceed on many fronts to seize the opportunities of spectrum. At our next Commission meeting in November, I will ask my colleagues to consider three items to maximize the use of our invisible infrastructure.

The first is a notice of proposed rulemaking that would lay essential groundwork for implementing incentive auctions quickly should Congress act.

The item will look at lifting technical restrictions so broadcast spectrum can be used for broadband.

It will explore a licensing framework that, for the first time, would allow stations to voluntarily “channel share.”

And it will examine new ways to improve the digital television reception of VHF, to make it a more effective option for TV broadcasters.

The second item I will ask my colleagues to consider is a Notice of Proposed Rulemaking to expand our experimental licensing program.

Experimental licensing has played a valuable role in many wireless innovations.

For example, you’ve probably seen the TV ads featuring new potentially life-saving anti-collision systems in cars. That technology requires spectrum, and it was developed using an experimental license. Experimental licensing also played a key role in White Spaces and Super Wi-fi.

The Commission will consider steps to expand experimental licensing including easing testing restrictions on universities, research organizations, and other institutions that are developing new services and devices that utilize spectrum.

The goal is to accelerate innovation – reducing the time for an idea to get from the lab to the market.

It would also help the FCC make smarter, faster decisions, by giving us on-the-ground intelligence on interference issues.

The third item for the November agenda is a notice of inquiry to accelerate opportunistic uses of spectrum – the key word being opportunity -- including technological advances that enable greater use of secondary markets.

Right now, there are swaths of spectrum that are being used but not to their full potential. The FCC is looking at a number of different ways to unlock that resource, including improved databases, sensing technology, or new innovations in the works at various private companies.

The item will look at how these technological innovations can be used to foster more robust secondary markets, through dynamic spectrum leasing, and better information on spectrum use, building on our innovative public spectrum dashboard.

We hope this item will help us identify ways to improve the efficiency of spectrum, and launch new value-providing markets.

To make real progress on spectrum, to identify and move forward on the best ideas, we need lots of input from a broad spectrum – so to speak – of the public. That’s why we’ve organized this Summit today.

It's also why I'm pleased to announce that the FCC has formed a new Technology Advisory Committee or TAC. The TAC will be comprised of some of the leading technology and business leaders in our country, and led by Tom Wheeler.

Tom is the perfect person for the job. He is a true leader both in private sector investment and innovation, and also in public policy development. On the FCC side, Julie Knapp and our CTO Doug Sicker will be running the point on TAC.

I have charged the TAC with providing counsel on using spectrum and other communications technologies to drive job creation and economic growth. I'm looking forward to the TAC generating concrete ideas, and being a spur to action.

And of course, we're here today for your ideas and input. I thank you all for participating, and I very much look forward to today's discussion.

Some of the questions I expect the panels address today are:

- (1) What are the opportunities we can seize if we address the crunch; and what exactly will happen if we don't?
- (2) Are the ideas we've put on the table the right ones, and how can they be improved and executed upon?
- (3) What innovative policies that I haven't mentioned can allow us to meet our spectrum challenges and drive tremendous consumer benefits?
- (4) What can we do to drive greater spectrum efficiency? How can we spur secondary markets for spectrum and similar ideas?
- (5) How exactly can we unleash the maximum amount of private investment, and spur the maximum amount of innovation, in and around spectrum?

The future is being built on our invisible infrastructure. Let's work together to update our spectrum policies for the 21st century and make sure that infrastructure truly serves our country's needs.