

**FCC CHAIRMAN JULIUS GENACHOWSKI
REMARKS AS PREPARED FOR DELIVERY
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It's great to be here at the CTIA convention. With the incredible innovation in wireless devices and apps, it's like Tomorrowland has been moved from the Magic Kingdom to the Orange County Convention Center.

Thank you, Dan Hesse, for your remarks. Also congratulations to Sprint, one of three mobile companies recently named to JD Power's list of Customer Service Champions.

Thank you to CTIA and Steve Largent for welcoming me and for your strong advocacy for our mobile future.

I know everyone here has been talking about the proposed transaction that was just announced. Of course you'll understand that I'm not going to comment on that.

Although it's been a while, it feels like I was just at CTIA. Why's that? I was at the Consumer Electronics Show two months ago, and it may as well have been a wireless convention.

Virtually every product on the CES floor was connected to the Internet, and overwhelmingly through wireless connections. If you had shut down wireless Internet access, pretty much nothing there would have worked.

As CES made clear, and you know well, broadband is no longer a luxury. It's an essential platform for new products, economic growth and job creation – creating opportunities and opening markets that allow businesses to start, grow, and hire.

As the demand increases, and the benefits are more compelling by the day, it's all the more reason why unleashing more spectrum must be a national priority.

That's what I want to talk about today: four core reasons why spectrum is at the top of my agenda -- American competitiveness, opportunity, the enormous dollar benefits of freeing up spectrum, and the enormous costs of delay.

First, American competitiveness and opportunity.

The history of the American wireless industry is filled with risk-taking and innovation – the supporting pillars of competitiveness and opportunity.

The first commercial cell phone call was made in 1983 using a \$4,000 Motorola analog cell phone that was the size of a human head and weighed two pounds. I have a slightly

later version of that phone sitting on a shelf in my office as a reminder of how fast things can change, and how tricky it is to predict the future.

With breakthroughs in digital signal processors and energy-efficient batteries, in just a matter of years, those brick phones have evolved into 4-ounce mini-computer smartphones that all of us have in our pockets right now.

Many have more computing power than NASA's lunar module.

We all remember when 3G was a big deal. Now we've got 4G, with both faster speeds and lower latency. And surely it's just a matter of time before 5G will mark the next revolution in wireless connectivity

It's hard to imagine an industry that's produced more game-changers than the wireless industry. Starting with the mobile phone.

And now consider the tablet. When Apple rolled it the iPad, the naysayers questioned its potential success, calling the iPad just a larger version of the iPhone that would have no meaningful impact. One national magazine predicted that consumers would be "genuinely baffled by why they might need it." A leading tech blog's take: "My God, am I underwhelmed."

Now, demand for the iPad2 is so high, there's a six-week backorder wait.

Always challenging ourselves; always adapting; always looking to the next horizon. That's the American way.

And my message to you today is simple: we must apply that same spirit to our broadband challenges.

Too many Americans have no broadband access at all, and too many Americans don't subscribe. Our adoption rate in the U.S. is 67%; it's even lower among low-income and minority Americans, and in rural and senior communities. In Singapore, the adoption rate is 90%

If we don't innovate – in the private sector and in government – if we don't find new ways to maximize efficiency and meet our strategic goals, we risk letting big opportunities pass us by – and the cost to our global competitiveness could be severe.

It's clear that America's global competitors aren't standing still. Some, for instance, project that Asia will have more 4G devices than the U.S. by 2014.

American leadership in the world economy is not a birthright. It has to be earned anew by every generation.

The mobile sector is critical to U.S innovation and economic leadership in the 21st century. We need to be developing here the most innovative wireless technologies, applications, services, and exporting them to the rest of the world.

You don't need me to tell you this, but broadband has changed the rules here in America and around the world.

I see broadband as a disruptive technology that's creating an innovator's dilemma for the United States as market leader in the global economy.

In his book Innovators Dilemma, Harvard Business School Professor Clayton Christensen described how market leaders face unique challenges in responding to disruptive technologies and disruptive competitors. Some take the necessary strategic steps; some don't. And it's generally harder for a market leader to do so in view of the dependencies, reliances and practices it has built up in the marketplace that preceded the disruptive technology.

The U.S. closed the 20th century as the world's market leader.

While many of our global competitors can chart -- and are charting -- a broadband-fueled strategy on a white board unencumbered by legacy achievements, the U.S. has no choice but to develop a 21st century strategy in the context of a complex web of 20th century infrastructure and programs.

Mary Meeker -- now at Kleiner Perkins after years of producing influential reports at Morgan Stanley -- recently made this point in a provocative report that analyzed the U.S. as if it were a public corporation

She concluded that the U.S. faces significant strategic challenges in the global marketplace -- and that our Information Technology infrastructure can be part of the solution, if we set clear goals and make tough choices.

A separate report by McKinsey concluded that better utilization of broadband is essential to boosting productivity and growing our economy.

That's why the FCC developed the country's first National Broadband Plan a year ago -- to identify the key strategic issues our country faces, and set a path forward.

One strategic challenge is extending the benefits to the nearly 100 million Americans who currently aren't connected. The Plan calls for transforming and modernizing the Universal Service Fund, so that it focuses on broadband deployment and adoption, not on outdated telephone service. Our reforms will be technology neutral, and we expect that wireless providers will be active participants in the Connect America Fund.

I invite you to offer your own ideas on how we can make this program more efficient and effective.

The National Broadband Plan also identified mobile broadband as a unique and powerful opportunity for the U.S., as well as a strategic challenge.

To some, it was a surprise that the Broadband Plan included major sections on mobile broadband. At the time, many assumed that broadband was what you got when you connected your computer to the modem plugged into your wall.

And while fixed broadband is of course of vital importance to our economy and our innovation future, the Broadband Plan placed unprecedented emphasis on mobile broadband, because no sector now holds more promise for opportunity, for economic growth, for improvements to our quality of life, and for our global competitiveness.

The Broadband Plan was innovative when it came to how it looked at the landscape. The Plan emphasized that opportunity will come from a healthy broadband ecosystem, with improvements in networks, devices, and applications creating a virtuous cycle of innovation.

Start with networks. As of late 2010, we had 141 million 3G subscribers – one-fifth of the worldwide total and more than 3 times as many as any other nation, except Japan, making us the world’s largest 3G market and a major reason why the U.S. has been the undisputed leader in mobile innovation.

Now 4G is finally here, which will deliver a high-speed Internet experience comparable to what many enjoy on desktops. 4G investments will soon enable a tidal wave of new mobile innovations, from entertainment, to two-way video, to telemedicine and more.

Look at devices. Last time I spoke at CTIA, the commercial tablet market didn’t even exist. Now, analysts are projecting 55 million tablet sales this year – making it a \$35 billion business. So far.

Smartphones keep getting more powerful and operating systems keep getting smarter. In the 4th quarter of 2010, smartphones outsold PCs worldwide – 101 million to 92 million.

And with the emergence of Machine-to-Machine wireless technology, pretty much everything can become connected – from appliances to vehicles to medical devices.

Qualcomm projects that by 2020, the Internet of things will consist of 50 billion connected devices around the world, which will drive efficiencies and improved services in areas like energy, transportation, manufacturing and health care.

Which brings us to mobile broadband applications, one of the most remarkable forces for economic opportunity and quality of life that we’ve ever seen.

Robust networks and powerful devices are allowing us to do all kinds of things we could barely have imagined a few years ago.

With mobile broadband, children can replace 50-pound backpacks with interactive digital textbooks that personalize lessons to their skill set.

Broadband enables remote medical monitoring – wireless devices that can help diabetes patients track their glucose levels, or heart disease patients monitor cardiovascular data. Voxiva, a company that I visited just last week, developed a mobile app to help expecting mothers stay up to date on neonatal care.

Each of these areas – education, health care, as well as energy – have enormous potential as new broadband fueled market opportunities ripe for U.S. leadership.

And as large as these can be, they can be part of an even larger economic success story.

In 2009, people downloaded 300 million mobile apps. Last year, that number increased more than 16 times to 5 billion downloaded mobile apps.

By 2015, the “apps economy,” is projected to generate \$38 billion in sales. That’s a remarkable figure when you consider that in 2008, the first app store hadn’t yet opened.

In 2009, mobile online shopping brought in \$1.4 billion. Last year, it jumped to nearly \$4 billion.

Location-based services are taking off. Companies like Foursquare and Gowalla – now each with millions of users – didn’t exist two years ago. Same for Groupon and Living Social, which are moving aggressively into the mobile space and are each hiring more than 150 employees ... a month.

Add to that the jobs impact of 4G buildout. According to industry studies, deploying the 40,000 towers needed for these next-generation mobile networks will create 53,000 jobs and help us reach the goal the President set to bring 4G service to 98 percent of Americans in the next 5 years.

The bottom line: mobile broadband is being adopted faster than any computing platform in history, and could surpass all prior platforms in their potential to drive economic growth and opportunity

But there’s a catch. This explosion in demand for mobile services places unsustainable demands on our invisible infrastructure – spectrum. Spectrum is the oxygen that allows all of these mobile innovations to breathe.

Whether or not most Americans know the physics of spectrum, they know what it feels like to have a dropped call or a slow connection or cranky Wi-Fi.

And they understand that smartphones and tablets use many times more spectrum capacity than traditional cellphones – 24 times for smartphones, and about 120 times for tablets, as it turns out.

But while American ingenuity and our appetite for wireless technology is limitless, spectrum is not. And the coming spectrum crunch threatens American leadership in mobile and the benefits it can deliver to our country.

The facts tell a powerful story. The amount of spectrum available for mobile broadband represents about a threefold increase over where we were a few years ago. Sounds good, except that analysts forecast a 35X increase in mobile broadband traffic over the next 5 years. Cisco has projected a nearly 60X increase between 2009 and 2015.

This explosion in demand for spectrum is putting strain on the limited supply available for mobile broadband, leading to a spectrum crunch.

To address these challenges and seize the opportunities of mobile, the FCC is moving forward aggressively with a comprehensive mobile broadband agenda.

I first announced our Mobile Broadband Agenda in my last speech to CTIA. It consisted of four parts and we've made real progress on each of them.

1. Providing fair rules of the road for an open Internet.
2. Empowering consumers by supporting a vibrant, transparent and competitive marketplace.
3. Removing obstacles to robust and ubiquitous 4G deployment.
4. Unleashing spectrum for 4G mobile broadband and beyond.

Let me discuss each briefly.

First, Open Internet. This past December, the FCC approved a framework to preserve Internet freedom and openness. As I said they would in my last CTIA speech, these rules recognize the legitimate differences between wired and wireless technologies, while preserving the core freedom to connect on all platforms. I believe our framework will help ensure that the mobile Internet remains a vibrant platform for innovation and investment.

Second, empowering consumers and promoting competition.

We've taken and are taking many important steps on this front, not the least of which was our Open Internet order.

Right now we're moving forward on broadband data roaming, with a vote scheduled at our next Commission meeting.

Voice roaming has promoted competition and has been an important spur to the dramatic uptake in mobile devices and investment in mobile networks.

Consumers everywhere want the ability to roam anywhere, and they want it for all of their basic mobile services, whether it's a voice call, an online check of out-of-town scores, or access to web job postings or health information. Many mobile providers need roaming arrangements to be competitive.

While we're still working through details of a data-roaming framework, I believe the core proposition is beyond dispute: healthy competition produces greater innovation and investment, lower prices, and better service.

We're also working to harness the power of mobile technology to improve the safety of all Americans. That's why we've taken steps to begin the transition to next-generation 9-1-1 systems.

More and more, Americans are surprised – and unhappy -- to discover that they can't send a text to 9-1-1 call centers. Or a photo of a crime scene, or a video of a burning building.

While that may have been a more modest issue when fewer Americans had smartphones, it's a big issue today. I look forward to working together with the wireless industry on measures to accelerate the transition to next-generation 9-1-1, and to improve wireless location accuracy for both legacy 9-1-1 and next-generation 9-1-1.

Third, returning to our mobile broadband agenda, we are working to spur the deployment and lower the costs of wireless buildout.

When I last spoke at CTIA, I promised that we would establish a shot-clock to speed the deployment of new cell towers. And we did.

We've recently launched a Broadband Acceleration Initiative looking to cut more red tape and pursue all smart policies to speed network deployment and ensure investment dollars go to building and upgrading networks, not the inefficiencies of the process.

We're working on this initiative together with our Technology Advisory Committee, which is being energetically chaired by Tom Wheeler.

I expect strong initiatives to emerge from this process that can be put in place quickly. One area of potential opportunity: collocation. Initial reports suggest that in some places the obstacles are greater than they should be to adding or replacing an antenna on an existing tower. If so, that's something we would work to address.

Overly burdensome rules, regulations and processes can slow down deployment and raise costs. They can slow down hiring and investment.

It's been estimated that removing red tape and expediting approval processes could unleash \$11.5 billion in new broadband infrastructure investment over two years. This is an important area.

Fourth, we continue to work aggressively on the major priority of unleashing mobile spectrum.

We're working to drive more efficient and innovative uses of spectrum – taking action to spur dynamic spectrum sharing and secondary markets for spectrum, as well as development and deployment of femtocells, smart antenna technology, and technologies like Wi-Fi that can use unlicensed spectrum to off-load traffic from cellular networks.

In fact, a few months ago we freed up “white spaces” spectrum – the most significant amount of unlicensed spectrum in 25 years -- to enable new technologies like “Super Wi-Fi.” This spectrum will be an important new platform for innovation.

We have eliminated unnecessary restrictions on the use of certain spectrum bands. This has allowed us, for example, to open 25 megahertz of spectrum in the 2.3 GHz band, which is already being used for broadband in Korea.

Our goal—widely supported, including in an Executive Order issued by the President - is freeing up 500 megahertz of spectrum for broadband, almost double what is currently available.

A vital way to recover a significant amount of spectrum toward that goal is our proposal for voluntary incentive auctions.

Under the proposal, Congress would grant the FCC the authority to run two-sided, voluntary spectrum auctions. We would auction spectrum for wireless broadband services, and the spectrum in the auction would be voluntarily contributed by current licensees like TV broadcasters or mobile satellite operators, who would in return receive a portion of the proceeds of the auction.

So a voluntary incentive auction can provide a capital infusion for those broadcasters that choose to participate, leaving the broadcasting industry in a strengthened position.

And the incentive auction proposal provides an incentive-based, market-driven path to tackle the spectrum crunch. It's the right idea at the right time.

And even with the healthy debate on the topic, I haven't seen a better mechanism for freeing up spectrum before the crunch hits, or a good response to why we shouldn't bring market dynamics to bands of spectrum that historically have been protected from market forces.

I'm pleased not only that the President is championing this proposal, but that it enjoys bipartisan support on Capitol Hill.

It's essential that we move quickly – not only because of the benefits of action, but because of the costs of inaction.

If we do nothing in the face of the looming spectrum crunch, many consumers will face higher prices – as the market is forced to respond to supply and demand – and frustrating service – connections that drop, apps that run unreliably or too slowly.

The result will be downward pressure on consumer use of wireless service, and a slowing down of innovation and investment in the space. Emerging markets like mobile medicine, mobile payments, social-network-based services, and machine-to-machine connectivity will see their growth stunted.

This would hurt our economy broadly. It would also have a disproportionate impact on minority and low-income groups who are more likely than the average American to access the Internet through a mobile device.

Can we quantify the costs of inaction?

Various parties, including CTIA, CEA, and OMB have estimated the revenue potential of voluntary incentive auctions in the range of \$30 billion. Not pocket change, particularly given the serious budget challenges the U.S faces.

But the cost of inaction is not just delayed or foregone auction revenue.

The economic benefits of freeing up spectrum vastly exceed even that \$30 billion figure, and so the costs of inaction exceed that amount as well.

Just think about how many businesses, small and large, would benefit from more spectrum from mobile broadband – driving not only connectivity, but productivity.

And think about how many jobs and how much investment could be created by the *next* Google or Facebook or Twitter. According to the High Tech Spectrum Coalition, which is comprised of companies like Intel, Qualcomm and Cisco, over the next five years, investments in 4G wireless technologies will create 205,000 US jobs, assuming our spectrum infrastructure can handle 4G demand.

Even more, freeing up spectrum will drive improvements in education, savings in health-care costs, and greater energy efficiency.

How do we measure those benefits? Some have tried. They estimate – based on past experience with the spectrum economy -- that the consumer benefits of freeing up spectrum for mobile broadband would be 10 times higher than the value that spectrum generates at auction.

Looked at that way, spectrum with an auction market value of \$30 billion translates to broad consumer benefits of \$300 billion.

The point isn't that the number is a perfect measurement, but that the order of magnitude of the benefits of freeing up spectrum through incentive auctions is in the hundreds of billions of dollars. And so are the opportunity costs of not moving forward.

Every day we are not freeing up spectrum for mobile broadband is a day with real costs to our economy, our global competitiveness, and our future.

The incentive auction proposal is a smart idea – a bipartisan idea – whose time has come.

I agree with CTIA and the other associations representing more than more than 2,000 companies with over \$1 trillion in revenue that we simply can't afford to delay on voluntary incentive auctions.

Working together, we can ensure that the U.S. leads the world in mobile innovation, harnessing massive benefits for our economy and a bright future for all our citizens.

Working together, we can make sure that mobile helps with disaster response and recovery all over the world, as we've seen in Japan and Haiti; and that mobile promotes freedom and opportunity around the globe, as we've seen so dramatically in the Middle East and North Africa

Working together, we can unleash the full potential of mobile broadband.

Thank you.