

CHAIRMAN JULIUS GENACHOWSKI
“THE CLOCK IS TICKING”
REMARKS ON BROADBAND
WASHINGTON, D.C.
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Thank you Paul Meyer and the Voxiva family for hosting us, and for giving us a sense of what is possible if we harness the power of broadband and mobile technology. You’ve taken this new platform and created new businesses and new jobs. Even better, your business isn’t just making a profit, it’s making a difference -- offering innovative solutions to improve the quality of health care in America and across the globe.

Thank you Jonathan Spalter, Allison Remsen, and Mobile Future for organizing today’s event, for your work to promote mobile innovation, and for the important report you’re releasing today, which sends a crucial message: The clock is ticking on our mobile future, and we cannot solve our mobile challenges by snapping our fingers; we must act without delay to free up spectrum for mobile broadband.

A year ago, the FCC submitted to Congress America’s first National Broadband Plan.

I can’t believe it’s been a year. It feels like only 80 months.

Looking back, it’s amazing how much has changed since we began this journey to help Americans harness the potential of broadband.

For starters, when this endeavor began, too many Americans didn’t know what broadband was. Too many Americans, young and old, too many companies small and even large, didn’t understand the benefits of being connected – the benefits to finding and landing jobs, to expanding businesses and lowering costs, to the health care of our families, to the education of our kids.

Even at the FCC, in the years prior to 2009, a majority concluded annually that everything was fine – that our mission was accomplished -- that broadband was moving forward in the US in a “reasonable and timely fashion,” in the words of the Communications Act.

But the facts – many updated and further developed in connection with our Broadband Plan -- told a different story. Up to twenty-four million Americans simply couldn’t – and still can’t -- get broadband where they live. And nearly one hundred million Americans who could have broadband haven’t signed up. That’s a U.S. broadband adoption rate of 67%, which compares to more than 90% for South Korea.

What’s worse, our capacity for competitiveness and innovation was lagging behind the top nations in the world, and our rate of improvements in key competitiveness and innovation metrics was at rock bottom for major industrial countries.

What was going on here?

Mary Meeker – the renowned analyst now at Kleiner Perkins -- gives us a hint in a recent report. She looked at the U.S. as if it were a corporation in the private marketplace, analyzing its financials, and developing views on strategic challenges.

That's a helpful lens.

Our country closed the 20th century as the world's market leader. The 21st century brought with it a disruptive new technology called broadband, and new global competitors focused on using this technology to leapfrog the U.S. in the global economy.

Our country is like the companies described in *The Innovator's Dilemma*, by Harvard Business School Professor Clayton Christensen.

We face new strategic challenges, but have not only the opportunities but the challenges of being the 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.

That's why we needed a National Broadband Plan, and why it was so important that the FCC developed one at the direction of Congress and the President.

And develop a Plan we did, thanks to the incredible work of a team of FCC veterans and new recruits who worked around the clock for months, consulting offline and online with literally thousands of people from multiple backgrounds and disciplines.

Since then, the FCC has been focused like a laser on the vital strategic issues around broadband.

And with good reason. If we want to lead the world in the 21st century, we must put broadband at the top of our agenda. Otherwise, we risk letting the broadband revolution pass us on by. Our competitors aren't standing still. Our challenges are growing, not diminishing. The clock is ticking.

As the National Broadband Plan confirmed, broadband can become a core driver of our economy and our global competitiveness, a core accelerator for job growth. In the last few years, even in the economic downturn, the part of our economy that depends on broadband – wired and wireless – has grown. In 2010, the U.S. tech sector grew about twice as fast as the U.S. economy, and the 2011 outlook is equally bullish.

In his State of the Union Address this past January, the President repeatedly mentioned high-speed Internet as essential to America's economic growth and global competitiveness, setting an ambitious goal for the country of connecting 98 percent of Americans to 4G.

As the President said, "To attract new businesses to our shores, we need the fastest, most reliable ways to move people, goods, and information – from high-speed rail to high-speed Internet ... In America, innovation doesn't just change our lives, it is how we make our living."

So, in just one year, broadband has now become part of the vernacular. Not just a topic for us geeks at the FCC, but in the national bloodstream.

It's being talked about in businesses, small and large, which recognize that broadband helps them reach new markets, improve productivity, and compete globally.

People around the country increasingly see that broadband can enable distance learning and digital textbooks that can improve education; remote diagnostics to enhance health care, and smart grid technology to reduce energy costs and harmful emissions.

Each of those areas also offers large business opportunities to help fuel our economy. And each needs a widespread, world-class broadband infrastructure.

Economic experts crafting strategies to boost our economy and U.S. competitiveness are taking note of broadband's power, too.

In the past month alone, two important reports have come out placing high-speed Internet at the center of our economic future. I mentioned Mary Meeker's. Another is from McKinsey. Both concluded that better utilization of broadband is essential to boosting productivity and growing our economy.

And both reports are consistent with the Broadband Plan's departure from conventional wisdom in some key respects.

The Plan makes clear that what matters is the full broadband economy – a broad and widely available ecosystem of fast networks, valuable applications, and innovative devices.

The core goal of policymakers should be to spur an ongoing virtuous cycle of improvement in each part of the broadband economy, which will drive economic success, new innovations, and broadband adoption. That's how we'll drive U.S. leadership in the 21st century.

We're pursuing this goal in multiple ways at the FCC.

We're proud of what we've accomplished this past year, and we're not going to rest until we tackle the full range of issues necessary to lead the way in the broadband world.

Of course, agreeing that we need broadband is a critical first step. Today, I want to talk about what it's going to take to get there, especially on the mobile side of the equation, because we all know that it's not enough to have world-leading wired networks *or* wireless networks. We need both.

Three of the plan's recommendations, in particular, are at the top of the FCC's 2011 agenda and are essential to achieving this goal. Each of these flows from the Broadband Plan's central theme of aligning our policies directly with our 21st century strategic goals.

First, we must transform and modernize the Universal Service Fund, so that it focuses on broadband deployment and adoption, not on outdated telephone service. Right now, the program is inefficient, spending too much in some areas and not enough in others. The related Intercarrier Compensation mechanism is actually disincentivizing broadband upgrades.

Last month, the FCC launched a proceeding to convert these inefficient 20th century telephone programs into efficient and effective 21st century broadband programs that ensure fiscal responsibility and accountability.

Second, we must remove barriers to broadband buildout and adoption.

In the U.S., we rely on the private sector to invest billions of dollars to upgrade and maintain our wired and wireless broadband infrastructure. We are working to cut needless red tape, to get the most out of public rights of way, and to pursue e-government and other smart strategies – all in the interest of lowering the cost and increasing the pace of broadband deployment and adoption.

Third, we must unleash spectrum and the opportunity of mobile broadband. Spectrum is our invisible infrastructure; it's the oxygen that sustains our mobile communications.

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 no doubt, extremely fast Internet of the sort that relies on wired networks is extremely important. Many business and research institutions require super-fast connections at speeds of hundreds of megabits per second and more. Which is why we set, for example, a goal in the National Broadband Plan of getting 1 gigabit per second broadband connections to anchor institutions in every community in the country, along with goals designed to make the U.S. the largest market in the world for very high-speed broadband, and to drive universal broadband connectivity.

But the Broadband Plan also placed unprecedented emphasis on mobile broadband, because few sectors of our economy offer greater opportunities for economic growth and improvements to our quality of life.

The hunger for mobility is even greater than many imagined a year ago, because even 3G wireless services can deliver speeds capable of handling a dramatically wide array of consumer applications, from entertainment, to education, to health care.

And 4G services coming our way can provide even greater speeds and lower latency on a mobile platform.

Consider some data points on mobile trends. When the National Broadband Plan was released a year ago, there was essentially no commercial market for tablets.

In 2011, global tablet sales are projected to top 55 million.

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

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

The “apps economy,” which didn't exist in 2008, is projected to generate \$38 billion in sales in 2015.

Location-based services are taking off. In the past year, for example, the number of Foursquare users jumped from 200,000 to 6 million. And companies like Foursquare, LivingSocial and Gowalla are creating hundreds of new jobs, even in this economy.

Mobile also offers a powerful new platform for commerce. Look at eBay's iPhone app. It's been downloaded 12 million times, and smartphone sales by eBay sellers will top \$1.5 billion in 2010. These figures, and similar numbers from Amazon, Google and others powering small-business commerce, include both pure Internet businesses, as well as main street small businesses expanding their sales and growing their businesses online.

Everywhere you look, mobile is becoming a staple of the workplace, increasing productivity and contributing to our economy -- from managing crops on a farm to managing inventory at Best Buy.

Thanks to Skype, Facebook, Twitter and many others, mobile has become an incredible platform for connecting friends and families, kids on one end of the country to grandparents on the other.

Mobile broadband can empower people not only in 21st century economies, but can promote 21st century democracy, as the international news of the last few weeks powerfully confirms.

The bottom line: mobile broadband is being adopted faster than any computing platform in history. The number of smartphones and tablets being sold now exceeds the number of PCs.

Let's just say that we aren't second guessing the Broadband Plan's emphasis on mobile.

The opportunities surrounding mobile are real, but so are the challenges. All of these wireless communications rely on spectrum – our invisible infrastructure. Smartphones use twenty-four times the amount of data of traditional cell phones; other wireless devices, like tablets, can use more than 122 times the data. This explosion in demand for spectrum is putting strain on the limited supply available for mobile broadband, leading to a spectrum crunch.

The Mobile Future report released this morning puts a fine point on this. According to their report, quote, "The clock is ticking, with rising demand rapidly closing the gap with existing supply. The consequences of inaction are severe, widespread and wholly negative for consumers and the U.S. economy."

The point deserves emphasis: the clock is ticking on our mobile future. The FCC is an expert agency staffed with first-rate employees who have been working on spectrum allocation for decades – and let me tell you what the career engineers are telling me. Demand for spectrum is rapidly outstripping supply. The networks we have today won't be able to handle consumer and business needs.

And it's not like daylight savings – you can't just turn back the clock. We can't solve this problem in an instant. It will take time to reallocate spectrum.

That's why we simply can't afford to wait.

To avoid this crisis, the National Broadband Plan recommended reallocating 500 megahertz of spectrum for broadband, nearly double the amount that is currently available.

But this essential transition will not come easy. As I mentioned at the outset, we're not drawing on a whiteboard. We're that market leading company with established practices and reliances, responding to new, disruptive technology and competitors. Our spectrum allocations reflect the leadership we've already shown.

In the 20th century, U.S. spectrum policy contributed to U.S. economic success. It led to the creation of a strong broadcasting industry that, together with our film companies, became the vital U.S. content sector, a significant contributor to our local communities, a strong source of exports, and a key part of our 20th century economic growth.

Broadcasters continue to provide important and valuable programming – and many are creatively bringing their programming to multiple platforms. This started years ago with cable and satellite, and continues as many broadcasters now seek to reach their audience on wired and wireless broadband, as well as providing free over-the-air TV to viewers who might otherwise lack access to broadcast programming

Broadcasters' efforts to become multiplatform programming entities should be encouraged, and we should work together to remove barriers to such efforts.

Similar success stories of our leadership in Mobile Satellite Services and in innovative government uses of spectrum are embedded in our current allocations of spectrum.

To accommodate new technologies, however, our spectrum policy must change. It's fair to acknowledge that past utilization of spectrum by various license holders under the FCC's old approach makes our job harder than other countries.

What do I mean by the FCC's old approach? Spectrum allocations prior to the mid-1990s were generally done on a command-and-control basis, with spectrum tightly assigned to limited purposes, and licensees shielded from market forces that would convert the spectrum to new uses.

The structure of spectrum allocations was also very limiting from a broadband perspective, with the FCC formerly relying on allocations with large vacant gaps separating allotments.

We have to tackle these challenges if we are to lead the world in mobile innovation in the 21st century – and if we're to avoid lousy consumer mobile broadband service, and sky high prices.

Some things we can undertake on our own at the FCC. We've already eliminated unnecessary restrictions on the use of certain spectrum bands. This has allowed us, for example, to open 25 megahertz of spectrum in the WCS -- wireless communications service bands – to mobile broadband.

And 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 are also encouraging dynamic spectrum sharing and secondary markets for spectrum, as well as development and deployment of femtocells, smart antenna technology, and devices that can access unlicensed spectrum like Wi-Fi to off-load traffic from cellular networks.

But these steps will only get us part of the way to where we need to go -- which brings me to one of the biggest policy innovations of the National Broadband Plan – voluntary incentive auctions – a new tool that we've asked Congress to supply.

Under the proposal, Congress would give the FCC the authority to run two-sided 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.

The strength of the incentive auction proposal is that it provides an incentive-based, market-driven path to tackle the spectrum crunch, while also effectively accommodating existing businesses.

It brings market forces to bear on spectrum licenses that – by virtue of their decades-old allocations – have been shielded from market dynamics. It provides a mechanism where the market – a voluntary buyer and a voluntary seller -- can determine the price and the use of spectrum.

It's the right idea at the right time. It is a win for consumers, businesses small and large, and our economy, which would benefit from freeing up spectrum for mobile broadband.

It is a win for federal budget and for American taxpayers, because auctioning contiguous blocks of spectrum would unlock its value, generating many billions of dollars for deficit reduction.

And it is a win for the licensees that voluntarily return their spectrum. A voluntary incentive auction can provide a welcome capital infusion for those broadcasters that choose to participate – including broadcasters who choose to share spectrum. And it can leave the remainder of the industry in an undiminished if not strengthened position to continue providing broadcast TV service.

I am pleased that the President is championing this proposal and that it enjoys bipartisan support on Capitol Hill.

Earlier this year, associations representing more than more than 2,000 companies with over \$1 trillion in revenue sent a letter to Congressional leaders calling on Congress “to swiftly pass legislation allowing the FCC to conduct voluntary incentive auctions.” They called incentive auctions “critical to furthering innovation and growing jobs in America.”

Despite the increasing acceptance of the incentive auction idea, as with any new idea, there are misimpressions being floated by some who want to preserve the status quo even in this time when change is necessary for our economic future. Let me address them.

First, there are some who say that the spectrum crunch is greatly exaggerated – indeed, that there is no crunch coming. They also suggest that there are large blocks of spectrum just lying around – and that

some licensees, such as cable and wireless companies, are just sitting on top of, or “hoarding,” unused spectrum that could readily solve that problem. That’s just not true. Let’s look at the facts.

Multiple expert sources expect that by 2014, demand for mobile broadband and the spectrum to fuel it, will be 35 times the levels it was in 2009. Cisco has projected a nearly 60X increase between 2009 and 2015. This compares to spectrum coming on line for mobile broadband that represents less than a 3X increase in capacity. The looming spectrum shortage is real – and it is the alleged hoarding that is illusory.

It is not hoarding if a company paid millions or billions of dollars for spectrum at auction and is complying with the FCC’s build-out rules. There is no evidence of non-compliance.

And while of course the FCC will be vigilant in any cases of non-compliance, the spectrum crunch will not be solved by the build-out of already allocated spectrum. That spectrum was already built into the FCC’s analysis of the spectrum shortage and does not detract from the desirability and necessity of adding the incentive auction tool to the FCC’s arsenal.

Second, some have argued that giving the FCC incentive auction authority should wait for a spectrum inventory. The good news is that we have already completed a baseline spectrum inventory that tells us more than enough to conclude that incentive auctions are an essential item to add to the FCC’s toolkit.

Our inventory confirms that there are no hidden vacant lots of commercial airwaves, but that there are a few areas well-suited to mobile broadband, such as the TV and MSS bands. We certainly know more than enough about existing spectrum uses to move forward with a mechanism that would simply bring new market-based options to these bands.

Third, others have suggested that, instead of having incentive auctions, we should just allow broadcasters to sub-lease their spectrum on their own. This won’t solve the spectrum crisis because it won’t free up contiguous blocks of spectrum over broad geographic areas, which is what’s needed for mobile broadband.

Keep in mind that the original broadcast allocation – the one that still exists – is a checkerboard approach with large gaps between full-power broadcast assignments. Freeing up, say, 6 MHz on Channel 9 in Detroit and 3 MHz on Channel 36 in Albuquerque and 6 MHz on Channel 28 in San Francisco won’t allow mobile providers to offer the kinds of nationwide mobile services that consumers demand.

And this approach would also preclude the approach that would unlock the most value from old allocations, denying taxpayers a significant deficit reduction benefit while also leaving the country on a path to higher mobile prices.

Fourth and finally, we know that some broadcasters have concerns about the channel realignment that would follow a reallocation of broadcast spectrum. We understand those concerns and will do our very best to address them.

Our plan would seek to minimize the number of stations affected, and it calls for fully reimbursing

broadcasters' costs for such moves.

Plus, we would propose that stations not be forced to move from the UHF band to the VHF band; rather, any such moves would be purely voluntary -- indeed, we have suggested that stations willing to do so could participate in the auction and put a price on a UHF to VHF move.

I would like to acknowledge the many individual broadcasters who have come forward and rolled up their sleeves to work through these and other issues in a pragmatic and constructive manner.

We're also committed to limiting any loss of service to over-the-air television viewers. In fact, we anticipate that the consumer impact of realignment will be quite small, as any shift in broadcaster frequencies will merely require that over-the-air viewers rescan their televisions or converter boxes.

The simple truth -- the overarching context for the few easily addressable questions that have been raised about incentive auctions -- is that the enormous benefits to consumers and to our economy of incentive auctions overwhelm the potential costs.

With the clock ticking, the real question is: how can we afford not to bring market-based incentive auctions to spectrum allocations?

It takes years to auction, clear and build out spectrum, and we need to deploy the incentive auction tool without delay.

If we don't act, we won't have enough spectrum for mobile broadband, that will have real consequences for consumers, who will face declining service, including dropped calls and Internet connections, slow downloads and high prices.

That will have real consequences for innovators looking to build new companies and services on the mobile platform, including life saving health applications, education programs to train our 21st Century workforce, and energy services designed to help save our planet.

Yes, we do face an innovators dilemma -- we know what we need to do to seize the opportunities of mobile broadband for our economy, our global competitiveness, and our standard of living. But we're not drawing on a whiteboard.

Seizing the opportunities requires change, and change requires leadership.

I think there is no other choice than for the U.S. to lead, as we have in the past. We must have a 21st century broadband infrastructure, wired and wireless so we can capitalize on all of the opportunities the broadband revolution has to offer. Thank you.

Now, I look forward to taking some of your questions.