

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

**“Broadband: Our Enduring Engine for Prosperity and Opportunity”**

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Good morning. Great to see everyone. I'm guessing everyone has had a memorable visit to D.C., not because of the snow, but because you got to spend Valentine's Day at a NARUC conference. Nothing says romance like a gathering of public service commissioners. Just ask my wife.

Thank you, Ray Baum for that wonderful introduction. Ray was one of the very first people I called for counsel after being sworn in as Chairman, and I appreciate the excellent work he does. I also want to thank NARUC President David Coen for inviting me to be with all of you this morning. NARUC and the FCC are close partners. Our ties are strong.

One of NARUC's own, Commissioner Mignon Clyburn, was of course appointed to the FCC last year. She is doing a stellar job in every facet of her new role, and I couldn't be more delighted to have her as a colleague and a friend. Another leader from your ranks, Sharon Gillett, heads our Wireline Competition Bureau, and we benefit every day from the wealth of experience she gained as a NARUC member.

It's never been more important for the federal government and the states to have a strong partnership. I'm pleased that there are healthy ongoing conversations between NARUC and members of the FCC team. And I look forward to continuing our collaboration on a full range of issues.

Today, I am here to talk with you about the topic at the top of the Commission's agenda -- the National Broadband Plan that we will deliver to Congress next month.

As many of you know, as part of the Recovery Act, Congress and the President charged the FCC with developing a strategy to bring high-speed Internet and its benefits to all Americans.

After months of intensive work across every bureau in the agency, a team of engineers, economists, entrepreneurs, analysts, and -- yes -- dedicated lawyers too, has nearly finished this stage of its work.

What drives this team? The answer is simple.

What drives the team is the imperative -- never more timely -- of developing a meaningful plan for U.S. global leadership in high-speed Internet to create jobs and economic growth; to unleash new waves of innovation and investment; and to improve education, health care, energy efficiency, public safety, and the vibrancy of our democracy.

Today, I'll outline some of the highlights of the plan in progress and why I believe the plan is so vitally important to America's future.

Building world-class broadband that connects all Americans is our generation's great infrastructure challenge.

Some compare high-speed Internet to building the interstate highway system in the 1950s. It's a tempting comparison, but imperfect.

In terms of transformative power, broadband is more akin to the advent of electricity. Both broadband and electricity are what some call "general purpose technologies" -- technologies that are a means to a great many ends, enabling innovations in a wide array of human endeavors.

Electricity reshaped the world -- extending day into night, kicking the Industrial Revolution into overdrive, and enabling the invention of a countless number of devices and equipment that today we can't imagine being without.

Now in the 21<sup>st</sup> century, it is high-speed Internet that is reshaping our economy and our lives more profoundly than any technology since electricity, and with at least as much potential for advancing prosperity and opportunity, creating jobs, and improving our lives.

The evidence is all around us. The information and communications technology sector of the American economy now represent a trillion dollars in revenue, millions of jobs, and 13 percent of the GDP. While our economy struggles with bubble-induced turmoil, the ICT sector has weathered the storm better than most industries.

Incredibly dynamic American companies, some quite new, lead the world in software, search, chips, apps, devices, services, and business innovation -- a testament to American ingenuity and entrepreneurialism.

We've gone from zero to 150,000 apps for smart phones in less than three years. And almost half-a-billion people are on U.S.-founded social network sites.

We've seen powerful innovation and staggering investment from American companies managing broadband networks, as well as U.S. companies at the edge. DOCSIS 3.0 and fiber, from cable operators and telcos, are extraordinary wired broadband technologies with the promise of offering faster speeds to consumers and businesses with access to them. And mobile carriers are readying the next generation of mobile broadband, also with massive potential.

The quantitative and qualitative benefits of all this are vast and a challenge to catalog. But they are important to recognize and act upon.

Studies from the Brookings Institute, MIT, the World Bank, and others all tell us the same thing - that even modest increases in broadband adoption can yield hundreds of thousands of new jobs.

It's not hard to see why this is so. Take, for example, small businesses, which have accounted for more than 22 million new American jobs over the last 15 years. Broadband allows small business to think big and grow bigger. With a high-speed Internet connection and the emergence of cloud computing, every small business can have access to a world-class IT system and a national, indeed, global marketplace.

So it is that Blue Valley Meats in the small town of Diller, Nebraska doubled its employees and saw 40 percent growth by setting up a Web site and selling its beef online.

But only once Diller got broadband.

Broadband creates jobs and economic growth on the networks, in companies that start or expand on the Internet. Think of the hundreds of thousands of businesses on the eBay and Amazon platforms; think of the jobs around the hundreds of thousands of smart phone applications.

Broadband promotes jobs in the building-out of wired and wireless networks. The faster we accelerate towers and trenching, the more jobs we can create or save.

Broadband increases the number of people who can find jobs -- given the fact that job postings have increasingly moved online only. If you don't have Internet access, you risk missing out on jobs that could be available for you. And broadband can power training of workers with new skills that can increase employability in a digital economy.

The economic benefits of broadband go hand-in-hand with social benefits and the potential for vast improvements in the quality of life of all Americans.

In health care, for example, we see the digital seeds sprouting -- high-speed Internet beginning to produce medical miracles, and evidence of the potential to save hundreds of billions in health care costs. I visited one program where eye doctors were using broadband-enabled remote diagnostics to save newborns from going blind. The problem was that these babies lived too far from a specialist who could diagnose their curable disease. The solution was broadband.

The Veterans Administration similarly found a solution in broadband. It created a telehealth program that has reduced hospitalizations by 19 percent.

We see the promise of revolutionary effects in the field of education as well. Anyone with a broadband connection can have the proverbial library at Alexandria -- and the actual Library of Congress -- at their fingertips.

Studies in our broadband record tell us that online high school graduates are twice as likely to go to college as those who aren't, and that college students double their learning productivity when using online systems. But incredible as our search engines and smart phones are; as useful and cool as today's applications may seem -- they are just the tip of the iceberg for what broadband can do.

Imagine a connected America where kids in poor neighborhoods, living in rural towns or city apartments, can have access in their classrooms to the best teachers in the world, and access in their homes to up-to-date e-textbooks and high-quality tutoring from energized college and grad students around America.

Imagine a connected America where a senior with diabetes can get dietary counseling on her home computer, a remote diagnosis in a nearby facility, and, if necessary, even surgery aided remotely by specialists at teaching hospitals.

Imagine a connected America where millions are on a smart grid, cutting greenhouse gases from power plants by as much as 12 percent -- the equivalent of taking 55 million cars off the road.

Imagine a connected America where law enforcement officers and first responders from a thousand jurisdictions can deal with emergencies as one smart, fluid team on a single, integrated mobile broadband network, rather than struggling on a patchwork of incompatible networks.

Imagine a connected America where entrepreneurs anywhere -- in state-of-the-art labs or garages -- can collaborate, innovate, and create new small businesses and high-value jobs because they have access to robust and open information networks.

That America is within our grasp. But here's the question we face: Are we going to take the necessary steps to assume global leadership in broadband and fully realize these economic and social benefits here at home? Or are we going to let the lion's share of those benefits accrue to others?

That hospital I visited that uses broadband to save the sight of newborns -- in America today, that's the exception. Will we make it the rule?

We are at a crossroads.

For while the United States invented the Internet, when it comes to broadband we have fallen behind. One frequently cited survey ranks us 16<sup>th</sup> in the world; others rank us a few places higher. But no one can argue that we are leading the world in broadband, or are even as close as we should be. And I can tell you from speaking to my counterparts in other countries, the rest of the world is not sitting around waiting for us to catch up.

More than 20 countries already have broadband plans and are pushing to capture the jobs and economic advantages that broadband enables. Look at Shenzhen, China. In the 1980s it was a fishing center. Today, it is a city of 12 million that produces about 25 percent of the world's cell phones. From chip sets to mobile devices to semiconductors and applications, American high-technology businesses today are competing not only with other firms here in the U.S, but with companies in China and India and elsewhere.

In this rough global competition, the robustness of our nation's broadband ecosystem is going to play a vital role in determining where innovation occurs and who will most benefit from it.

The fact is, and our broadband record shows, that despite significant private investment and some strong strides over the last decade, America's broadband ecosystem is not nearly as robust as it needs to be.

Right now, the vast majority of Americans don't have broadband fast enough to take advantage of remote video learning or diagnostics.

Right now, roughly 14 million Americans do not even have access to broadband.

Right now, more than 100 million Americans that could and should have broadband don't have it. Because they can't afford broadband, don't know how to use it, or aren't aware of its potential benefits. That's an adoption rate of roughly 65 percent of U.S. households, compared with 88 percent adoption in Singapore, and 95 percent adoption in South Korea. The U.S. adoption rate is even lower than 65 percent among low-income, minority, rural, tribal, and disabled households. Unemployed Americans lack sufficient Internet access, even though job postings are increasingly online only. We are leaving millions behind.

Right now, many small businesses do not have access to a basic broadband connection. One estimate indicates that 26 percent of rural business sites do not have access to a standard cable modem and 9 percent don't have DSL. More than 70 percent of small businesses have little or no mobile broadband.

Right now, the United States does not have nearly enough spectrum to meet its medium- and long-term mobile broadband needs. There may be no greater obstacle to our country having a world-leading mobile broadband infrastructure, and the economic benefits that would bring.

Right now, our public schools are far behind where they should be when it comes to having the ability to deliver educational content in an accessible digital form, to all students. Tens of millions of kids who need to study online at home simply can't, and their parents are shut off from the ability to participate with their kids and teachers in the educational effort.

Right now, we lack the medical records systems and standards necessary to attain the improved health outcomes and reduced costs of telemedicine. Tens of thousands of health care facilities don't have sufficient broadband connections to support telehealth services, and doctors face serious practical impediments to adopting online medicine as part of their practices.

This is where the National Broadband Plan comes in -- we need a thoughtful, pragmatic, strategic plan to close these gaps. A plan to ensure universal access and to turn potential access into actual broadband adoption. A plan to tear down barriers and improve access to jobs, education, and health care resources. A plan to promote private investment and competition, to lower costs and incentivize accelerated upgrades to our wired and wireless networks so that the next generation of incredible innovation happens right here at home. A plan that will be a strong complement to the Commerce and Agriculture Department's near-term broadband grants.

To meet these challenges, the National Broadband Plan will set goals that are ambitious but achievable. It will describe a 2020 vision for U.S. broadband leadership grounded in two

quintessentially American ideas -- unsurpassed excellence and unrivaled opportunity.

Our team continues to work on these goals, but let me discuss a few of them now.

To meet the imperatives of global competitiveness and enduring job creation, we must have broadband networks of such unsurpassed excellence that they will empower American entrepreneurs and innovators to build and expand businesses here in the United States.

Our plan will set goals for the U.S. to have the world's largest market of very high-speed broadband users. A "100 Squared" initiative -- 100 million households at 100 megabits per second -- to unleash American ingenuity and ensure that businesses, large and small, are created here, move here, and stay here.

And we should stretch beyond 100 megabits. The U.S. should lead the world in ultra-high-speed broadband testbeds as fast, or faster, than anywhere in the world. In the global race to the top, this will help ensure that America has the infrastructure to host the boldest innovations that can be imagined. Google announced a one gigabit testbed initiative just a few days ago -- and we need others to drive competition to invent the future.

We also must commit ourselves to a path to lead the world in mobile broadband. It is growing clearer every day that broadband is the future of mobile and mobile is the future of broadband. We need to capture that future and its benefits here in the United States.

But it is not enough, important as it is, to have networks unsurpassed in their power to drive investment and innovation. We must also lead the world in inclusion.

We must lead the world in creating opportunity. And unrivaled opportunity means that every American must have access to broadband at a speed sufficient for meaningful use, no matter where they live or how much money they make.

Like other speed goals in the plan, this should evolve over time as technology and use patterns develop, and the plan will have milestones for ongoing review and updating. Other countries with broadband plans have universality goals ranging from 1 to 2 megabits. Our goal for universal service will be higher.

Opportunity also means that we need to move our adoption rates significantly -- from the current 65 percent to at least 90 percent. And opportunity means that we need to embrace a goal of universal digital literacy so that all of our kids have the tools they need to learn and compete in a 21<sup>st</sup> century economy. Every child in America must be digitally literate by the time he or she leaves high school.

Every American deserves to be in the same position as the man I met in the Bronx last week with Chairman Serrano. This fellow had lost his job several years ago at age 47. He had no computer experience. But he got information technology training through a local nonprofit called Per Scholas and, as a result, today he works in the Technical Operations Department at Time Warner Cable. He said that, to him, broadband means "broad opportunity." I couldn't agree more.

Pursuing the opportunity of universal broadband is, I believe, a universal goal. Not rural versus urban, rich versus poor, edge versus core, or one party versus another. All Americans will benefit in success; failure will hurt us all.

Our technology future is one that we can -- and must -- create together.

In that spirit, the National Broadband Plan will set us on a course for a once-in-a-generation transformation of the Universal Service Fund -- cutting waste, driving efficiencies, and converting it over time to broadband support so that all Americans can enjoy the benefits of 21<sup>st</sup> century communications networks.

There is a noble precedent for this. When the 1934 Communications Act was signed by President Roosevelt in the midst of the Great Depression, only 32 percent of American households had telephone service. But the President and the country made a commitment to get everyone affordable phone service. Today we should do no less with respect to high-speed Internet access.

Beyond that, the broadband plan will contain a comprehensive set of recommendations for all parts of the ecosystem. To mention a few:

- A recommendation for improving the highly successful E-Rate program -- which made Internet connections in America's classrooms and libraries a reality -- so that kids and teachers can have a 21<sup>st</sup> century educational experience that is the envy of the world.
- A recommendation to modernize the FCC's rural telemedicine program to connect thousands of additional clinics and break down bureaucratic barriers to a telehealth future.
- A recommendation to take the steps necessary to deploy broadband to accelerate a smart grid.
- A recommendation to develop public/private partnerships to increase Internet adoption, and ensure that all children can use the Internet proficiently and safely -- with programs like NCTA's new A+ program playing a helpful role.
- A recommendation to free up a significant amount of spectrum in the years ahead for ample licensed and unlicensed use.
- A recommendation for lowering the cost of broadband build-out -- wired and wireless -- through the smart use of government rights of way and conduits.
- A recommendation for creating an interoperable public safety network to replace the currently broken system.

There is an enormous amount of work to be done. Pilot projects to launch, more to learn, measurements and course corrections to be made along the way, using IT and, indeed, broadband to keep us on course. That is why this plan is a strategic plan -- a blueprint to be reviewed and revised in light of experience and growing knowledge.

But it will chart a clear path forward. And if we do not seize the moment, I fear for the opportunity we will have lost.

I believe that broadband will be our enduring engine for creating jobs and growing our economy, for spreading knowledge and enhancing civic engagement, for advancing a healthier, sustainable way of life. And the time to get to work on that engine is now.