

**REMARKS OF FCC CHAIRMAN JULIUS GENACHOWSKI
M-HEALTH SUMMIT,
WASHINGTON, DC
DECEMBER 6, 2011**

Good afternoon. It's great to be with you all at an event that has already become the premier destination for discussing the ways that mobile innovation can positively transform health outcomes in the United States, and internationally. It's also great to be at an event that brings together people from four communities: research, business, technology and policy.

I'd like to thank the Foundation for the National Institutes of Health for inviting me to join you today. This was an invitation I was very pleased to accept - because innovation at the intersection of communications technology and health care is essential to economic growth, job creation, and improving the quality of life for all Americans.

That has been true for years. Back in 1923 – before the FCC was even created – a doctor's manual stated that the telephone had become as necessary to the physician as the stethoscope.

Today, health care is being transformed once again, this time by high-speed Internet access, or broadband – wired and wireless, fixed and mobile. Technology is helping doctors and scientists do their jobs better and faster. It's giving consumers access to better information, tools and technologies. It is transforming our health care system.

Today, a cardiologist in a large research hospital in Des Moines is reading the EKG of a young patient in remote Iowa – spotting irregularities before they turn into more serious conditions.

A comprehensive stroke center program in Texas is using new technology to integrate telemedicine into care from the patient's door to the emergency room.

New mobile diabetes management devices are freeing patients from the burden of logging their glucose measurements and making remote monitoring a seamless process.

Ideas like these innovated in America are spreading around the world, and ideas innovated overseas are being imported to the US. One example: In Washington, DC there's a clinic that helps young pregnant women with prenatal health by using text messages. It's based on a successful program that started in Kenya.

What makes all of this innovation possible? What's the core enabler for all of these advances? Wired and wireless connectivity.

Last year we released our National Broadband Plan – a bold strategy to promote private investment and build a world-class broadband infrastructure to bring the benefits of high-speed Internet to all Americans. In it, we identified health care as an area of enormous promise where broadband connectivity could enable game-changing innovation. Our connected health team, led by Kerry McDermott and Dr. Mo Kaushal, worked closely with many stakeholders, including many people here, and in our broadband plan proposed thoughtful steps to use broadband to improve America's health care ecosystem.

Those start with a core part of our mission at the FCC – to ensure that all people in all corners of America – from small towns to highways to big cities – have ubiquitous broadband and to encourage the adoption of broadband in every home, doctor’s office, clinic and hospital.

While of course HHS and the FDA, along with the NIH and other entities, are the primary government agencies with responsibility for health issues, the FCC’s complementary role is increasingly vital. We are responsible for an information and communications infrastructure that's essentially horizontal - but that's vital for so many key verticals, including health care.

So collaborative, smart policymaking is essential - collaboration between the FCC and other agencies of government, and collaboration between government agencies and the business, technology, and research communities. Done right, this will unleash innovations and breakthroughs in how care is delivered – from improvements in remote diagnostics and treatment, to new devices that can save lives while helping contain rising health care costs.

For example, last year we entered into an unprecedented partnership with the Food and Drug Administration to help ensure that communications-related medical innovations can swiftly and safely be brought to market. The MOU we signed explicitly recognized the significant benefits of providing more certainty and clarity to the innovators and investors who will develop and launch the next generation of health-related communications technologies. I look forward to continuing our work with the FDA to achieve this goal.

To enable lasting, productive partnerships like our work with the FDA, and continued innovation in connected health, we at the FCC are pursuing a health strategy with three key components: promoting connectivity, ensuring that spectrum is optimally allocated and managed, and enabling the development of wireless medical devices.

First, connectivity. For a flourishing mHealth ecosystem, we must ensure that broadband is ubiquitous – that everyone has access to broadband infrastructure and services, wherever they live. We also need to make sure our anchor institutions, like hospitals and government buildings, have the ultra-high speed connections they need.

But today, almost 100 million Americans don’t subscribe to broadband at home. 20 million Americans live in areas without broadband infrastructure. And up to 30 percent of rural clinics don’t have adequate broadband service. They can’t offer telemedicine, easily access or exchange electronic health records, or view the results of diagnostic tests such as MRIs and x-rays.

So just six weeks ago, the Commission acted unanimously, and on a bipartisan basis, to comprehensively modernize the Universal Service Fund, the primary program the federal government uses to support communications networks in rural America. We transformed the multi-billion dollar program from supporting plain old telephone service to a new Connect America Fund that supports universal broadband. As a result, over the next six years, seven million more rural Americans will be connected to broadband, and we are now on a path to get broadband to every American by the end of the decade.

In that Order, the Commission for the first time established a goal as part of the Universal Service Fund of getting broadband to all community anchor institutions – including hospitals and clinics – throughout rural America. This is an important step toward getting medical institutions the tools they need to deliver robust in-building mobile data.

And last year we launched an initiative to transform a related program the Commission oversees that is specifically focused on expanding rural health care connectivity. The proposed reforms would help ensure patients in rural areas have access to state-of-the-art diagnostic tools now typically available only in the largest and most sophisticated medical centers.

With the help of leading Internet service providers, technology companies and nonprofits, we've also launched the "Connect to Compete" initiative – an unprecedented effort to close the broadband adoption gap. Low-income families with children on school lunch programs will be able to sign up for broadband Internet for \$9.95 a month and purchase a laptop for \$150, and tens of thousands of Americans will begin to train their neighbors in basic digital literacy and tech skills so they can use broadband effectively. This will help young adults, grandparents, and millions more Americans become partners in their own care and spur the further development of the wireless health ecosystem.

The second pillar of our strategy is spectrum.

Spectrum is our invisible infrastructure – the oxygen that sustains all wireless medical technologies. It's the key to making mobile communications work within a hospital's walls so patients and medical professionals can move from room to room while giving and receiving care. It's critical for transforming commercial wireless networks from the era of voice-only cell phones to the era of robust, reliable wireless data communications that enable innovative new applications.

For over seven decades, the FCC has managed the United States's commercial spectrum, and efforts over the last few years to promote competition and spectrum flexibility have unleashed tremendous innovation and investment.

Today, we're pursuing a bold agenda to harness spectrum for mobile innovation across the American economy, and to address the gaps and challenges we face, including the spectrum crunch. The spectrum crunch, put simply, is the fact that increasing mobile demand for spectrum is rapidly exceeding the supply of spectrum available for mobile broadband.

So in our National Broadband Plan, we set a goal of unleashing 500 megahertz of spectrum for mobile broadband by the year 2020 – a goal endorsed by the President in an Executive Memorandum last June.

And to help meet that goal, we've proposed a new idea – voluntary incentive auctions.

Under this proposal, spectrum licensees like broadcasters would voluntarily supply spectrum into an auction. The broadcasters would get a share of the proceeds from the auction and mobile providers would get large blocks of beachfront spectrum that could be used to deploy mobile broadband.

It's an incentive-based approach that enjoys broad, bipartisan support, and I'm hopeful that Congress will act soon to authorize these auctions so that we can move forward and free up new spectrum – and its benefits.

Unlicensed spectrum is also important for wireless innovation, including in innovation in health care and devices. In just the past few years, we've seen an explosion in new mobile devices that use unlicensed spectrum, such as devices by Enteromedics that are surgically implanted in the body and used for the treatment of disorders such as pancreatitis.

And we've seen an explosion in technologies like WiFi - now used in most of America's health care facilities - and Bluetooth - which helps accommodate low-power medical apps that monitor heart rates or collect information from pulse oximeters. These technologies developed because of a decision twenty-five years ago to open up for unlicensed use a band of what was thought to be "junk" spectrum.

Today, unlicensed spectrum has become an important complement for the efficient functioning of mobile devices that predominantly run on licensed spectrum. Traffic offloading to WiFi helps reduce congestion that could otherwise impair the flow of data on commercial networks.

WiFi and other innovations based on unlicensed spectrum have contributed hundreds of billions of dollars to our economy, and offer tremendous potential to foster economic growth and job creation.

This is why the FCC has been looking for additional opportunities to harness the benefits of unlicensed spectrum, including the TV "white spaces," which can enable new technologies like Super WiFi that can cover larger areas than traditional WiFi.

It's vital that we continue to unleash unlicensed spectrum as a platform for innovation. And as the number and variety of medical applications that use spectrum, both licensed and unlicensed, continue to grow, we also need to develop guidance to ensure that the wide array of devices used in health care facilities can share the radio spectrum without interference - what some have described as a reference architecture.

The FCC looks forward to working with the industry and the FDA to support the development of such guidance.

The third pillar of our strategy is enabling the development of medical devices that can improve the quality of health care and reduce its cost.

Often, we can do this by helping mobile app or device developers to use spectrum in new ways, either through new technologies like sensing and dynamic spectrum access or by allowing expanded use of spectrum on a secondary basis.

For example, last week we authorized Second Sight Medical Products to market a retinal prosthesis that exceeds our ordinary power limits, but that will help restore functional sight for individuals with certain eye diseases while preventing harm to the operation of other devices.

Last week we also adopted rules to provide access to spectrum for medical micropower networks, which promise to dramatically improve the lives of the millions of Americans who suffer from spinal cord injuries, traumatic brain injuries, strokes, and various neuromusculoskeletal disorders.

One of the interesting aspects of the provisions for medical micropower networks is that they employ dynamic spectrum access or smart radio techniques to share spectrum with other radio services without interference. When the devices sense an interfering signal from another radio service, they automatically switch to another frequency that is clear. We are going to need to continue to develop and use these sorts of techniques to make efficient use of our limited spectrum resources.

We also recognize that certain types of medical devices need access to specific parts of the spectrum under provisions that are specifically tailored for them. For example, the FCC has provided spectrum for wireless medical telemetry devices that are used to monitor patients in critical care units. And we've provided spectrum for implanted medical devices where, for example, radio is used to reprogram cardiac pacemakers and defibrillators, and for the Medical Communications Service under which devices can, for example, continuously monitor blood glucose levels to control and treat diabetes.

Helping a blind person to see. Empowering a paraplegic to stand. That's the power of wireless technology.

And that's why the FCC will continue working hard in 2012 to harness the power of broadband to improve the lives of people here in the United States and around the world.

Early next year, we plan to adopt rules that provide access to spectrum for medical body area networks in the 2360 - 2400 MHz band. These networks can be used to wirelessly interconnect a network of extremely low-powered sensors on the body so that patients will no longer be hooked up to a set of wires that anchor them to monitoring equipment. They'll be able to move about the health care facility as they recover, while still being monitored for any health issues that might develop.

We've also proposed to improve and expand our experimental licensing program, proposing to ease testing restrictions on universities and research organizations, and proposing a new program to speed development of new health-related devices that use spectrum and have a significant impact on reducing medical costs. We plan to finalize these provisions next year as well.

Few technologies hold more promise for health care – improving outcomes at lower costs – than broadband, particularly mobile broadband.

Working together, we can build on our progress and seize the opportunities of mHealth for all Americans.

Thank you.