

**STATEMENT OF  
CHAIRMAN JULIUS GENACHOWSKI**

***Re: Amendment of Parts 2 and 95 of the Commission's Rules to Provide Additional Spectrum for the Medical Device Radiocommunication Service in the 413-457 MHz band, ET Docket No. 09-36***

This may seem like science fiction, but it's not. A veteran who recently participated in a study conducted at the Walter Reed Medical Center had a spinal cord injury that paralyzed his lower limbs. The patient was treated with an early version of the technology we are further advancing today, Medical Micropower Networks. Thanks to this technology, the patient recovered use of his limbs, and five months later he could perform rehabilitation exercises without using the microstimulators.

Anyone wondering why we have made unleashing mobile innovation one of the FCC's highest priorities need look no further than this example, testimonials included in the record in this proceeding, and the stories we heard in the video during the Bureau's presentation. As we saw, new wireless networks have the potential to enable paraplegics to stand and to facilitate other breakthrough treatments for victims of spinal cord injuries, traumatic brain injuries, and strokes. These broadband-enabled technologies are life-changing, impacting individuals, families, and communities in ways we can only begin to imagine.

This may be the most dramatic step we've taken to harness the benefits of communications technology for health care, but it's not the first. In our National Broadband Plan we identified health care as an enormous area of opportunity. We pointed to ways that broadband can improve health care quality and reduce costs – including remote medical monitoring. Wireless devices can help diabetes patients track their glucose levels or heart disease patients monitor cardiovascular data.

And as part of our mobile broadband agenda, the Commission has already taken a number of actions to seize the opportunities of mHealth. We entered 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. We've also taken steps to facilitate spectrum sharing and 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.

Today's order to enable Medical Micropower Networks builds on this work and promises to dramatically improve the lives of the millions of Americans who suffer from spinal cord injuries, traumatic brain injuries, strokes, and various neuromusculoskeletal disorders. These debilitating injuries severely impair quality of life and impose significant medical costs. Americans incurred costs of approximately \$73.7 billion in 2010 for stroke-related disabilities and \$60 billion in 2000 for traumatic brain injuries. Of course, the true cost of these injuries to these victims is immeasurable.

The devices that we expect to be deployed under the rules the Commission adopts today hold the promise of safer, less invasive, and more effective treatment options than those available under current medical practice. We're talking about medical miracles: allowing paraplegics to stand and restoring hand grasp function for quadriplegics. The implications for veterans, accident victims and people born with disabilities are incredible. Medical Micropower Networks can restore their mobility.

Medical Micropower Networks have been shown to reliably operate in spectrum shared with other services and are a model for making more efficient use of radio spectrum by using advanced technologies such as monitoring the quality of the radio link, switching frequency bands, notching out of interfering signals, and error correction coding. Testing also demonstrates that the Medical Micropower Network devices developed by the Alfred Mann Foundation are able to operate reliably in spectrum shared with federal government and commercial services.

The Commission's action today is only a first step in our efforts to advance the health care agenda. Early next year, I expect that we will act with respect to Medical Body Area Networks for wireless patient monitoring in health care facilities and make changes to our experimental licensing program to facilitate research and development of wireless medical devices.

I'm also pleased to announce that today the FCC's Office of Engineering and Technology is issuing an order allowing Second Sight Medical Products, Inc. to market a retinal prosthesis that will help restore functional sight for individuals with certain eye diseases. Second Sight's Argus II retinal prosthesis is a medical implant system designed to treat blind people suffering from advanced retinal degenerative diseases. The system consists of a neurostimulator surgically implanted on the eye, a pair of eyeglasses housing a miniature video camera, and an external video processing unit connected to the eyeglasses via cable.

The video camera captures images that are converted into instructional signals by the video processing unit and are sent back to the eyeglasses to be wirelessly transmitted to the implant. OET's order will permit the device to exceed the Part 15 limits for intentional radiators when the data signals are transmitted from the eyeglasses to the implant.

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 around the clock to harness this power to improve the lives of the American people.

I want to recognize and thank the staff in our Office of Engineering and Technology who worked on today's item, particularly Julie Knapp, Geraldine Matise, Jamison Prime, Nicholas Oros and Peter Georgiou. I'd also like to thank Amy Levine of my office for her excellent work shepherding through this item.