

**STATEMENT OF
COMMISSIONER JESSICA ROSENWORCEL**

Re: *White Spaces and Spectrum Sharing for Wireless Broadband Presentation*
(July 19, 2012)

The wireless revolution is here to stay. The number of devices using our airwaves is growing at breathtaking speed. This is more than the proliferation of wireless phones and tablet computers. Consider that within the next decade machine to machine devices communicating wirelessly may number as high as 50 billion. But as with any revolution, the old ways of management will have to give way to the realities of our new world.

In the simplest terms, the demand for spectrum is going up. The supply of unencumbered spectrum is going down. This is the pressure point. We must innovate.

Innovation, as the presentation here today reminds us, will take many forms. Good spectrum policy involves licensed and unlicensed services. The former provides reliability and interference protection; the latter provides low barriers to entry and low-cost opportunities for creative uses. But what we have done before will not be sufficient in the years to come. The solution, as others have noted, lies in three things—technology, topology, and spectrum.

First, technology. New technologies and opportunities for sharing are under development. Geographic and temporal sharing are established notions. But more dynamic technologies need investment from the public and private sector to speed their development on a broader scale. I believe we can lead here, just as we have led the world in developing white spaces technology.

Second, topology, or the structure of networks. It is here that small cells hold large promise. They can make more efficient use of existing frequencies. They can help cover geographies that are hard to reach with macro service. But standardization is still underway, backhaul is key, and the agency should be looking for ways to facilitate their use.

Third, spectrum. We all know that the President has called for 500 megahertz of spectrum to be cleared for commercial use within ten years. We are making progress at the Commission, including in our review of how to provide for more flexible use of the 2 GHz band currently assigned to Mobile Satellite Service. Plus, we have a series of auctions, including incentive auctions, on the near-term horizon. To bring certainty to the marketplace, I believe we should put these auctions on a clear timeline. But it will take more than these efforts to meet this goal. As others have noted, the federal government uses large swaths of choice spectrum. While past efforts to reclaim spectrum from federal users have involved the stick, I think going forward we should explore the carrot. Today, the Commercial Spectrum Enhancement Act provides funding to federal users for relocation when their airwaves are reallocated for commercial use. It also now provides upfront funding for planning. What is missing is a series of incentives. What if we were

to financially reward federal authorities for efficient use of their spectrum resource? What if they were able to reclaim a portion of the revenue from the subsequent re-auction of their airwaves? Would they make smarter choices about their missions and the resources they need to accomplish them? It's an idea worth exploring. The idea of synthetic currency proposed by the President's Council of Advisors on Science and Technology is also worth exploration.

Finally, it is essential to understand why it is so important that we get our new spectrum policies right. Putting our wireless resources to work will grow the economy. By some estimates, every dollar invested in the wireless sector will add \$10 to our gross domestic product. This is investment that can create jobs, raise wages, and change the way we live. When it comes to the state of wireless, the issues are challenging, but if we get our policies right, the rewards are real.