

**Opening Statement of the Honorable Greg Walden**  
**Subcommittee on Communications and Technology**  
**Hearing on “The Role of Receivers in a Spectrum Scarce World”**  
**November 29, 2012**  
*(As Prepared for Delivery)*

Good fences make good neighbors. Where I come from in Oregon, we know that’s the case for crowded city blocks and sprawling ranches alike. In many places in my beautiful district, the land stretches for miles and running out of space isn’t a problem. But in our digital world—in Oregon and around the country—we’re running out of room. Demand for spectrum is far outpacing supply, and we need to figure out how to use the room we have as effectively as possible. In short, how do we create good, strong fences to make sure everyone stays within their spectrum bands so spectrum can be used as efficiently as possible?

Why is this important? Simple—spectrum equals jobs. Telecommunications is the most vibrant and innovative sector in America. Spectrum is the fuel that it runs on, but there’s a limit to our supply. As our subcommittee continues to work to free up more spectrum, we are also focused on maximizing use of existing spectrum. We’ve taken a forward-looking approach—authorizing first-of-its-kind incentive auctions and taking a look at making government spectrum use more efficient.

This hearing focuses on receivers, and how interference issues can impact our ability to roll out new broadband services. While the controversy surrounding LightSquared and GPS is one example, we have seen similar debates involving a would-be broadband provider called M2Z networks, satellite radio, and unlicensed white-space devices. That this issue is starting to recur more frequently raises an important question: What engineering techniques and smart strategies are available to fit more mobile services in a crowded spectrum environment without having to carve out larger and larger guard bands—big, inefficient moats—to avoid interference? And how can we do so without unreasonably increasing the costs of services and devices?

The FCC has traditionally tried to combat interference by regulating wireless transmitters and placing wireless services of a similar type in neighboring bands—like a city planner placing schools next to other schools and factories next to other factories. While that has generally been successful in the past, fitting additional users into existing spectrum is becoming more difficult with the accelerating rise of new wireless technologies and services.

Recently, both the FCC and the President’s Council of Advisors on Science and Technology have taken a fresh look at the way we manage interference and suggested that we need to begin examining receiver performance to maximize our spectrum resources. This is in part because receivers are developed to meet current technological needs, not to anticipate a changing spectrum environment. They are built for the technology world of today or even a few years ago, which, as we know, will look very different in just a few more years. Again, be prepared.

As a result, the FCC is increasingly either rejecting new users to protect existing ones or turning to guard bands—bands of restricted-use spectrum to physically separate the two licensed uses. Sometimes these guard bands are like digging a big, wide moat between neighbors when a simple fence will do. Neither rejecting new users, nor ordering large guard bands, is ideal if we intend to remain the world’s most innovative wireless economy.

Today’s witnesses include electrical engineers and a physicist with expertise in radio engineering. I look forward to their guidance on how receiver performance strategies in devices as different as televisions, smartphones, and GPS systems impact our ability to put spectrum to its best use. I am also looking forward to their thoughts on how to strike a balance, so we can accommodate new innovations in wireless technology without forcing manufacturers to waste time and money over-engineering receivers for unknowable future uses. Remember: spectrum equals jobs, and we must make sure it continues to remain a job-creation engine in the future. We must ensure that our policies promote continued growth and innovation in this sector without endangering our nation’s communications, commerce and security.

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