Access To Low-Band Spectrum Is The Key To Wireless Competition

Not all spectrum is created equal. Low-band spectrum – spectrum below 1 GHz – has unique propagation characteristics that make it very valuable to mobile wireless carriers. Carriers refer to this spectrum as “beachfront” spectrum because it is so valuable. There are two attributes that make low-band spectrum ideal for rural areas and densely populated urban and suburban areas:

- Low-band spectrum provides superior coverage over large geographic areas.
- Low-band spectrum is able to better penetrate through walls of buildings.

Why is low-band spectrum good for rural areas? Low-band spectrum will travel farther in comparison to other spectrum. Whereas low-band spectrum will cover a large area using one cell site, it may take 7 times more cell sites to cover the same area using mid-band spectrum, and 13 times more cell sites to achieve the same coverage using high-band spectrum. In other words, by using low-band spectrum, mobile wireless carriers are able to gain significant cost savings associated with network deployment – less capital expenditures and lower recurring site operating expenses.

Why is low-band spectrum needed in densely populated urban and suburban areas? Low-band spectrum is the key to assuring robust in-building coverage. Low-band spectrum is able to penetrate through walls of buildings. Sufficient in-building service is critical for keeping subscribers satisfied. According to Cisco, 80% of all data consumption occurs indoors. In recent surveys, 75% of consumers said they would switch mobile carriers to obtain better coverage in their indoor workplace.

Unfortunately, the two wireless giants – AT&T and Verizon – already own nearly three quarters of all valuable low-band spectrum that is available for commercial use nationwide.
This is why RWA and many others are calling on the FCC to adopt pro-competitive rules for the 600 MHz Incentive Auction that will enable competitive carriers to have a better chance to gain access to this vital spectrum. The Incentive Auction is a once-in-a-lifetime opportunity to expand the benefits of mobile wireless competition for all consumers. For RWA’s members in particular, it is a chance to expand and improve coverage to those living, traveling, and working in rural areas.

To ensure these goals are met, the FCC must increase the size of the Incentive Auction spectrum reserve to 40 MHz. Without a reserve consisting of 40 MHz, the most dominant carriers – AT&T and Verizon – will be able to foreclose other carriers from gaining access to vital low-band spectrum, and worse, will be able to “choke off any threat of competition in the future.”

This one small change to the Incentive Auction – increasing the spectrum reserve to 40 MHz – will have a major positive impact on the future of the wireless industry. A larger Incentive Auction spectrum reserve will go a long way in promoting competition in wireless markets across the country including our nation’s small and rural communities that rely upon robust and innovative services from RWA members.