

**Remarks of FCC Commissioner Michael O’Rielly  
Before the Wireless Connect 2019, University of Maryland  
April 4, 2019**

Let me begin by thanking Dr. Rikin Thakker and Ryan Elm for inviting me to join you at Wireless Connect 2019 and for considering me for this award. It is a distinct honor to be part of an event that seeks to get the many stakeholders in the wireless industry together in one place to engage in not only academic discussion, but also provide an opportunity to exhibit and observe the latest 5G technologies and services. I applaud the University of Maryland for putting this event together and serving as such a gracious host today.

I also appreciate the kind introduction by my friend, Jonathan Adelstein. He is always a hard act to follow, and it is a true privilege to receive this acknowledgement after he received the inaugural award last year. Many of you may not know that Jonathan and my careers have followed similar paths from Capitol Hill to the Commission, and, while in the past we may have found ourselves on opposing sides, we often find ourselves now fighting alongside one another.

When I was informed about today’s event, I was told that I was being honored for my efforts to make spectrum available for use in next-generation, or 5G, networks. I am sincerely humbled by this gesture, but I must admit that this feels a bit like being part of a life time achievement ceremony, which tends to be held at the end of one’s career. We can hold off on any eulogies just yet. While I have spent considerable time and effort advocating for 5G spectrum, there is so much left to do and I’m not ending my advocacy for 5G bands anytime soon. So, I will endeavor to continue to do what I can in the future to truly merit this recognition today. I just ask for your patience. As I have often said, things at the FCC always seem to take two years longer than you think they should.

All kidding aside, for those who have followed my time at the FCC you know that I tend to use my speaking opportunities to get into the substance. Sometimes I am far, far in the weeds but rarely in the clouds. With that, let’s delve into some policy. Hopefully, I won’t bore you too much!

The one principle that anyone engaged in wireless issues knows is that we cannot take time for granted. As today’s speakers, panelists, and exhibitors will demonstrate, 5G is no longer out there somewhere on the horizon. It is here staring us right in the face. And the Commission’s purpose, as I see it, is to ensure that the regulatory environment and necessary spectrum exists to ensure the continued development and deployment of 5G and all next-generation wireless technologies. From Jonathan Adelstein and others’ infrastructure initiatives to the 5G trials already underway, the FCC must keep pace with market realities, being led by many of you in this room.

I am pleased to say that many of my past efforts to get more spectrum to be released into the marketplace are starting to come to fruition. Early in my tenure at the Commission under former Chairman Wheeler’s leadership, the FCC was focused on the millimeter waves. Without being too boastful, my efforts helped lead to the 28 GHz auction, which closed at the end of January 2019; the 24 GHz auction that is underway; and the 37, 39 and 47 GHz auction, which will occur before the end of this year. All positive and exciting developments. This notwithstanding, there are many millimeter wave bands that are still teed up for Commission consideration, including 26, 32, 42 and 50 GHz. The Commission must take up these bands as quickly as possible, so that we have sufficient spectrum available for multiple providers to offer service and to ensure there is a pipeline for generations of wireless innovation to come after 5G.

And, while the millimeter wave bands will continue to be very important and the Commission's efforts have led the way globally, most of my attention the last few years has been on the mid bands where the need for 5G spectrum is the greatest. Specifically, over two years ago, it became clear that industry and the international community had shifted its focus to mid-band spectrum and that the Commission needed to adjust accordingly to ensure our global leadership in 5G.

On that point, I appreciate that Chairman Pai asked me to take the helm on the Commission's efforts to review the priority licensing, commonly referred to as PALs, for the 3.5 GHz, or CBRS, band. After months of talking to interested parties, a fair compromise was reached regarding such issues as increasing the PAL geographic area size, providing for renewability, and extending term lengths, and improvements were also made to technical rules so that the band would be more attractive for 5G and other advanced services. These changes are now effective, as we managed to adopt these rule modifications without any legal challenges. Everyone I talk to, even those who were originally opposed to county-sized licenses, see this band a crucial ingredient to provide new, innovative services to Americans and are looking forward to a successful auction. CBRS is an incredibly exciting opportunity and likely to be the first U.S. mid-band spectrum ready for 5G services.

Going forward, I will continue to pressure the FCC to get these frequencies into the hands of wireless providers as quickly as possible, but, unfortunately, I have been informed that it may take until next year at the earliest to conduct an auction. As I said, things always tend to take longer than they should in the government, and apparently reconstructing auction software over and over takes some time.

Thankfully, 3.5 GHz spectrum should be available shortly under general authorized access, or the unlicensed tier. Significant progress has been made in the testing phases of the two systems that will enable sharing of this spectrum, including with the U.S. Navy incumbents. Three ESC operators have completed testing, have submitted their reports, and the FCC should finish its review shortly, allowing for the certification of the ESC systems. SAS testing is still being conducted, but initial commercial deployments will hopefully happen in the June timeframe.

While placing 3.5 GHz into the hands of industry is a huge step forward, it is just not enough spectrum, by itself, to support 5G. The Commission must move with all due haste to conclude its proceeding to open the C-block spectrum for additional wireless use. The existing C-Band satellite downlink spectrum – or 3.7 to 4.2 GHz band – provides the best mid-band spectrum play for 5G wireless services. Not only is it the largest swath of mid-band spectrum available, but it is adjacent to the 3.5 GHz band and the current satellite licensees are willing to part with some of it. I have led the charge to open this band for terrestrial use, and it remains one of my highest priorities for this year at the Commission.

As many of you have heard me say, the question is no longer whether there will be wireless operations in the C-band, but what is the appropriate mechanism for reallocation and determining how quickly it can occur. When the Commission started this proceeding, I announced some very simple principles that would need to be met. Besides accommodating the current incumbent users, the plan needs to repurpose a sufficient amount of spectrum – at least 200 to 300 megahertz – for private sector wireless use and has to happen quickly. How quickly? Yesterday would have been nice, but, under no circumstances, can the Commission adopt a process that takes five or more years to get this spectrum into the marketplace. Indeed, the Commission needs to come to a resolution and adopt an order in the coming months to ensure that we keep pace with the global community in the mid bands.

Additionally, the U.S. must step up efforts to make available spectrum below the CBRS band for private sector use. Originally, there were reports that the federal users would clear the 3.45 to 3.55 GHz frequencies, but, unfortunately, those entities seem to have reconsidered their “approach” and now favor studying these bands for sharing instead. This is just not good enough. Instead of a sharing feasibility study, we need to know the best and fastest way to clear and reallocate this spectrum. A study should then be conducted to determine what additional wireless uses can be supported in the frequencies between 3.1 and 3.45 GHz.

I would also be remiss if I didn’t throw in a few words about making additional spectrum available for next generation unlicensed spectrum. The Commission must expedite its efforts to expand unlicensed services into the 6 GHz band, which is the corresponding uplink for the C-band spectrum. This is prime spectrum not only due to its proximity to the existing 5 GHz band, but also because it can provide the largest channels of spectrum to achieve the speeds, capacity and latency that will be needed.

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That’s enough of a lecture from me on this fine day. Hopefully, my advocacy on these key issues will help the Commission see the necessity of completing an ambitious spectrum agenda before I actually do retire. And if this is accomplished, maybe I will feel worthy of the generous award that you have presented to me today.