

**Remarks of Michael O’Rielly, Federal Communications Commission
New America’s Open Technology Institute
“The Road to Gigabit Wi-Fi: Can We Share the 5.9 GHz ‘Car Band’?”
January 12, 2016**

Let me start by thanking Michael Calabrese and New America for organizing and hosting this event. I am pleased to join my friend and colleague, Commissioner Rosenworcel, to talk about our joint efforts to advance additional uses of what’s commonly referred to as the 5.9 GHz band. I also would like to comment briefly on New America’s latest report and some related activity that took place at the World Radiocommunication Conference (WRC’15). I promise not to talk too long to allow plenty of time for the distinguished panel that will follow to discuss these issues.

It is fair to say that I haven’t always agreed with New America on every communications issue during my time at the Commission. We certainly have had some fundamental disagreements on particular policy matters. Never let it be said, however, that our views *always* clash. In fact, when people of vastly different beliefs can come together on an important policy matter, it should help demonstrate the depth of its overall support. So, I am pleased to be here today to discuss our mutual perspective on the benefits of unlicensed spectrum in the upper 5 GHz band.

As Michael Calabrese knows well, my involvement with unlicensed spectrum actually originated far before my Commissioner days – back to the early debates over television white spaces when then-Senator John Sununu (R-NH) joined a few colleagues to champion its use. After much consternation, common sense and science eventually won out over hyperbole and unsubstantiated claims. That is not to say that white spaces has been an unmitigated success, but with a little luck and thoughtful planning, the economics might be able to catch up to its technological capabilities.

Consider the importance of unlicensed – and Wi-Fi in particular – from a macro perspective. In the past, Commissioner Rosenworcel has highlighted some critical statistics to emphasize just how significant Wi-Fi already is to the American economy and our collective Internet experiences. But there is a flip side to that same coin: the unanticipated innovation that occurs with each new unlicensed band made available for use. I’ve referred to this as the magic or beauty of unlicensed spectrum: no one can predict the astonishing outcomes that will occur once America’s creative geniuses are set free to experiment and innovate. It’s like putting paint supplies in front of Michelangelo, providing a quill pen to Shakespeare, or giving a bicycle and wood to the Wright Brothers.

In terms of today’s particular topic, the upper 5 GHz is a critical component to the continued success of unlicensed spectrum use. This is because it’s adjacent to the rest of the 5 GHz band, in which Wi-Fi has been incredibly successful. One possibility is that Wi-Fi devices will be able to use larger slices of unlicensed spectrum, perhaps tracts of 100 megahertz or more, to dramatically improve throughput speeds and capacity. We are talking about gigabit

speeds. For the foreseeable future, there is unlikely to be spectrum better positioned to complement current Wi-Fi offerings, in terms cost efficiency, time to market, and technological possibilities, as the 5.9 GHz band.

Given the stakes involved, it should be clear that our interest in this project is not intended in any way to undermine the automobile industry's ability to deploy DSRC (Dedicated Short Range Communications) systems without harmful interference. It is not a pet project seeking to gain the attention of the powerful automobile industry, nor is it to inflict pain on an industry traditionally not regulated by the Commission.

For those who wonder if there is some type of personal animosity towards the automobile industry, let me shed light on a little of my background. I am the proud son of a car guy, who participated in the last stage of the automobile distribution chain: a new and used car salesman. That means that the car industry put food on our table, kept us clothed and allowed us to enjoy a middle-class American lifestyle. Far from hating the American auto industry, I want to see it succeed, and improving the overall safety experience can be a key component for consumers.

At the same time, there should be little doubt that exploring the ability to allow other uses, such as Wi-Fi, in the 5.9 GHz band, via sharing or partitioning, is the right thing to do. Even the auto industry seems to have come around to this thinking, as evidenced by the letters the Commission received from leading Senators and the industry. It's no longer a question of whether to do it; it's now a question of how to go about it.

Similarly, I think there is general agreement that the Commission, rather than some other department or agency, should move forward to conduct the necessary testing, based on sound science. And we are prepared to do so in the near term with cooperation – and most importantly prototypes – from equipment manufacturers. The good news is that as an independent agency, the Commission is not supposed to get stuck in the political morass that can be all too common in the rest of the Administration.

The Commission's role, as opposed to other Federal agencies, is to ensure that the 5.9 GHz spectrum band is used efficiently and as intended. That currently is not the case with regards to DSRC technology that has been on the drawing and testing boards for over 15 years. Underutilized and underwhelming, we won't see our first deployment outside of a testing area until 2017, when Cadillac will equip its CTC with DSRC. More significantly, Commissioner Rosenworcel and I learned in our visit to the unofficial DSRC headquarters last year that the rest of the industry won't follow for at least another two years later, assuming nothing goes awry or technology doesn't pass DSRC by in the meantime. But while some remain skeptical regarding DSRC technology, it is somewhat irrelevant for my purposes at the current moment.

Instead, I am focused on what is the best path to introduce sharing into the 5.9 GHz band. Currently, the Commission has before it two competing plans submitted by Cisco and

Qualcomm. There is merit to both proposals. The former perhaps provides an easier path to approval, but the latter may have more ultimate value and benefit.

As the Commission considers the best way to share the 5.9 GHz band with non-automotive users, we must ensure that the DSRC technology focuses on human safety, which needs to be defined reasonably, but narrowly. For Commission purposes, safety does not include functions better suited for commercial spectrum bands and partnerships with commercial wireless providers. For instance, we should make clear, as necessary, that e-commerce and social media are out of bounds, and so too are things like locating parking spots.

Some may try to claim that the actions just taken at WRC'15 should preclude efforts to move forward with sharing of the 5.9 GHz band. As someone who spent time at the conference, I think that this is misplaced. More importantly, the activities of WRC'15 in other bands shows that technology leaders, such as the United States, must step outside the boundaries of an organization that may be losing its focus and relevancy. Certainly, the United States – and a number of other countries – will move forward in key spectrum areas, such as 600 MHz and 28 GHz, despite decisions at WRC, and we won't be tied to any future upper 5 GHz decisions as well.

New America's latest report does a very good job of thoughtfully dissecting a number of issues I have discussed today and makes a strong case for the Commission initiating a proceeding to formalize the testing process. I am very sympathetic to this view as the time to act is soon, before the Commission gets focused on some other unrelated matter. Moreover, too many items will soon be caught in the political whirlwind that will intensify later this year, which will likely slow down the Commission's activities as personnel depart.

With a little bit of hard work and attentiveness, the Commission can vastly expand the Wi-Fi experience at 5 GHz. I am pleased to be part of the effort to make it happen.

Thank you for your attention, and I understand there may be questions from the audience.