

**STATEMENT OF
COMMISSIONER MICHAEL O'RIELLY**

Re: *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, GN Docket No. 14-177; Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands, ET Docket No. 95-183 (Terminated); Implementation of Section 309(j) of the Communications Act – Competitive Bidding, 37.0-38.6 GHz and 38.6-40.0 GHz Bands, PP Docket No. 93-253 (Terminated); Petition for Rulemaking of the Fixed Wireless Communications Coalition to Create Service Rules for the 42-43.5 GHz Band, RM-11664, Notice of Inquiry*

The beauty of today's Notice of Inquiry is that no one in this room knows where it will eventually take us. Which spectrum bands above 24 GHz can be effectively used in the short-term, over the long-term? Will the technologies be mobile or fixed, unlicensed or licensed? What equipment will be necessary to utilize these bands? Only research, testing and time will tell.

Commercial use of high band, or millimeter wave, spectrum provides a host of opportunities and challenges to our technology developers, including technical hurdles and the constraints of physics. I look forward to exploring with interested stakeholders the potential for these bands, while also recognizing the incumbents already using these frequencies.

At its heart, this item expands our search for additional spectrum to meet America's mobile needs, especially wireless broadband technologies. Two important data points highlight this: the growth in monthly mobile data,¹ and the growth of mobile connected devices.² Consumer demand for faster wireless speeds is also exceptionally clear.

My colleague, Commissioner Rosenworcel, has been outspoken in the last few weeks on the need to open these frequencies to additional commercial wireless uses, and she is correct. The bands in the higher giga-sphere represent an untapped ocean of possibility for wireless usage. The Commission cannot sit idly by and start our search for future commercial bands only when the need arises. That is too late. We must be forward looking to figure out what is next in the spectrum pipeline.

If I had one pause, it is that some refer to these bands as 5G. The truth is that 5G wireless technologies are likely to use many spectrum bands, and may or may not include these millimeter wave

¹ In 2013, Americans consumed 360 Petabytes – the equivalent of 90 million DVDs – of mobile data per month. It is estimated that by 2018 this number will grow to approximately 2.7 Exabytes – or 677 million DVDs. See Cisco, *VNI Mobile Forecast Highlights, 2013-2018, United States – 2013 Year in Review*, http://www.cisco.com/assets/sol/sp/vni/forecast_highlights_mobile/index.html#~Country (filtering by United States and 2013 Year in Review) (last visited Oct. 16, 2014); Cisco, *VNI Mobile Forecast Highlights, 2013-2018, United States – 2018 Forecast Highlights*, http://www.cisco.com/assets/sol/sp/vni/forecast_highlights_mobile/index.html#~Country (filtering by United States and 2018 Forecast Highlights) (last visited Oct. 16, 2014).

² It is expected that between 2013 and 2018, the number of mobile-connected devices will increase from 390 million to 673 million and that machine-to-machine traffic will increase 68 fold. See Cisco, *VNI Mobile Forecast Highlights, 2013-2018, United States – Network Connections*, http://www.cisco.com/assets/sol/sp/vni/forecast_highlights_mobile/index.html#~Country (filtering by United States and Network Connections) (last visited Oct. 16, 2014); Cisco, *VNI Mobile Forecast Highlights, 2013-2018, United States – M2M*, http://www.cisco.com/assets/sol/sp/vni/forecast_highlights_mobile/index.html#~Country (filtering by United States and Potential M2M Connections) (last visited Oct. 16, 2014).

frequencies. As the item recognizes, there is no consensus definition of 5G. It would be wise to sharpen our lexicon ever so slightly going forward.

I thank the Chairman for initiating this proceeding and the Wireless Telecommunications Bureau and Office of Engineering and Technology for their work on this item.