

**STATEMENT OF  
COMMISSIONER JESSICA ROSENWORCEL**

**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 United States leads the world in 4G LTE wireless deployments. While we are home to less than five percent of the globe's population, we have nearly half of all LTE subscriptions worldwide.

The world has taken note. I can say this with confidence, because just last week I was in Austria, where I represented the United States at the annual gathering of the International Institute of Communications. So I was able to sit down in Vienna with colleagues from around the world and talk—over some spectacularly strong coffee—about what we have accomplished here on our shores.

We can be proud. But we also have more work to do. Because laurels, are not, in fact, good resting places. Because we need to think beyond our success with 4G service. Because the race to 5G is on.

Look around, because the evidence is there. Slowly but surely, the world's wireless economies are planning for 5G. Last year, South Korea announced plans to run its first 5G trials by the time it hosts the Winter Olympics. That's just three years away. Not to be outdone, Japan's Ministry of Internal Affairs and Communications announced that it hopes to roll out 5G service in a number of cities by 2020—the year that Tokyo hosts the Summer Olympics.

Other parts of the world have stepped up their efforts, too. Earlier this year, the European Commission entered into a cooperative agreement with South Korea. They plan to work together on a global definition of 5G service and cooperate on 5G research. Meanwhile, last year in China three of the nation's ministries jointly established a group to promote the development of 5G technologies.

So we have signs that the rest of the world is on the road to 5G. There is no reason for the United States to stay in the starting gate. We need to build on our 4G success—and get going right now.

The good news is that today's Notice of Inquiry combined with our Report and Order on wireless facilities siting represents a starting gun. We are off. We are thinking about the spectrum and infrastructure policies that best support next-generation wireless networks.

In our current generation of wireless networks, we focus on spectrum from 600 MHz to 3 GHz. That represents today's sweet spot for mobile broadband. But the future could look different—very different. That's because we are moving from networks designed for analog voice to networks designed for high-speed digital data. To keep up with escalating data demand, our next generation networks are going to have to do some heavy lifting. They will need to accommodate more traffic coming from more devices at higher data rates. At the same time, they will need to lower latency and conserve power to extend battery life. Well, that sounds easy, right?

So how do we meet these demands? We look up. Way, way, up. To infinity and beyond. We need to bust through our old 3 GHz ceiling. Let's take a look at spectrum all the way up in the 60 GHz

range—and maybe all the way to 90 GHz. At these ranges we can aggregate spectrum and allow data intensive applications to ride across hundreds of megahertz at a time.

But these stratospheric frequencies can mean more than just wide channels. The physics here are different. That means real propagation challenges, but also new opportunities to think about 5G network topology. Because if you mix those wide channels with small cells packed close together, you can densify networks at lower cost. This, in turn, can mean service that reaches further into buildings at faster speeds than ever before, especially in fast-growing areas with the greatest traffic demands.

To take advantage of these millimeter waves will require thinking through some novel technical and policy issues. At the same time, we will need to continue to work to secure spectrum for new commercial use below 3 GHz. But if we do both right, we will take our leadership in 4G service and leverage it into the emerging world of 5G service. So let's get out of the gate, get going, and make it happen.