

**STATEMENT OF
COMMISSIONER MIGNON L. CLYBURN**

Re: *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services, GN Docket No. 14- 177; Establishing a More Flexible Framework to Facilitate Satellite Operations in the 27.5-28.35 GHz and 37.5-40 GHz Bands, IB Docket No. 15-256; Petition for Rulemaking of the Fixed Wireless Communications Coalition to Create Service Rules for the 42-43.5 GHz Band, RM-11664; Amendment of Parts 1, 22, 24, 27, 74, 80, 90, 95, and 101 to Establish Uniform License Renewal, Discontinuance of Operation, and Geographic Partitioning and Spectrum Disaggregation Rules and Policies for Certain Wireless Radio Services, WT Docket No. 10-112; Allocation and Designation of Spectrum for Fixed-Satellite Services in the 37.5-38.5 GHz, 40.5-41.5 GHz and 48.2-50.2 GHz Frequency Bands; Allocation of Spectrum to Upgrade Fixed and Mobile Allocations in the 40.5-42.5 GHz Frequency Band; Allocation of Spectrum in the 46.9-47.0 GHz Frequency Band for Wireless Services; and Allocation of Spectrum in the 37.0-38.0 GHz and 40.0-40.5 GHz for Government Operations, IB Docket No. 97-95*

Today's NPRM is an important step toward developing a regulatory framework that should go a long way in facilitating Fifth Generation, or 5G, mobile services. Most of the world's commercial mobile networks use frequencies below 6 gigahertz. At this point, the record indicates that there should be little doubt that 5G devices will incorporate some beachfront spectrum below 1 Gigahertz such as the 700 megahertz spectrum we auctioned in 2008 and the 600 megahertz we plan to auction next year.

But the explosive levels of consumer demand necessitate that we start looking for more spectrum higher up the chart. It was once thought that frequencies above 28 gigahertz could not support mobile services because their wavelengths were too short and the signal propagation losses were too high. But industry engineers have now turned these weaknesses into strengths by finding ways to use short wavelengths to build dynamic beam-forming antennas to support high capacity networks that are small enough to fit into handsets. Many expect that these engineering advances will lead to 5G networks that will offer much higher data speeds and substantially lower latency than what commercial mobile services offer today. They also expect that these networks will support sporadic, low-data-rate transmissions needed to deploy machine-to-machine connections, aka, the "Internet of things."

However, technical innovation is not the only reason why we are able to launch this rulemaking today. Our spectrum management policies have evolved. Experiences in the AWS-3 and 3.5 gigahertz proceedings have taught us that it is possible for new commercial users to share spectrum with federal and incumbent operations and that spectrum access system databases can advance such sharing. We have also learned how valuable unlicensed services are. They complement licensed services, serve an ever increasing wide range of consumer needs and contribute billions of dollars to our economy each year. We have learned that if our rules promote flexible, interoperable use of spectrum, we encourage entry by small businesses and expedite deployment of new wireless services to consumers. So I am pleased that we have initiated this rulemaking that builds on spectrum policies that have successfully spurred innovation and competition in the commercial wireless industry.

I commend Roger Sherman, Julie Knapp, Mindel De La Torre and their staffs at the Wireless Telecommunications Bureau, Office of Engineering and Technology, and International Bureau for presenting such a detailed and thoughtful item.