

**STATEMENT OF
CHAIRMAN AJIT PAI**

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

I've long been struck by the insight from Benedict Evans of Andreessen Horowitz that "mobile is eating the world."¹ As he's pointed out, mobile subscriptions have quickly grown from a small fraction of the world's adult population to virtually matching that population—leaving PCs in the far distance. Smartphones have only accelerated that trend, with over 2.5 billion now in use. As a result, the fundamental questions in wireless have changed: Instead of debating over things like platform standards, we now contemplate what breakthroughs—the Internet of Things, machine learning, and the like—could take advantage of tomorrow's wireless networks.

That's where the FCC comes in. Those future networks will use spectrum in ways unimaginable a generation ago. And their architecture will be different, too, going from a few massive cell towers to thousands of small cells, operating at lower power. Each of those factors counsels in favor of forward-thinking spectrum policy. We need to introduce more low-, mid-, and high-band spectrum into the marketplace. We need to include a mix of licensed and unlicensed, and terrestrial and satellite spectrum. And we need to encourage flexible use as we enter the 5G future. (Infrastructure policy, of course, is another vital part of the equation.)

This Spectrum Frontiers decision reflects these goals, and in so doing, further establishes American leadership in 5G. We encourage satellite entrepreneurship by preserving a four-gigahertz band for satellite services and relaxing certain rules for siting earth stations. We also maintain the full 64-71 GHz band as a massive testbed for unlicensed innovation. And we make much more millimeter wave spectrum available for terrestrial wireless use. In particular, we add 1,700 MHz of new spectrum in the 24 and 47 GHz bands, on top of the spectrum we freed up last year. In short, we begin to set the table so that however mobile continues eating the world—whether it's a high-bandwidth virtual reality application or a narrowband industrial IoT use case—spectrum won't be a limiting factor.

That's policy. Two critical points on process. First, this isn't the end of our work in this field, but the beginning. Accordingly, I plan to follow up on today's achievement by presenting the next spectrum frontiers item in the first half of next year. This will continue our commitment to enabling

¹ See Benedict Evans, Presentation, "Mobile is eating the world" (Dec. 9, 2016), *available at* <http://ben-evans.com/benedictevans/2016/12/8/mobile-is-eating-the-world>; *see also* Benedict Evans, Presentation, "16 mobile theses" (Dec. 18, 2015) ("[I]t's now perfectly clear that mobile is the future of technology and of the internet."); Benedict Evans, Presentation, "mobile is eating the world" (Oct. 28, 2014), *available at* <http://ben-evans.com/benedictevans/2014/10/28/presentation-mobile-is-eating-the-world> (when "everyone gets a pocket supercomputer," the "first thing that changes is the internet").

access to these high-band frequencies.

Second, any future spectrum leaps to get these frequencies licensed require legislation. As much as anyone, I want to move forward with a high-band spectrum auction in 2018. But currently, we can't. As I've recently and repeatedly stated, we can't hold any large spectrum auction unless and until Congress fixes the upfront-payments problem. I stand ready to assist any elected official interested in helping us solve this problem. (We'll certainly do any and all legwork in the meantime, studying other bands for potential wireless use and moving forward through our rulemaking process to get them ready for auction.)

Promoting U.S. leadership in 5G is an all-FCC effort. So thanks to the expert staff who helped make this happen: Simon Banyai, Kamila Benzina, Steve Buenzow, Monica DeLong, Tiare Faatea, Stephanie Goldberg, Tim Hilfiger, Catherine Mataves, Elizabeth McIntyre, Aalok Mehta, Charles Oliver, Matthew Pearl, John Schauble, Catherine Schroeder, Blaise Scinto, Dana Shaffer, Jiaming Shang, Don Stockdale, Joel Taubenblatt, Jeffrey Tignor, Janet Young, and Nancy Zaczek from the Wireless Telecommunications Bureau; Bahman Badipour, Brian Butler, Martin Doczkat, Michael Ha, Julie Knapp, Antonio Lavarello, Ed Mantiplay, Tom Mooring, Nicholas Oros, Barbara Pavon, Jamison Prime, Karen Rackley, Ron Repasi, and Anh Wride from the Office of Engineering and Technology; Jose Albuquerque, Chip Fleming, Diane Garfield, Jennifer Gilsenan, Dante Ibarra, Kal Krautkramer, Michael Mullinix, Robert Nelson, Alyssa Roberts, Jim Schlichting, and Tom Sullivan from the International Bureau; Greg Intoccia, Nicole McGinnis, David Plotinsky, and Brenda Villanueva from the Public Safety and Homeland Security Bureau; Charles Cooper, Jeremy Marcus, and Steve Spaeth from the Enforcement Bureau; and David Horowitz, Linda Oliver, William Richardson, and Anjali Singh from the Office of the General Counsel.