



October 15, 2018

Ex Parte

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz, GN Docket No. 17-183; Unlicensed Use of the 6 GHz Band, ET Docket No. 18-295

Dear Ms. Dortch:

Mark Racek, Senior Director, Spectrum Policy, Ericsson, and Jared Carlson, Vice President, Government Affairs and Public Policy, Ericsson, met via conference call on:

- Friday, October 12, with Rachael Bender, Chairman Pai's Wireless Legal Advisor; and
- Monday, October 15, with Ira Keltz, Michael Ha, and Jamison Prime of the Office of Engineering and Technology and Aalok Mehta and Charles Mathias of the Wireless Telecommunications Bureau.

Ericsson's representatives respectfully requested at the meetings that the Federal Communications Commission ("FCC") keep the door open for the possibility of licensed mobile use of spectrum in the upper portion of the 6 GHz band. The current draft Notice of Proposed Rulemaking in the proceeding circulated on October 3 suggests that only the unlicensed use will be introduced across the entire band.¹

Ericsson is a firm supporter of unlicensed use of spectrum and produces many products like carrier-grade Wi-Fi and License Assisted Access (LAA). In our comments to the Notice of Inquiry in this docket, we expressed support for the introduction of unlicensed services, on a technology neutral basis, into the 5.925-6.425 GHz band, so long as such services do not cause harmful interference to fixed-service incumbents.²

That being said, the mobile industry also requires large blocks of *licensed* spectrum to support 5G – particularly in mid-bands. As our North American President and CEO stated to Chairman Pai two weeks ago, more mid-band spectrum is crucial for the U.S. to maintain its lead globally

¹ See *Draft Notice of Proposed Rulemaking*, Unlicensed Use of the 6 GHz Band, ET Docket No. 18-295, Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz, GN Docket No. 17-183, FCC-CIRC 1810-01, at para. 1 (draft document released Oct. 2, 2018).

² See *Comments of Ericsson*, Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz, GN Docket No. 17-183, at 9 (filed Oct 2, 2017).



in the race to 5G. Mid-band spectrum, due to its propagation and capacity characteristics, is a popular global option for 5G.³

Internationally, there is no consensus to commit to unlicensed use in the 6.425-7.125 GHz band, and various groups are studying whether that band should be allocated for licensed or unlicensed use.

In the U.S., Ericsson's representatives noted that there is an insufficient amount of identified spectrum to support 100 MHz blocks in the mid-bands to operators. Ericsson distributed the attached slide dramatizing the amount of new spectrum identified, and on the horizon, in bands between 3-24 GHz. There are at present limited opportunities for non-federal mobile allocations below 24 GHz, and certainly no 100 MHz mid-band blocks available on the horizon that can be used for macro deployments. Instead a majority of potential mid-band spectrum is receiving attention as unlicensed.

The process to move from identification to allocation of spectrum takes a very long time, and it is already clear that there are limited opportunities for licensed mobile spectrum in mid-bands. We thus urge the FCC, in the forthcoming NPRM, to entertain the possibility for studies of the potential for spectrum in the 6.425-7.125 GHz band to be used for licensed terrestrial mobile use. Noting the difficulties for spectrum allocation for terrestrial mobile 5G use in the mid-band, we recommend that the FCC develop a longer-term plan that would identify candidate bands that could be explored.

Respectfully submitted,

/s/ Jared M. Carlson

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³ See Letter from Jared M. Carlson, Ericsson, to Marlene H. Dortch, FCC, Spectrum Bands Above 24 GHz for Mobile Radio Service, GN Docket No. 14-177, et al., at 2 (dated Oct. 9, 2018).

Spectrum < 24 GHz (Mid-band)

- Purple Boxes = Spectrum Allocated
- Blue Boxes = Spectrum Under Evaluation For Allocation
- Solid = Licensed Shared / Exclusive
- Striped = Unlicensed



Frequency Range	2495-2690 MHz	3450-3550 MHz	3550-3700 MHz	3700-4200 MHz	5925-6425 MHz	6425-7125 MHz	7125-8400 MHz
Total Spectrum	114 MHz	100 MHz	150 MHz	500 MHz	500 MHz	700 MHz	1275 MHz

- Limited Opportunities Exist for Licensed Mid-band Spectrum for 5G
- Longer-term Identification of Mid-band Spectrum Needed