



QUALCOMM Incorporated

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December 18, 2015

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

Re: Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, GN Docket No. 14-177, IB Docket Nos. 15-256 & 97-95; RM-11664; WT Docket No. 10-112

Dear Ms. Dortch:

On December 16, 2015, Paul Guckian, Lin Lu, Dean Brenner, and the undersigned of Qualcomm Incorporated along with David Hilliard of the Wiley Rein law firm met with the following FCC Office of Engineering and Technology staff: Julius Knapp, Rashmi Doshi, Bruce Romano, Martin Doczkat, Michael Ha, Ed Mantiply, Mark Settle, Bill Hurst, Kwok Chan, Tim Harrington, and Travis Thul. We discussed the interpretation of existing FCC RF exposure regulations to take into account time averaging as a means of assessing compliance. We also discussed the RF exposure issues raised in the October 23, 2015, Notice of Proposed Rulemaking in the above-referenced proceedings.

Qualcomm explained that modifications to the FCC's RF exposure regulations and assessment techniques likely are needed to enable portable device applications in the millimeter wave ("mmWave") frequency bands. *See, e.g.*, Qualcomm NOI Comments at 15-16 (filed Jan. 15, 2015). For the mmWave bands under consideration in the NPRM, assessment of RF exposure for portable device applications, such as smartphones and tablets, needs to be done in the near field. It is important that spatial averaging be used for a meaningful exposure assessment against the limit, as the power density distribution varies drastically in the near field, especially in close proximity of the source. The exposure time also should be taken into account to assess the heating effect (temperature rise) in tissue. Qualcomm noted that ICNIRP has specified the power density limit over a defined spatial averaging area and specified a time window for time averaging, and we encouraged the FCC to align with ICNIRP guidance or define a new area and time window to allow for spatial averaging and time averaging.

Respectfully submitted,

John W. Kuzin

John W. Kuzin
Senior Director & Regulatory Counsel

cc (via email): FCC staff in attendance