



QUALCOMM Incorporated

1730 Pennsylvania Ave., NW ■ Suite 850 ■ Washington, DC 20006 ■ Tel: 202.263.0022 www.qualcomm.com

September 24, 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, RM-11640**

Dear Ms. Dortch:

In Comments filed in response to the Above 24 GHz Notice of Inquiry, Qualcomm explained that modifications to the FCC's RF exposure regulations and assessment techniques may be necessary for portable applications in the millimeter wave frequency bands. *See* Qualcomm Comments at 15-16 (filed Jan. 15, 2015). We provide additional detail herein.

The FCC specifies "power density" in Rule Sections 2.1093 and 1.1310 to prevent excessive heating in tissue at or near the body surface. For portable applications, such as smartphones and tablets, the human body is present in the near field of the source, rather than in the far field. Thus, with regard to the bands under consideration in the NOI, assessment of RF exposure needs to be done in the near field, and 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.

ICNIRP has specified the power density limit over a defined spatial averaging area and specified a time window for time averaging. Qualcomm requests that the FCC align with ICNIRP guidance or define a new area and time window to allow for spatial averaging and time averaging. Thank you for your consideration of this request.

Respectfully submitted,

John W. Kuzin

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Senior Director & Regulatory Counsel

cc (via email): Julius Knapp
Rashmi Doshi
Kwok Chan
Martin Doczkat
Tim Harrington
Ed Mantiplay
Bruce Romano
Travis Thul

