



**QUALCOMM Incorporated**

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April 20, 2016

Ms. Marlene Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> 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 April 18, 2016, John Forrester, Keith Douglas, Sumit Verma, Sean He, Andrzej Partyka, Victor Abramsky, Dean Brenner, and the undersigned of Qualcomm Incorporated met via teleconference with members of the FCC's Office of Engineering and Technology, Wireless Telecommunications Bureau, Public Safety & Homeland Security Bureau, and International Bureau listed below. We discussed issues relating to the proposed emissions levels in the above-referenced proceedings.

Qualcomm encouraged the FCC to implement flexible technical rules to encourage innovation and experimentation in the millimeter wave bands. We explained that it will be challenging to design millimeter wave mobile equipment that meets the proposed emissions requirements at the power levels required to support 5G system performance objectives. We noted that the average interference from a mobile handset and a base station/small cell with a steerable antenna array is very different and variable when compared to fixed point-to-point microwave operations and that the emissions limit for mobile operations should take this into account.

Also, where there are no conducted RF ports through which to measure emissions levels, the Commission's rules should allow for the use of radiated measurements while permitting the use of conducted measurements where feasible. In addition, Qualcomm believes the FCC should allow the use of alternative measurement bandwidths as frequency increases so long as the results are scaled to the original emissions limit bandwidth definition. Qualcomm also discussed the use of a stepped out-of-band emissions limit as proposed in its reply comments.

Respectfully submitted,

*John W. Kuzin*

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Senior Director & Regulatory Counsel

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