

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of

Innovation in the Broadcast Television Bands:
Allocations, Channel Sharing and Improvements
to VHF

ET Docket No. 10-235

COMMENTS OF QUALCOMM INCORPORATED

Dean R. Brenner
Vice President, Government Affairs

John W. Kuzin
Senior Director, Regulatory

1730 Pennsylvania Avenue, NW
Suite 850
Washington, DC 20006
(202) 263-0020

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QUALCOMM Incorporated strongly supports the FCC's *Notice of Proposed Rulemaking* to lay the groundwork for voluntary incentive auctions to enable the repurposing of part of the UHF and VHF television broadcast bands for mobile broadband operations.¹ As the Commission aptly recognizes, action is needed now to address America's booming mobile broadband data demands and impending spectrum crunch.

I. New Mobile Broadband Spectrum Is Critical To Our Future Economic Success

Qualcomm agrees with the FCC that there is a pressing need to identify and allocate additional spectrum for mobile broadband use and to do so quickly, for such new allocations are critical to America's future economic success. Indeed, in 2010, the U.S. technology sector grew almost twice as fast as the overall U.S. economy. This is not at all surprising. As Chairman Genachowski reiterated earlier this week, broadband is a core driver of "our economy and our global competitiveness [and] a core accelerator for job growth."²

Last fall, when the FCC projected that overall mobile data demand in the U.S. would increase 35 times by 2014, the agency determined that at least an additional 275 MHz of licensed commercial mobile broadband spectrum would be needed to meet that demand.³ More recent

¹ See *Innovation in the Broadcast Television Bands: Allocations, Channel Sharing and Improvements to VHF*, ET Docket No. 10-235, *Notice of Proposed Rulemaking*, FCC 10-196 (Nov. 30, 2010) ("*NPRM*").

² Chairman Genachowski, "The Clock is Ticking," Remarks on Broadband at the Mobile Future Forum (Mar. 16, 2011) at 2; *id.* at 9 ("If we don't act, we won't have enough spectrum for mobile broadband, that will have real consequences for consumers, who will face declining service, including dropped calls and Internet connections, slow downloads and high prices.").

³ See *Mobile Broadband: The Benefits Of Additional Spectrum*, FCC OBI Technical Paper No. 6 (Oct. 21, 2010) at 9 (average of three projections used by the FCC "reveals strong expected growth in mobile data traffic from 2009 levels").

studies, however, not only confirm this remarkable growth trend, but they also are showing that the FCC's estimate was quite conservative, as the agency suspected in its 5-month-old report.⁴

For example, Cisco's February 2011 mobile traffic study,⁵ issued one year after the 2010 Cisco study the FCC had used to develop its 35X growth rate last fall, reveals that actual growth in 2010 exceeded the prior year's estimates. In addition, Cisco now projects that the mobile data demand between 2009 and 2015 will increase 60 times.

The 2011 study presents a number of other remarkable growth trends:

- In 2015, mobile-broadband-enabled tablet computers alone will generate as much traffic as the entire worldwide mobile network generated in 2010,
- The aggregate traffic generated in 2015 by smartphones will be 47 times greater than it is today; and
- Machine-to-machine mobile traffic by itself will be more than 20% greater than that of the entire global mobile network in 2010.⁶

These estimates, which cover just a subset of the mobile product classes in use today, demonstrate that the FCC along with the Administration and Congress must take action now to ensure that the spectrum resources needed to support this demand are identified, auctioned, and allocated within the next few years.

II. Voluntary Incentive Auctions Are An Appropriate And Necessary Means Of Meeting Our Country's Pressing Spectrum Needs

As it has repeatedly stated, Qualcomm fully supports the efforts of the FCC, the Administration, and Congress, to give the Commission authority to conduct voluntary incentive auctions to repurpose a significant portion of the spectrum currently occupied by television

⁴ See *id.* at 17-19 (“Even with the conservative set of assumptions used in this model, it is apparent that the nation faces the prospect of a spectrum shortage within the next five years.”).

⁵ See *Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2010–2015* (Feb. 2011).

⁶ See *id.* at 2-3.

broadcasters for mobile broadband use.⁷ Voluntary incentive auctions will allow those parties who value spectrum most highly to deploy next generation wireless services, devices, and applications.

While wireless technology developers, equipment providers, and mobile broadband service providers are continuing to upgrade their networks and user devices to make more efficient use of the current spectrum licensed for mobile broadband operations, wireless technology enhancements and network upgrades alone will not be nearly enough to meet the incredible level of growth in mobile data demand discussed above. Additional mobile broadband spectrum – including spectrum that would be made available via voluntary incentive auctions of the television broadcast spectrum as covered in the *NPRM* – is critically necessary. Without new mobile broadband spectrum, there will be “real consequences for innovators looking to build new companies and services on the mobile platform, including life saving health applications, education programs to train our 21st Century workforce, and energy services designed to save our planet.”⁸ Accordingly, the actions set out in the *NPRM* need to be taken now so the Commission can quickly plan and conduct voluntary incentive auctions of the television broadcast spectrum once such authority is provided by Congress and the President.

⁷ See, e.g., Qualcomm Comments on *Dynamic Spectrum Use Notice of Inquiry*, ET Docket No. 10-237 at i, 2 and 14 (filed Feb. 28. 2011).

⁸ Chairman Genachowski, “The Clock is Ticking,” *supra*, n.2 at 9.

III. Conclusion

Mobile broadband spectrum is the lifeblood of today's information economy and key to enabling "a high-performance America – a more productive, creative, efficient America in which affordable broadband is available everywhere and everyone has the means and skills to use valuable broadband applications."⁹ New mobile broadband spectrum made available via voluntary incentive auctions of the television broadcast spectrum is necessary to continue fueling this ecosystem. The FCC needs to continue its work with the Administration and Congress to give the Commission authority to conduct voluntary incentive auctions to repurpose a significant portion of the spectrum occupied by television broadcasters for mobile broadband use.

Respectfully submitted,

QUALCOMM INCORPORATED

By: 

Dean R. Brenner
Vice President, Government Affairs

John W. Kuzin
Senior Director, Regulatory

1730 Pennsylvania Avenue, NW
Suite 850
Washington, DC 20006
(202) 263-0020

Attorneys for QUALCOMM Incorporated

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⁹ FCC NBP at 9.