

July 22, 2015

**VIA ELECTRONIC FILING**

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

Re: *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, GN Docket No. 14-126; *Wireless Telecommunications Bureau Seeks Comment on the State of Mobile Wireless Competition*, WT Docket No. 15-125; *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, GN Docket No. 12-268.

Dear Ms. Dortch,

On Monday, July 20, 2015, Scott Bergmann and Brian Josef of CTIA – The Wireless Association® (“CTIA”) and Coleman Bazelon and Giulia McHenry of The Brattle Group met with Commissioner Mike O’Rielly and Erin McGrath, Legal Advisor to Commissioner O’Rielly to discuss two recent studies by The Brattle Group, *Substantial Licensed Spectrum Deficit (2015-2019): Updating the FCC’s Mobile Data Demand Projections*<sup>1</sup> and *Mobile Broadband Spectrum: A Vital Resource for the American Economy* (studies attached).<sup>2</sup> In particular, CTIA highlighted The Brattle Group’s finding that the United States will need to introduce more than 350 MHz of licensed spectrum into the mobile market by 2019 to meet America’s skyrocketing demand for mobile broadband. CTIA explained that it is in our national interest for policymakers to execute a new spectrum plan to maintain the United States’ global wireless leadership position. With the release of these studies, CTIA asks the Commission to take up this mantle and identify and repurpose over 350 MHz for licensed mobile broadband services by 2019.

Most immediately, CTIA stressed that the incentive auction represents the Commission’s best short-term opportunity to address this spectrum deficit and ensure the United States remains the global leader in wireless technologies as we continue to invest in the evolution of 4G while simultaneously commencing to develop the potential of 5G. The spectrum repurposed through a

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<sup>1</sup> Coleman Bazelon and Giulia McHenry, *Substantial Licensed Spectrum Deficit (2015-2019): Updating the FCC’s Mobile Data Demand Projections*, The Brattle Group (June 23, 2015), available at [http://www.ctia.org/docs/default-source/default-document-library/bazelon\\_mchenry\\_spectrum-deficit\\_2015-06-23.pdf](http://www.ctia.org/docs/default-source/default-document-library/bazelon_mchenry_spectrum-deficit_2015-06-23.pdf) (“Brattle Spectrum Deficit Report”).

<sup>2</sup> Bazelon and McHenry, *Mobile Broadband Spectrum: A Vital Resource for the American Economy*, The Brattle Group (May 11, 2015), available at [http://www.ctia.org/docs/default-source/default-document-library/brattle\\_spectrum\\_051115.pdf](http://www.ctia.org/docs/default-source/default-document-library/brattle_spectrum_051115.pdf) (“Brattle Economic Value Report”).

successful incentive auction will help meet the significant expected increase in mobile data traffic, as well as facilitate opportunities for innovative communications services, including mobile health, Internet of Things, education, and other mobile broadband-related initiatives. As the *Brattle Economic Value Report* demonstrates, licensed spectrum for commercial wireless networks already generates more than \$400 billion in annual economic activity nationwide.<sup>3</sup> A new infusion of spectrum can further foster job growth and spark entirely new industries: indeed, for every one person employed in the wireless industry today, an additional 6.5 jobs are created.<sup>4</sup>

The *Brattle Spectrum Deficit Report* updates the FCC's 2010 spectrum forecast using the same methodology the Commission used, applying conservative estimates that likely may underestimate U.S. spectrum needs in 2019.<sup>5</sup> It projects that demand for mobile broadband will increase six-fold by 2019 after factoring in traffic offloading, and finds that just under half of the unaddressed demand can be met by additional cell sites and improved technology. But for the remaining three-fold increase in traffic over 2014 levels, mobile licensed spectrum is needed, and more than 350 MHz is required to support that level of demand.

Key conclusions and facts in the *Brattle Spectrum Deficit Report* include:

- Mobile data traffic for North America increased more than 11-fold from 2010, from 49 petabytes to 563 petabytes per month by 2014.<sup>6</sup> This growth tracks the FCC's forecast from back in 2010, which implied a projected traffic level of 562 petabytes per month by 2014 for North American mobile data traffic levels.
- Conservatively projected, mobile data traffic is expected to grow six-fold by 2019.<sup>7</sup> Mobile users are expected to increase by 21 million to 290 million, mobile connections will increase by over 600 million to over 1 billion, and mobile video traffic will represent 75 percent of all traffic.<sup>8</sup>
- Demand for spectrum will begin to exceed supply in 2017, and the spectrum deficit is expected to grow to 366 MHz by 2019. And demand for wireless data is expected to continue to increase beyond 2019.<sup>9</sup>

As the *Brattle Spectrum Deficit Report* observes, “[w]hile growth in data demand has kept up with the FCC’s projection, spectrum reallocations have not.”<sup>10</sup> Since the FCC released its spectrum demand report five years ago, American consumers have fully embraced a

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<sup>3</sup> *Brattle Economic Value Report* at 2.

<sup>4</sup> *Id.* at 2.

<sup>5</sup> For example, the study incorporates Cisco’s most recent projections for mobile broadband data demand, but applies a conservative 15 percent discount to forecast a six-fold increase from 2014. *Id.* at 11-12.

<sup>6</sup> *Id.* at 2-3.

<sup>7</sup> *Id.* at 1, 11-12.

<sup>8</sup> *Id.* at 3.

<sup>9</sup> *Id.* at 19.

<sup>10</sup> *Id.* at 7.

connected life. Indeed, the attached CTIA report, *Mobile Data Demand: Growth Forecasts Met*, explains that “the FCC’s average estimated growth rate was remarkably precise, demonstrating that the use of demand projections is reasonable, that they are reliable indicators, and that the need for more spectrum was – and remains – real.”<sup>11</sup> Additional CTIA research, presented in the recently-released report *From Proposal to Deployment: The History of Spectrum Allocation Timelines*, also attached, demonstrates that “[b]ringing new spectrum into the hands of wireless operators to provide broadband services to U.S. consumers takes a significant amount of time,” on average 13 years.<sup>12</sup> The report also documents the stark reality that “after the broadcast incentive auction, the traditional spectrum pipeline is empty.”<sup>13</sup>

For these reasons, CTIA explained that the Commission’s final auction procedures and rules can have a significant impact on wireless industry participation and the ultimate success of the auction. It is essential that the Commission adopt an auction framework – including auction procedures, rules to protect licensed services, rules to govern licensees’ access to newly-purchased spectrum, and protections for remaining broadcasters – that minimizes complexity and provides potential forward auction participants with the certainty needed to make the substantial capital investments that will be required for the auction to succeed.<sup>14</sup>

Pursuant to Section 1.1206 of the Commission’s rules, a copy of this letter is being filed in ECFS. Please do not hesitate to contact the undersigned with any questions.

Sincerely,

/s/ Scott K. Bergmann

Scott K. Bergmann  
Vice President, Regulatory Affairs  
CTIA – The Wireless Association®

Attachments

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<sup>11</sup> Thomas K. Sawanobori and Dr. Robert Roche, *Mobile Data Demand: Growth Forecasts Met*, CTIA – The Wireless Association® (June 22, 2015), available at <http://www.ctia.org/docs/default-source/default-document-library/062115mobile-data-demands-white-paper.pdf> (CTIA Mobile Data Demand Report”).

<sup>12</sup> Thomas K. Sawanobori and Dr. Robert Roche, *From Proposal to Deployment: The History of Spectrum Allocation Timelines*, CTIA – The Wireless Association® (July 20, 2015), available at <http://www.ctia.org/docs/default-source/default-document-library/072015-spectrum-timelines-white-paper.pdf> (“CTIA Spectrum Timelines Report”).

<sup>13</sup> *Id.* at 1.

<sup>14</sup> See Letter from CTIA President and CEO, Meredith Attwell Baker, GN Docket No. 12-268 (filed July 9, 2015).