July 9, 2015

VIA ELECTRONIC FILING

Chairman Tom Wheeler
Commissioner Mignon Clyburn
Commissioner Jessica Rosenworcel
Commissioner Ajit Pai
Commissioner Michael O’Rielly
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions (GN Docket No. 12-268) and related proceedings (ET Docket Nos. 13-26, 14-14, 14-165; MB Docket No. 03-185; GN Docket No. 14-166; AU Docket No. 14-252).

Dear Chairman Wheeler and Commissioners,

CTIA – The Wireless Association® and its members have worked closely with the Commission to implement the 600 MHz incentive auction directed by the Middle Class Tax Relief and Job Creation Act of 2012 (“Spectrum Act”). We applaud your dedication to this critical effort and your commitment to hold the auction in a timely manner. To ensure that these efforts produce their intended results, we identify eight targeted reforms that can have a material impact on the auction’s success and appreciate your efforts to address each of these specific issues in your final reforms.

Importance of the Auction. For the wireless industry, the incentive auction represents an important opportunity to bid for access to much-needed spectrum for mobile broadband use. The spectrum repurposed through a successful incentive auction will help meet the expected six- to seven-fold increase in mobile data traffic within five years, as well as facilitate opportunities for innovative communications services, including mobile health, Internet of Things, education, and other mobile broadband-related initiatives. Using the FCC’s own formula, the FCC needs to re-allocate over 350 MHz in additional licensed spectrum by 2019.1 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. As you know, licensed spectrum for commercial wireless networks already generates more than $400 billion in annual economic activity nationwide.2 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.3

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3  Id. at 2.
**Key Reforms.** 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.

**Sufficient Interference Protection.** The Commission’s regulatory framework needs to recognize the statutorily guaranteed rights of licensed services and protect them accordingly, which the current proposal fails to do. The success of the auction assumes carriers will bid billions of dollars, and that cannot happen absent clear and understood interference protection. The Commission’s rules should minimize impairment of licensed bands and protect licensed services from harmful interference as mandated in the Spectrum Act.

1. **Safeguard licensed operations from interference from unlicensed and wireless microphone use of the 600 MHz guard band and duplex gap.** We support unlicensed operations in the 600 MHz band duplex gap and guard bands as long as they create no interference challenges. Consistent with the real-world testing submitted by V-COMM, the Commission should adopt technical rules that both provide sufficient buffers and appropriate limits on harmful emissions from unlicensed operations into 600 MHz wireless licensed services.4

2. **Adopt a “stop buzzer” to prevent harmful interference.** This mechanism would require unlicensed white space devices and wireless microphones to cease transmissions immediately in the event that they cause harmful interference to licensed wireless services in the 600 MHz band consistent with the FCC’s approach in its Experimental Radio Services decision.5

3. **Strive to minimize impairments while maximizing the amount of spectrum recovered.** The FCC should produce near-nationwide band plans based on a sliding scale approach, which yields lower impairments and higher clearing targets, rather than adopt a rigid 20 percent threshold.6 Reducing the impairment threshold below the proposed 20 percent cap will maximize the availability of wireless licenses free from interference.7

**Expedite Deployment and Reduce Uncertainty.** The Commission’s framework for access to licensed spectrum and inter-service interference should speed broadband deployment and avoid unnecessarily

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burdensome mandates on 600 MHz licensees, particularly where those mandates could create auction-harming uncertainty about the value of wireless licenses. Several of the Commission’s proposed rules would impose a disproportionate burden upon 600 MHz licensees that will erode bidder certainty about their primary status and impose unending obligations that will slow the buildout and upgrade of mobile broadband networks.

4. **Establish clear rights to spectrum acquired for billions at auction.** We urge the Commission to reject its proposal to allow secondary users to operate in auctioned bands contemporaneously with licensed operations. The Commission should define the term “commencement of operations” in a manner that enables licensees to conduct pre-deployment testing without encumbrances from secondary users and should not burden licensees with obligations to provide multiple, ongoing notifications to secondary users in order to access their own spectrum.8

5. **Streamline the inter-service interference prevention and resolution process.** The wireless industry is committed to the Commission’s efforts to minimize interference between remaining broadcast stations and new 600 MHz wireless licensees. We believe that common objective can be best met without the need for repetitive inter-service interference analysis. For example, 600 MHz licensees should not be required to conduct extensive analyses of interference effects if proposed mobile network modifications would not increase the interference potential to a broadcast station. Similarly, the Commission should calculate any inter-service interference using a granular statistical measure and provide this information to bidders well in advance of the forward auction.9

**Complete Bidder Information.** It is critical that the Commission provide forward auction bidders with all of the information needed to make billion-dollar financial commitments. The Commission should provide forward auction bidders with access to comprehensive information well in advance of the auction as well as sufficient time to make educated and fully informed decisions between auction stages. Forward auction participants will bid in the forward auction for “generic” licenses, rather than specific licenses with well understood impairment and interference conditions. There remains concern that all licenses will not be truly fungible, as each block of spectrum in each individual market may have its own varying level of impairment. As a result, bidders need basic information about the impairments associated with particular spectrum blocks, including whether impairments will come from domestic television broadcasters, foreign television broadcasters, or unlicensed operations.

6. **Provide forward auction bidders with sufficient information.** The Commission should provide prospective wireless licensees with complete information regarding potential inter-service interference and license impairments, using the most granular data available.10 Specifically, the Commission should provide licensees

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9 Opposition and Reply of CTIA – The Wireless Association® to Petitions for Reconsideration, GN Docket No. 12-268, ET Docket Nos. 13-26 and 14-14 (filed Feb. 26, 2015). The Commission should utilize the F(50,10) statistical measure to predict interference from broadcast stations to wireless operations, as it is a more accurate reflection of the real-world usability of a spectrum block and the costs associated with addressing impairments. At a minimum, the FCC should provide the information needed by forward auction bidders to determine the F(50,10) statistical measure.

10 CTIA Procedures PN Comments at 10-13; Reply Comments of CTIA – The Wireless Association®, GN Docket No. 12-268, AU Docket No. 14-252, at 12-13 (filed Mar. 13, 2015) (“CTIA Procedures PN Reply Comments”). In addition, we encourage the Commission to provide a sample data structure, data dictionary, and sample data for information
with station-by-station information regarding the level of access to spectrum and level of interference that prospective 600 MHz licensees can expect from domestic and international broadcast stations. This data should be provided sufficiently in advance of the forward auction and in a readily accessible format.

7. **Allow for 10 business days between reverse and forward auctions.** The Commission’s proposal to allow two days between the reverse and forward auction significantly underestimates the need of bidders for time to analyze potential impairments. The Commission should allow at least 10 business days between the release of the provisional 600 MHz band plan and granular data on impairments and the launch of the forward auction. This brief extension of a few days will help contribute to a more successful auction.

8. **Provide new file formats and bidder packages and hold multiple mock auctions well in advance of the actual auction.** Given that the many new and complex aspects of this auction will require extensive time for bidders to prepare, the Commission should release the file formats for the files it will provide bidders during the auction well before applications are due. And it should release the bidder packages to qualified bidders and conduct multiple mock auctions well in advance of the actual incentive auction to ensure a smooth process and address issues that arise.

These eight targeted reforms are essential to development of an incentive auction framework that will promote the continued innovation and investment in mobile broadband services; equitable, readily-administered coexistence in the 600 MHz band; and, ultimately, substantial public interest benefits.

Sincerely,

Meredith Attwell Baker  
President and CEO  
CTIA – The Wireless Association®

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12 CTIA Procedures PN Comments at 15.  
13 Specifically, CTIA asks the FCC to conduct an initial mock auction at least two months prior to the start of the incentive auction for parties who have submitted an application to participate in the auction. This will allow parties time to analyze all the data provided during the mock auction, ascertain if the current incentive auction software is functioning properly, allow for comments and changes to be provided and implemented, and schedule follow-up mock auctions well in advance of the actual auction.