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EX PARTE VIA ECFS

Ruth Milkman
Chief, Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Gary Epstein
Chief, Incentive Auction Task Force
Federal Communications Commission
445 12th Street, SW
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Re: Expanding the Economic and Innovation Opportunities of Spectrum through Incentive Auctions, GN Docket No. 12-268

AT&T¹ has consistently endorsed the four principles outlined in the Joint Verizon Wireless/T-Mobile Submission (the “Joint Submission”),² including maximizing paired spectrum in the 600 MHz incentive auction proceeding, allowing for cost-effective and timely development of new equipment and devices, facilitating a single 3GPP band class where appropriate, and allocating supplemental downlink blocks below Channel 37. AT&T therefore supports the 35 x 2 MHz band plan approach as outlined in the Joint Submission, but only if certain conditions are met and with some important caveats as explained below.

There has long been broad industry agreement that the Commission should adopt a “Down from 51” band plan for the 600 MHz incentive auction. AT&T also agrees that the Commission should authorize only Frequency Division Duplexing or FDD operations in the 600 MHz band and, as noted above, concurs with the four principles outlined in the

¹ This submission is filed by AT&T Services, Inc., on behalf of the subsidiaries and affiliates of AT&T Inc. (collectively, “AT&T”).

² See Letter dated Sept. 16, 2013 from Kathleen Ham, T-Mobile USA, Inc., and Kathleen Grillo, Verizon, to Ruth Milkman and Gary Epstein, FCC, GN Docket No. 12-268 (the “Joint Submission”).

Joint Submission as among the most important considerations for the Commission as it crafts the details of the 600 MHz band plan.³

Based on the foregoing, AT&T agrees that if the auction yields 84 MHz of spectrum or more in the largest non-border markets across the country, the 35 x 2 MHz proposal as broadly outlined in the Joint Submission is an efficient and effective approach to the band plan.

AT&T previously offered an exemplar “Down from 51” band plan that detailed a 25 x 2 MHz approach. As AT&T explained, this approach has specific technical advantages: a band plan arranged in this manner permits implementation with a single duplexer, allows for the reuse of the existing antenna used for the lower 700 MHz band, and avoids specific third order harmonic concerns that may limit certain carrier aggregation solutions. Thus, as AT&T explained, the 25 x 2 MHz approach presented fewer technical and design challenges than would a 30 x 2 MHz or a 35 x 2 MHz approach. Nonetheless, AT&T believes that all three of these approaches are technically feasible, and that the additional technical challenges posed by a 35 x 2 MHz plan can be satisfactorily met. Therefore, maximizing the amount of paired spectrum by relying on the 35 x 2 MHz approach outweighs the countervailing engineering concerns where 84 MHz of spectrum or more is widely available.

The 35 x 2 MHz approach is challenged, however, if less spectrum is ultimately cleared in non-border areas. In order to hold the duplex gap constant (which AT&T agrees is essential), if only 72 MHz of spectrum is cleared in the majority of non-border markets, the approach supported in the Joint Submission would yield only 20 x 2 MHz or four pairs. In the exemplar band plan filed by AT&T – which was built in the first instance on a 25 x 2 MHz approach and thus includes a slightly different duplex gap configuration – 72 MHz of cleared spectrum would yield five pairs of 5 MHz blocks instead of four. Moreover, AT&T’s exemplary 25x2 approach based on 72 MHz cleared would not require a TV broadcaster in the uplink and downlink portion of the band plan, which in turn gives rise to complicated co-channel interference in adjacent market, concerns that would need to be addressed.

Similarly, if 78 MHz of spectrum is the most that can be cleared in major non-border markets, there is an opportunity to build a 30 x 2 MHz band plan. But the approach in the Joint Submission would again yield only 20 x 2 MHz in paired spectrum in that scenario, allocating the remaining cleared spectrum to SDL and introducing a TV channel into the uplink and downlink portion of the band plan.

Indeed, relying on our current analysis of co-channel interference challenges, AT&T cannot support any of the specific 35 x 2 MHz configurations in the Joint Submission for clearing targets at 78 MHz or below in non-border markets.⁴ In

³ See Joint Submission at 1.

⁴ See, e.g., Comments of AT&T Inc. at Ex. 1 (filed June 14, 2013), GN Docket No. 12-268.

particular, the introduction of one or more TV allocations in the uplink and downlink portion of the band plan in those configurations raises the potential for significant adjacent market co-channel interference concerns in the congested East Coast and Midwest corridors that topography and clutter will likely not mitigate. AT&T's co-channel analysis at this point suggests that most of the non-border regions of the country must operate with the same uplink, downlink, and guard band allocations to ensure effective implementation of the 600 MHz band.⁵

AT&T continues to examine the issue of co-channel interference in adjacent markets and will continue to collaborate with others on this important issue. AT&T will of course consider greater market-to-market variability if the record ultimately demonstrates that approach is feasible, either because concerns about the potential for co-channel interference are overcome or because of growing confidence that at least 84 MHz of spectrum will actually clear throughout most, if not all, of the major non-border markets in the auction, ensuring uniform uplink, downlink and guard bands above Channel 37.

In accordance with the Commission's rules, this letter is being filed electronically with the Secretary for inclusion in the public record.

Sincerely,

A handwritten signature in black ink, appearing to read 'Joan Marsh', with a horizontal line extending to the right.

Joan Marsh

cc: Erin Griffith
Chris Helzer
John Leibovitz
Paul Malmud
Jonathan McCormack
Tom Peters
Blaise Scinto
Edward Smith
Brett Tarnutzer
Jennifer Tomchin

⁵ In fact, T-Mobile's recent submission regarding co-channel interference implicitly supports AT&T's study indicating that, in areas without significant terrain or topography constraints, separation distances between TV transmitters and wireless base station receivers would generally need to be in the range of more than 200 kilometers in order to avoid harmful interference to mobile base station receivers. Letter from Trey Hanbury, Hogan Lovells, to Marlene Dortch, FCC (dated Sept. 23, 2013), 600 MHz Incentive Auction: Market Variability Analysis at pp. 12, 14, GN Docket No. 12-268 (showing possible risk of interference from a signal stronger than -100 dBm from a TV transmitter in Miami with co-channel cell cites operating in various areas of Florida (*e.g.*, Tampa, Jacksonville, Tallahassee, Orlando, Sarasota) that appear to be well more than 200 kilometers from the Miami TV transmitter).