



**Rafi Martina**  
Legal and Government Affairs  
[Rafi.Martina@sprint.com](mailto:Rafi.Martina@sprint.com)  
(571) 287-8136

Sprint Corporation  
900 7th Street, NW  
Suite 700  
Washington, DC 20001

July 30, 2015

**Via Electronic Filing**

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room TW-A325  
Washington, D.C. 20554

**Re: *Notice of Ex Parte Presentation: Competitive Bidding Procedures for Broadcast Incentive Auction 1000, Including Auctions 1001 and 1002, AU Docket No. 14-252; Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, GN Docket No. 12-268***

Dear Ms. Dortch:

Recently, a number of stakeholders have presented competing views to the Federal Communications Commission (“the Commission”) concerning where the Commission should place television broadcast stations within the post-Incentive Auction 600 MHz band, in the event not all remaining stations can be repacked outside of it. To be sure, not repacking any television stations within the new 600 MHz band would most satisfy all stakeholders. Based, however, on its predictive judgment and so that “more spectrum can be made available in the forward auction,” the Commission has determined that placing some television stations in the 600 MHz band is likely unavoidable.<sup>1</sup>

Throughout this proceeding, Sprint has encouraged the Commission to focus on maximizing the amount of repurposed 600 MHz spectrum available in the forward auction, with minimal or no impairments from repacked broadcast stations. The Commission has credibly advanced both of these goals through its plan to scale the level of permitted impairment to the

---

<sup>1</sup> *Comment Sought on Competitive Bidding Procedures for Broadcast Incentive Auction 1000, Including Auctions 1001 and 1002, AU Docket No. 14-252, GN Docket No. 12-268, Public Notice, at ¶ 32 (rel. Dec. 17, 2014) (“Comment PN”).*

amount of spectrum cleared, as well as by proposing to locate non-selling television stations in a manner that minimizes overall impairment levels.<sup>2</sup>

Sprint continues to believe that if television stations must be repacked within the 600 MHz band, placing them in the downlink portion of the band is preferable since it will maximize the amount of low-impairment, bi-directional spectrum available for auction, as downlink impairments will impact co-channel device receivers over much shorter distances than the alternatives. Sprint understands the difficulties that may be associated with designing 600 MHz devices to operate with DTV stations in portions of the downlink adjacent to the operating channel.<sup>3</sup> Nevertheless, as we have stated previously, we continue to believe that technical solutions (such as improved receiver dynamic range and switchable filter banks or tunable filters) can be developed in the 2019-2020 network implementation timeframe to prevent both receiver overload and receiver damage concerns.<sup>4</sup> On the other hand, placing television stations in the uplink portion of the 600 MHz band would: 1) cause more impairment to co-channel 600 MHz operations over far greater distances than would occur for television stations in the downlink; and 2) cause adjacent-channel interference problems that cannot, even with future technology, be filtered out.<sup>5</sup> The only viable solution for a 600 MHz wireless operator would be to locate their base stations as much as 11.5 miles from a DTV station in the uplink, resulting in

---

<sup>2</sup> AT&T and others suggest approaches that could further reduce impairment of 600 MHz wireless channels from repacked broadcast stations. See Letter from Joan Marsh, Vice President – Federal Regulatory, AT&T, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 12-268, AU Docket No. 14-252, at 4 (filed July 27, 2015) (“*AT&T Ex Parte*”). Sprint supports reduced impairment levels; however, the FCC’s CTO Simulations suggest that AT&T’s proposed impairment cap would produce band plans smaller – perhaps much smaller – than 84 megahertz. As Sprint has stated previously, the Commission should target at least a minimally-impaired 84 MHz band plan to make enough high-quality spectrum available for auction to promote downstream competition. Accordingly, Sprint supports the Task Force’s proposed scaled nationwide impairment cap. See, e.g., Letter from Regina M. Keeney, Counsel to Sprint, to Marlene H. Dortch, Secretary, FCC, AU Docket No. 14-252, GN Docket No. 12-268, WT Docket No. 12-269, WT Docket No. 14-17 (filed June 25, 2015); Comments of Sprint Corp., AU Docket No. 14-252, GN Docket No. 12-268, at 5 (June 3, 2015).

<sup>3</sup> See *AT&T Ex Parte* at 3 (“Modern interoperable devices are capable of receiving signals across 4 to 5 LTE blocks in one pass band of the duplexer and high power TV transmissions into any open LTE block is likely to cause interference into all open blocks within a single duplexer. There is *currently* no way to mediate this type of impact on all blocks within a single duplexer”) (emphasis added).

<sup>4</sup> Reply Comments of Sprint Corp., AU Docket No. 14-252, GN Docket No. 12-268, at 18 (March 13, 2015).

<sup>5</sup> *Id.*, at 19 and n. 38. The out-of-band emissions (OOBE) from television transmitters would be strong enough to cause interference to nearby 600 MHz base stations listening to adjacent frequencies. While 600 MHz operators could put filtering into their base stations to avoid potential receiver overload from the adjacent channel TV transmissions, such filtering would do nothing to reduce the co-channel noise the 600 MHz base station would receive from the television station’s OOBE.

gaps in 600 MHz service within the market. As such, we believe that repacking television stations in the 600 MHz uplink channels should only be done as a last resort. Sprint notes that the publicly-released CTO Simulations indicate that the Incentive Auction Task Force's proposed methodology for repacking broadcast stations within the 600 MHz band prioritizes minimizing the impairment levels for commercial wireless operations and places very few television stations in the uplink.

Sprint has been hesitant to support placing television stations in the duplex gap because those stations could cause both uplink and downlink impairments impacting multiple channels.<sup>6</sup> The additional simulation data released on July 10<sup>th</sup> conclusively show that absolute protection of the duplex gap (*i.e.*, repacking no broadcast stations within any portion of the duplex gap and preserving the duplex gap exclusively for unlicensed uses) significantly increases the level of impairment to forward auction spectrum – thereby reducing the number of Category 1 channels available for auction and potentially resulting in smaller band plans.<sup>7</sup>

Accordingly, Sprint agrees with T-Mobile's recent conclusion that "the benefits to unlicensed spectrum availability from not using the duplex gap for broadcast relocation are small relative to the harm done to licensed broadband spectrum" from an inability to reach higher spectrum clearing targets.<sup>8</sup> Particularly in the event of less robust broadcaster participation, in which fewer blocks of competitively critical low-band spectrum can be repurposed, repacking television stations in the duplex gap may be the only way to conduct an auction with a modestly successful amount of auctioned spectrum. Indeed, certain proposals in the record have sought to balance the competing priorities by making repacking in the duplex gap contingent on the amount of spectrum cleared.<sup>9</sup> Sprint recognizes the Commission's need to balance competing

---

<sup>6</sup> Sprint has indicated, however, that TV stations that must be placed in the uplink can slightly overlap the duplex gap. *See* Comments of Sprint Corp., AU Docket No. 14-252, GN Docket No. 12-268, at 7 (June 3, 2015). Sprint and others have requested that the Commission (or its staff) make public additional impairment simulation data so that stakeholders could undertake further analysis and offer additional comment. That has not happened; therefore, commenters must rely on the data the Commission has made available.

<sup>7</sup> *See* Letter from Gary M. Epstein, Chair, Incentive Auction Task Force, Federal Communications Commission to Marlene H. Dortch, Secretary, FCC, GN Docket No. 12- 268, WT Docket No. 12-269, AU Docket No. 14-252 (July 10, 2015).

<sup>8</sup> Letter from Kathleen O'Brien Ham, Vice President, Federal Regulatory Affairs, T-Mobile USA, Inc. to Marlene H. Dortch, Secretary, FCC, AU Docket No. 14-252, GN Docket No. 12-268, at 2 (filed July 21, 2015).

<sup>9</sup> *See, e.g.*, Letter from Henry A. Waxman, Chairman, Waxman Strategies, to Hon. Tom Wheeler, Chairman, FCC, GN Docket No. 12-268, WT Docket No. 12-269, AU Docket No. 14-252 (filed July 9,

priorities, including making spectrum available for unlicensed use. We caution, however, that any path forward should not compromise the Commission retaining sufficient flexibility in selecting a clearing target that will produce at least 84 MHz of largely unimpaired spectrum to promote wireless broadband competition.

NAB recently proposed permitting broadcaster repacking into the duplex gap in a maximum of six markets, of which no more than one could be in the top 25 markets.<sup>10</sup> NAB's proposal is directionally well-intentioned; however, given the uncertainties of reverse auction participation and outcome, it could deprive the Commission of valuable repacking flexibility, thereby creating unnecessary constraints that could drive the clearing target optimization process to an unduly small band plan. We are generally supportive of NAB's additional proposal that, once the clearing target is established, the Commission may not add any new television impairments in the wireless band, as we believe it would be preferable for the Commission to use the reverse auction process to remove as many television broadcasters as possible from the 600 MHz band to minimize impairment for that clearing target. Nevertheless, given the unprecedented nature of this overall incentive auction, as well as its complexity, Sprint urges the Commission to retain the ability to exercise its discretion in a reasonable manner to produce the best, pro-competitive, low-impairment spectrum inventory for the forward auction. With greater deployment-ready, competition enhancing low-band spectrum that is relatively unimpaired, the Commission can best sustain long-term wireless broadband competition.

Separately, Sprint encourages the Commission to revise implementation of the spectrum reserve to eliminate strategic bidding opportunities. The Commission formulated the reserve, against a number of alternate pro-competitive proposals, pursuant to the Commission's clear findings that the nation's largest mobile broadband providers have both "an incentive and ability...to bid for the [600 MHz] spectrum in an attempt to stifle competition that may arise if multiple licensees were to hold low frequency spectrum."<sup>11</sup>

The Commission's proposed reserve trigger, however, appears to assume bidders will bid in a straightforward manner, only seeking spectrum where they most need it to serve existing

---

2015); Letter from Rebecca Murphy Thompson, General Counsel, CCA, to Marlene H. Dortch, Secretary, FCC, AU Docket No. 14-252, GN Docket No. 12-268 (filed July 14, 2015).

<sup>10</sup> Letter from Rick Kaplan, General Counsel and Executive Vice President, Legal and Regulatory Affairs, National Association of Broadcasters, to Marlene H. Dortch, Secretary, FCC, AU Docket No. 14-252, GN Docket No. 12-268, WT Docket No. 12-269 (July 21, 2015).

<sup>11</sup> *Policies Regarding Mobile Spectrum Holdings, Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd 6133, ¶ 62 (2014).

customers and support future growth. The proposed implementation of the reserve does not admit the possibility that these carriers will bid supra-market prices for additional blocks to undercut rivals' ability to compete. Simply put, the implementation process's assumptions do not comport with the Commission's own findings in the *Mobile Spectrum Holdings Order*, nor the well-established record herein (including the concurrence of the United States Department of Justice) that certain bidders will take advantage of a flawed reserve trigger to raise prices to foreclosure levels in key markets so as to maintain their low-band spectrum dominance.<sup>12</sup>

As commenters have consistently emphasized, the cost component of the Final Stage Rule ("FSR") gives the two dominant operators significant 'runway' to drive prices to foreclosure levels in key markets by concentrating their demand in those markets prior to the Commission permitting bidding on the reserve spectrum. For instance, instead of expressing their demand in a straightforward way – *e.g.*, 20 or 30 MHz demanded in all, or most, PEAs – AT&T and Verizon have the incentive and ability to take the bidding eligibility associated with that demand and apply it to only a subset of key markets, demanding blocks equal to or exceeding supply in a subset of the nation's largest PEAs, while withholding their demand from the broader array of markets. In this way, these carriers can ensure that prices in those key PEAs steadily rise each round (with their eligibility stored in just these target markets), while prices in the vast majority of markets increase only incrementally, if at all.

Commenters have offered a number of different proposals to correct this continuing foreclosure risk, including implementing the reserve at the start of the auction,<sup>13</sup> or modifying the 'trigger' for initiating reserve bidding.<sup>14</sup> Sprint believes that either of those solutions could be easily implemented; however, staff has expressed concerns with incorporating these mechanisms in the auction software. Competition policy, which the Commission has continually hinged on the successful operation of the reserve, should not be frustrated by purported inconveniences in reprogramming computer software.

---

<sup>12</sup> Letter from William J. Baer, Assistant Attorney General, U.S. Department of Justice to Marlene H. Dortch, Secretary, FCC, WT Docket No. 12-269, at 2 (June 24, 2015); *see also* Letter from William J. Baer, Assistant Attorney General, U.S. Department of Justice to Marlene H. Dortch, Secretary, FCC, WT Docket No. 12-269 (May 14, 2014); *Ex Parte* Submission of the United States Department of Justice, WT Docket No. 12-269 (Apr. 11, 2013).

<sup>13</sup> *See* Letter from Lawrence R. Krevor, Vice President, Legal and Government Affairs – Spectrum, Sprint Corp., to Marlene H. Dortch, FCC Secretary, AU Docket No. 14-252 (filed May 20, 2015).

<sup>14</sup> Letter from Trey Hanbury, Counsel to T-Mobile USA, Inc., to Marlene H. Dortch, FCC Secretary, AU Docket No. 14-252 (June 30, 2015).

Alternatively, Sprint has suggested a more straightforward solution to the threat of strategic bidding.<sup>15</sup> The Commission could simply revise the bid entry options available to bidders prior to the FSR being satisfied. The auction system would not, for instance, process any bids demanding more than three (3) blocks (or in clearing targets above 84 MHz, more than 40%) of Category 1 spectrum in any PEA in a bidding round prior to satisfaction of the FSR.<sup>16</sup> This would prevent AT&T and Verizon from disingenuous and strategic bidding, in which they concentrate all their eligibility in only a subset of markets by demanding the maximum amount of blocks there. By incentivizing *all* bidders to bid more straightforwardly, demand would be spread over a larger number of markets, more closely reflecting true demand and resulting in clock prices increasing over a larger range of markets towards satisfaction of the FSR. In addition to eliminating the strategic bidding opportunities discussed herein, this simple fix would also accelerate the point at which the Commission could be confident that forward auction revenues have met necessary costs.

Pursuant to Section 1.1206 of the Commission's rules, this letter is being electronically filed with your office. Please let me know if you have any questions regarding this filing.

Respectfully submitted,

/s/ Rafi Martina

Rafi Martina

Counsel

Legal and Government Affairs

Sprint Corporation

cc: (via email)  
Roger Sherman  
Gary Epstein  
Howard Symons  
Renee Gregory  
Jessica Almond  
Louis Peraertz  
David Strickland  
Valery Galasso

---

<sup>15</sup> Letter from Lawrence R. Krevor, Vice President, Legal and Government Affairs – Spectrum, Sprint Corp., to Marlene H. Dortch, Secretary, FCC, AU Docket No. 14-252, GN No. 12-268, at 3 (filed July 9, 2015).

<sup>16</sup> The Commission could accomplish this by limiting bid input options for bidders – *i.e.*, presenting bid options of 3, 2, 1, or 0 demanded blocks– or, as it treats other impermissible bids, by not processing any expressed demand above the threshold.

July 30, 2015

Page 7

Brendan Carr  
Erin McGrath  
Evan Kwerel