

Holland & Knight

Tel 202-955-3000
Fax 202-955-5564
www.hklaw.com

Holland & Knight LLP
800 17th Street, N.W., Ste. 1100
Washington, DC 20006

Leighton T. Brown
(202) 457-7161
Leighton.Brown@hklaw.com

July 9, 2015

Via ECFS

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

Re: *Notice of Ex Parte Presentation*
GN Docket No. 12-268, AU Docket No. 14-252, WT Docket No. 14-170,
RM-11395 and WT Docket No. 05-211

Dear Ms. Dortch:

On July 7, 2015, Grant Spellmeyer, Vice President, Federal Affairs and Public Policy, United States Cellular Corporation (“U.S. Cellular”), and the undersigned met with Commissioner Ajit Pai and Brendan Carr, Legal Advisor to Commissioner Pai, to discuss issues related to the above-referenced proceedings.

During the meeting, we primarily stressed that incorporating bidding procedures into the assignment phase of the forward auction would unnecessarily risk decreasing the amount of revenue generated during the crucially important clock phase of the forward auction.¹ As a result, assignment phase bidding could delay satisfaction of the final stage rule and cause the incentive auction to move to another stage with a lower spectrum clearing target.²

We noted that U.S. Cellular previously provided a detailed example demonstrating the negative impact the proposed Vickrey-style assignment phase bidding procedures could have on clock phase revenue.³ Under those procedures, the “losing” assignment phase bidders would pay nothing and be assigned their least-preferred blocks. While the “winning” bidders would be assigned their preferred blocks, these bidders could end up paying so much for those assignments

¹ See Philip A. Haile, *Comments on U.S. Cellular’s Assignment Phase Proposals*, p. 1 (May 15, 2015) (“*AT&T Paper*”) (attached to Letter from Christopher T. Shenk, Sidley Austin LLP, Counsel for AT&T, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 12-268, AU Docket No. 14-252 (May 15, 2015)) (“[T]he proposed revenue-generating assignment phase could substantially suppress bidding in the clock phase of the auction ... because bidders in the clock phase would anticipate a need to make substantial payments in the assignment phase in order to avoid poor allocations.”).

² See *id.* at 4 (“Because it is the clock phase bids that determine satisfaction or failure of the final stage rule, these defects threaten to cause failures of clearing targets that would have succeeded under alternative rules...”).

³ See Reply Comments of United States Cellular Corporation, AU Docket No. 14-252, GN Docket No. 12-268, pp. 8-17 (Mar. 13, 2015).

that they would be no better off than if they had been assigned their least-preferred blocks at no additional cost. In other words, every bidder could end up with essentially no retained value.

While this would be an optimal outcome in a typical auction, it would be inappropriate for the assignment phase because bidders will already be bound to pay the amounts they bid during the clock phase for generic licenses. Thus, unlike in a typical auction, bidders will not be able to simply walk away from the assignment phase having neither paid nor received anything. As a consequence, during the earlier clock phase, bidders would value a category of generic licenses in a PEA based on the valuation they attach to their least-preferred block within that category because they would rationally assume that they will ultimately be assigned those blocks unless they pay additional sums in the assignment phase.

Stated differently, during the clock phase, a bidder will only bid up to the value it attaches to a license *less* its anticipated assignment round bid for that license. As noted, if the Commission adopts the proposed Vickrey-style bidding procedures, each bidder will reasonably anticipate that it will need to pay the *full difference* between the value it attaches to its least-preferred block in a category and its most-preferred block in the same category. As a result, bidding in the clock phase will reflect the values bidders attach to their least-preferred blocks. AT&T has similarly explained how “[n]o bidder will pursue a strategy that it expects to result in it paying more (in total) for a license than it is worth.”⁴ Consequently, the Commission’s proposal is “likely to result in clock phase revenues that fall well short of the value that the spectrum would bring to the wireless market.”⁵

Notably, there is no record support for assignment phase bidding, while numerous commenters (including carriers of all sizes) have stressed that they would feel obligated to reserve a portion of their fixed budgets for the assignment phase if the Commission adopts its proposed bidding procedures.⁶ Given that these very carriers likely will be responsible for a significant portion of forward auction revenue, their unanimous view on this issue must not be ignored. Simply put, if these carriers believe assignment phase bidding requires them to withhold funds during the clock phase, there is a high likelihood that course of action will be the dominant strategy in the forward auction if the Commission adopts its proposal.

While it is possible that the funds bidders’ set aside for the assignment phase would not be substantial enough to cause a stage of the auction to fail that otherwise would have satisfied

⁴ *AT&T Paper* at 3.

⁵ *Id.* at 4.

⁶ *See, e.g.*, Comments of Competitive Carriers Association, AU Docket No. 14-252, GN Docket No. 12-268, p. 38 (Feb. 20, 2015) (warning that assignment phase bidding “could limit forward-auction revenues because participants would necessarily hold back capital to secure preferred spectrum blocks in the assignment phase”); Comments of Cellular South, Inc., AU Docket No. 14-252, GN Docket No. 12-268, p. 6 (Feb. 20, 2015) (warning that assignment phase bidding “could encourage bidders to reduce their forward-auction bids in order to preserve capital resources for the pursuit of ‘better’ spectrum blocks in the assignment round”); Reply Comments of the Rural Wireless Association, Inc. and NTCA – The Rural Broadband Association, AU Docket No. 14-252, GN Docket No. 12-268, p. 5 (Mar. 13, 2015) (“[N]early every commenter that addressed this issue in the underlying rulemaking proceeding urged the Commission to rely on random or quasi-random procedures rather than bidding in the assignment phase”).

the final stage rule, during the meeting, we emphasized that this cannot be known with any level of certainty. For instance, although it has been noted that only a small portion of the total revenue generated by Australia's 700 MHz auction came from the assignment phase, we explained why the results of that auction cannot be reasonably relied upon to make predictions concerning the incentive auction. Specifically, unlike here, the Australian auction involved only nationwide licenses.⁷ As a result, the licensees were already guaranteed geographic-contiguity. In addition, only two bidders sought (and thus won) licenses in the Australian auction, and combined, they acquired only six of the nine licenses offered in the auction.⁸ Consequently, the bidders were also already guaranteed that all of their licenses would be spectrally contiguous.

Also significant is the fact that the licenses in the Australian auction sold for the reserve price.⁹ In other words, the bidders paid the absolute minimum they could have during the clock phase, and thus had no ability to hold back funds in anticipation of the assignment phase without foregoing licenses being sold at the absolute minimum price established for the auction. Finally, unlike here, the Australian auction did not offer licenses with permanent impairments. As AT&T explained, the "allocative distortion and suppression of clock phase bids might be small in auctions where there is little inherent license heterogeneity. In such cases, bidders' interests in the assignment phase ... may involve relatively little conflict."¹⁰ With respect to the incentive auction, however, "the Commission has proposed to allow substantial heterogeneity in impairments across nominally generic licenses," and the proposed one-to-one impairment discount "is too crude to adequately reflect the loss in value implied by the impairments."¹¹

In sum, there is a widely-acknowledged likelihood that bidders will reserve at least some portion of their budgets for the assignment phase if the Commission implements bidding procedures. Moreover, the amounts bidders ultimately would hold back during the clock phase cannot be known with any level of certainty. Accordingly, during the meeting, we stressed that the Commission must avoid any procedure, including assignment phase bidding, that could undermine the overarching objectives of the incentive auction. This is especially true given that

⁷ See Australian Communications and Media Authority, *Notice for the Digital Dividend Auction* (available at <http://www.acma.gov.au/Industry/Spectrum/Digital-Dividend-700MHz-and-25Gz-Auction/Reallocation/notice-for-the-digital-dividend-auction>).

⁸ Specifically, Telstra won four 5x5 MHz paired licenses and Optus Mobile won two 5x5 MHz paired licenses. See Australian Communications and Media Authority, *Figure 3: Frequency Ranges Assigned to Successful Bidders* (available at <http://165.191.2.87/Industry/Spectrum/Digital-Dividend-700MHz-and-25Gz-Auction/Reallocation/digital-dividend-auction-results>).

⁹ See *id.* ("Demand in Clock Round 1 of the auction led to three unsold lots in the 700 MHz band.").

¹⁰ *AT&T Paper* at 3.

¹¹ *Id.*; see Comments of CTIA – The Wireless Association, AU Docket No. 14-252, GN Docket No. 12-268, p. 13 (Feb. 20, 2015) ("[T]he Commission's numerical, linear approach to impairment does not truly reflect the value of a license or the impact of impairment."); Verizon Reply Comments, AU Docket No. 14-252, GN Docket No. 12-268, p. 9 (Mar. 13, 2015) ("[A] particular level of impaired pops does not translate linearly ... into the same percentage reduction in a market's value."); Reply Comments of Sprint Corporation, AU Docket No. 14-252, GN Docket No. 12-268, p. 11 (Mar. 13, 2015) ("[T]he Commission's proposed post-clock impairment discount does not effectively resolve underlying variability between blocks and in certain cases could even distort bidding.").

non-monetary procedures exist that would accomplish all of the Commission's objectives in the assignment phase.

Specifically, we again urged the Commission to instead adopt the assignment phase proposal jointly developed by U.S. Cellular and T-Mobile US, Inc. Under that proposal, the Commission would utilize a "deferred acceptance algorithm," or more properly, a "serial priority-assessment algorithm," in order to assign bidders frequency-specific licenses.¹² As U.S. Cellular and T-Mobile previously explained, because deferred acceptance algorithms are well accepted and have been used in many different settings around the world, this approach to the assignment phase would be less risky than other possible mechanisms, including assignment phase bidding procedures, that have undergone far fewer practical tests and applications. Perhaps most importantly, the proposal would not cause bidders to withhold funds during the crucial clock phase of the forward auction, which would increase the odds of satisfying the final stage rule during a given stage of the auction, and thereby increase the likelihood of repurposing additional spectrum for next-generation wireless broadband networks.

During the meeting, we distributed the attached summary of the assignment phase proposal developed by U.S. Cellular and T-Mobile. We explained that, under this proposal, the Commission would begin by having all of the winning bidders from the clock phase of the forward auction prioritize all of the PEAs in which they won generic licenses based on the importance they attach to being assigned particular blocks in those PEAs. The auction system would then randomly rank-order all of the bidders, 1...N, and select Bidder 1's highest priority PEA for the first assignment round. Once all of the bidders with generic licenses for that PEA have prioritized their possible block assignments, the auction system would assign Bidder 1 its highest priority block (or combination of blocks) in the PEA that remains feasible after optimizing for the three spectral-contiguity objectives proposed by the Commission.¹³ Next, the auction system would again turn to the randomly selected rank-order of bidders and assign Bidder 2 its highest priority block(s) from among the unassigned blocks that satisfy the spectral-contiguity objectives. If Bidder 2 did not win any generic licenses for this PEA, the auction system would proceed to the next highest ranked bidder that holds a generic license for this PEA. This process would continue in descending rank-order of the bidders that hold generic licenses for this PEA until every block is assigned.

The auction system would then proceed to the second round, which would assign licenses for the currently unassigned PEA given the highest priority by Bidder 2. In that PEA, Bidder 2's block preferences (to the extent feasible) would be honored first, followed by Bidder 3's block preferences, and so on, with Bidder 1 following Bidder N if necessary. In other words, because

¹² For a detailed overview of this joint proposal, see Gregory Rosston, Andrzej Skrzypacz & Robert J. Weber, *Comments on the Assignment Round* (June 11, 2015) (attached to Letter from Trey Hanbury, Hogan Lovells US LLP, Counsel for T-Mobile US, Inc., to Marlene H. Dortch, Secretary, FCC, GN Docket No. 12-268, AU Docket No. 14-252 (June 11, 2015)); see also Letter from Trey Hanbury, Hogan Lovells US LLP, Counsel for T-Mobile US, Inc., to Marlene H. Dortch, Secretary, FCC, GN Docket No. 12-268, AU Docket No. 14-252 (June 16, 2015) (providing a detailed example of how the joint proposal would work).

¹³ See *Comment Sought on Competitive Bidding Procedures for Broadcast Incentive Auction 1000, Including Auctions 1001 and 1002*, Public Notice, 29 FCC Rcd 15750, 15815 (2014).

Bidder 1 had its block preferences honored first in round one, its block preferences would be honored last in the second round. When this round-by-round process reaches Bidder N, the remaining PEA given the highest priority by Bidder N would be selected, and Bidder N's block preferences for that PEA would be honored first. Bidder 1's block preferences would be honored second in that PEA, followed by Bidder 2, etc.

In the following round, the ordering of the bidders would reverse with respect to both PEA selection and the assignment of preferred blocks. As a result, Bidder N's PEA-ranking would *again* determine which PEA the auction system selects, and Bidder N's block preferences for that PEA would be honored first. As noted, the ordering for purposes of honoring block preferences also would reverse. Thus, rather than honor Bidder 1's block preferences next, the auction system would honor the preferences of Bidder N-1, followed by Bidder N-2, and so on.

In the subsequent round, the PEA-ranking of Bidder N-1 would determine which PEA the auction system selects, and the block preferences of Bidder N-1 would be honored first. The auction system would then honor the block preferences of Bidder N-2, followed by Bidder N-3, etc., until every block is assigned.

The process would continue in this manner until Bidder 1's PEA-ranking determines the next PEA. After that, the ordering would again reverse (*i.e.*, the original ordering of the bidders would start all over again). Thus, for the next round, the PEA priorities of Bidder 1's PEA-ranking would again determine the PEA, and the auction system would again honor the block preferences of Bidder 1 first, followed by Bidder 2, and so on. In this way, the proposal mimics the "snake drafts" often used by fantasy football leagues, and would ensure that each bidder has a fair share of high and low "picks" as the assignment phase winds its way back and forth through the randomly selected rank-order of bidders.

Although this joint assignment phase proposal may at first appear rather complicated, as we explained in the meeting, it is quite similar to the Commission's proposed procedures in most respects. For instance, as noted, the auction system would only honor bidders' block preferences to the extent they remain feasible after optimizing for the three spectral-contiguity objectives proposed by the Commission. If a bidder's highest priority block (or combination of blocks) fails to satisfy those objectives, the auction system would continue moving down the bidder's list of block preferences until a specified block (or combination of blocks) does satisfy all three objectives. Also like the Commission's proposed procedures, under this joint proposal, the assignment rounds would be sequenced in order to allow "bidders to incorporate frequency assignments from previously-assigned areas into their bid preferences for other areas," which would provide an opportunity for bidders to acquire "contiguous blocks across adjacent PEAs."¹⁴

Significantly, to the extent the joint proposal does vary from the Commission's proposal, the joint proposal would make participation in the assignment phase far less complicated and time consuming for bidders. For instance, bidders would simply need to rank their feasible block assignments in each PEA. On the other hand, with bidding, in addition to ranking their possible

¹⁴ See *id.* at 15814.

Marlene H. Dortch

July 9, 2015

Page 6 of 6

block assignments, bidders would need to attach dollar amounts to each possible assignment based on the degree of preference they attach to each such assignment. These valuation decisions would be especially complex and uncertain given that the Commission has never before conducted this type of auction, and thus bidders lack any basis on which to value the potentially large number of possible block assignments they could be assigned in each PEA.

Also during the meeting, we were asked about the proposed revisions to the Commission's competitive bidding rules. In response, we noted that, from what we understand, the proposed revisions would create a variety of issues with respect to the future participation of U.S. Cellular and similar entities in the Designated Entity ("DE") Program, which would generally impact our ability to participate in future auctions. In particular, we noted that limiting the amount of spectrum a DE may lease to its disclosable interest holders, but not to other entities, would uniquely disadvantage entities that have invested in DEs.

This notice of ex parte presentation is being filed electronically in the above-referenced dockets pursuant to Section 1.1206 of the Commission's rules.

Respectfully submitted,
HOLLAND & KNIGHT LLP

/s/
Leighton T. Brown
Counsel for United States Cellular Corporation

cc (via email): Commissioner Ajit Pai (Ajit.Pai@fcc.gov)
Brendan Carr (Brendan.Carr@fcc.gov)

Assignment Phase Proposal¹ “Serial Priority-Assessment Algorithm”

- **Prioritizing PEAs & Ranking Bidders**
 - Each winning bidder from the clock phase of the forward auction prioritizes all of the PEAs in which it won generic licenses based on the importance it attaches to being assigned particular blocks in those PEAs.
 - Auction system then randomly rank-orders all of the bidders, 1...N.

- **Round One**
 - Auction system selects Bidder 1’s highest priority PEA for the first assignment round.
 - Bidders with generic licenses for this PEA prioritize their possible block assignments.
 - Auction system assigns Bidder 1 its highest priority block (or combination of blocks) in the PEA that remain feasible after optimizing for the three spectral-contiguity objectives.²
 - Throughout the proposed process, the assignments made by the auction system are constrained by the three spectral-contiguity objectives.
 - Auction system then assigns Bidder 2 its highest priority block(s) from among those that remain unassigned.
 - If Bidder 2 did not win any generic licenses for this PEA, the auction system would proceed to the highest ranked bidder that does hold generic licenses for this PEA.
 - Auction system continues to honor, in descending rank-order of the bidders, the block preferences of bidders with generic licenses for this PEA until every block is assigned.

- **Round Two**
 - Auction system selects the PEA given the highest priority by Bidder 2 for which licenses have not already been assigned.
 - Bidders with generic licenses for this PEA prioritize their possible block assignments.
 - Auction system assigns Bidder 2 its highest priority block(s) in the PEA.
 - Auction system then assigns Bidder 3 its highest priority block(s) from among those that remain unassigned.
 - Auction system continues to assign blocks for this PEA in descending rank-order of the bidders until every block is assigned.

¹ For a detailed overview of this proposal, *see Comments on the Assignment Round (attached to Letter from Trey Hanbury, Counsel for T-Mobile US, Inc., to Marlene Dortch, Secretary, FCC, AU Docket No. 14-252 (June 11, 2015))*; *see also Letter from Trey Hanbury, Counsel for T-Mobile US, Inc., to Marlene Dortch, Secretary, FCC, AU Docket No. 14-252 (June 16, 2015) (providing a detailed example of how the joint proposal would work).*

² *Comment Sought on Competitive Bidding Procedures for Broadcast Incentive Auction 1000, Including Auctions 1001 and 1002*, Public Notice, 29 FCC Rcd 15750, 15815 (2014) (“*Procedures PN*”) (proposing a “sequence of optimizations using the following objectives: (1) maximizing the number of bidders that won multiple blocks that are assigned at least two contiguous blocks; (2) minimizing for all bidders that won two or more blocks in the clock phase the number of blocks that are non-contiguous to any of the bidder’s other blocks; and (3) maximizing the number of bidders that are assigned only contiguous blocks.”).

- Because Bidder 1 had its block preferences honored first in Round One, if Bidder 1 holds a generic license for this PEA, its preferences would be honored last (*i.e.*, after Bidder N or the next lowest ranked bidder holding a generic license for this PEA).
- **Round N**
 - o At this point, the PEA priorities of every bidder but N (the lowest ranked bidder) will have determined the PEAs that were selected for the preceding assignment rounds.
 - o Thus, in this round, the auction system selects the remaining PEA given the highest priority by Bidder N, and assigns Bidder N its highest priority block(s) in that PEA.
 - o Auction system then honors the block preferences of Bidder 1, followed by Bidder 2, etc., until every block is assigned.
- **Subsequent Round – Order Reverses**
 - o Bidder N’s PEA-ranking *again* determines which PEA the auction system selects, and Bidder N’s block preferences are *again* honored first.
 - o Auction system then honors the block preferences of Bidder N-1, followed by Bidder N-2, etc., until every block is assigned.
- **Following Round**
 - o The PEA-ranking of Bidder N-1 determines the PEA, and the block preferences of Bidder N-1 are honored first.
 - o Auction system then honors the block preferences of Bidder N-2, followed by Bidder N-3, etc., until every block is assigned.
- **Back to Bidder 1**
 - o The process continues in the manner described above until Bidder 1’s PEA-ranking determines the next PEA.
 - o Auction system then honors Bidder 1’s block preferences for that PEA, followed by those of Bidder N, then Bidder N-1, etc., until every block is assigned.
 - o The original ordering then starts over again.
 - In other words, for the next round, Bidder 1’s PEA-ranking *again* determines which PEA is selected, and Bidder 1’s block preferences are *again* honored first.
 - Auction system then honors the block preferences of Bidder 2, followed by Bidder 3, etc., until every block is assigned.
- **“Snake Draft”**
 - o The proposal mimics the “snake drafts” often used by fantasy football leagues.
 - o This ensures that every bidder has a fair share of high and low “picks” as the assignment phase winds its way back and forth through the randomly selected rank-order of bidders.