

NANC Toll Free Assignment Modernization Working Group

**Perspectives on the Auction Mechanism and
Future Improvements**

July 14, 2020

Outline

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- Approach and Resources
- Issues 2 / 3 / 4 Review and Recommendations
- Issues 1/ 5 Review and Recommendations
- Questions

Auction Results Summary

The table below details selected outcomes from the auction process.

Number of completed applications (with upfront payments): 44
Number of completed applicants not allowed to bid: 2
Number of bidders: 39
Number of winning bidders: 35
Total Net (second) bid value: \$285,075
Total Highest Bids: \$6,819,035
Total Vickrey Delta: (\$6,533,960)
Number of Toll Free numbers bid on: 1,660
Number of Toll Free numbers with 1 bid (going to the winner for \$0): 1,406
Number of ties for highest bid: 0
Bidders with amount due: 9
Qualified bidders with refunds: 35
Number of bidders needing assistance to complete bid: 1

833 Auction goals/priorities were not necessarily known, but the general sense was that the auction generated less revenue than perhaps was anticipated. Further, auction revenues were likely insufficient to cover one-time costs of designing and building the auction platform, and then running the auction itself.

Approach and Resources

- The *TFAM working group Charge Letter* specifically asked the working group to analyze the questions set forth **from the perspective of participants in the auction.**
- Request for feedback sought from registrants (those that completed the initial registration step) and to all toll-free Responsible Organizations (Resp Orgs) (regardless of whether they had participated or not).
 - Feedback received from 12+ entities and was factored into the analysis.
- Analysis also included
 - a review of the auction results;
 - discussions from potential and actual auction participants;
 - discussions with the auctioneers;
 - review of reasons for auction choice in the original order;
 - review of relevant economic literature;
 - responses to the Commission's March 13, 2020 Public Notice inviting Comments on the 833 Auction; and
 - discussions within the TFAM working group.

Issues 2 / 3 / 4

Review and Recommendations

Issue 2: Evaluate the education and outreach efforts undertaken throughout the 833 Auction process.

Impressions of auction education and outreach efforts were overwhelmingly positive, but there is room for improvement.

The TFAM working group recommends:

- (1) future toll-free auction education and outreach be streamlined, and the materials be simplified;
- (2) the Commission maintain a toll-free auction website presence; and
- (3) consideration be given to providing a mock auction at the *beginning* of the process or via a recorded video accessible on-demand.

Issue 3: Evaluate the application process for the 833 Auction, specifically the auction application requirements and the decision to not require a post-auction application, in view of the Commission's commitment to promoting auction transparency and integrity and its goal of ensuring the auction is simple and cost-effective.

The goal was to ensure a simple process, but some felt the requirements made the process extremely challenging. Some issues:

- Application requirements varied depending on the type of applicant, i.e. legal classification; done to help ensure an entity only apply once and with no affiliation or agreement to any other applicant.
 - In some cases requirements for the different ownership levels required many hours and resources, as well as legal consultation, and guidance from Somos to complete all the steps within the process.
 - At least one entity noted that they decided not to move forward with participating due to the level of effort involved.
- Identity verification concerns/issues (needed in order to be issued application credentials).
- After submission - approval uncertainty and timing concerns especially with resubmissions

Issue 3 – Improvements and Recommendations

The Application Process while onerous for some was reasonable overall, but could be improved in a few key ways:

- (1) Resp Orgs and returning non-Resp Orgs should be approved to participate by default without having to go through the time-consuming application and verification process.
- (2) the application process should be modified to allow for either or some combination of the following: (i) more detailed explanation in the initial deficiency letter from Somos; (ii) allow Somos to provide feedback upon review with the applicant, or (iii) allow for multiple resubmissions with a specific timeline for Somos response.
- (3) the Commission should consider providing a grace period for non-Resp Orgs to seek another Resp Org if their original Resp Org choice does not qualify.

Issue 4: Evaluate the upfront payment mechanism in the 833 Auction considering the Commission’s goal of ensuring bidders in toll free number auctions place sincere offers, while maximizing auction participation and recommend whether to modify the upfront payment mechanism or amount of upfront payment required in any future toll free number auctions.

Issue 4 revolves around trust; many auction houses do not require upfront payments from “known” bidders.

Recommendations:

Resp Orgs: should not be required to submit an upfront payment because they are “trusted entities” with a current toll free inventory that can be used as collateral. Fines could be levied on these bidders if they do not complete their purchase. Further,.

Non-Resp Orgs: the Commission should consider a bond requirement or creating an upfront payment percentage tied to auction cost such that it will be sufficient to cover the minimum cost of setting up for the auction.

The TFAM working group also suggests allowing for additional payment methods, such as by credit card to encourage participation, since many participants noted this as a minor drawback.

Issues 1 / 5

Review and Recommendations

Defining Terms

- *Participants*: Those parties that:
 - evaluated registering for the auction,
 - registered for the auction (whether or not a bid was made), and
 - the *customers* that those parties were in representing in the auction
- *Potential future auction participants*: Any party that may want any number in the future (because it is unclear how broadly the Commission may extend the 'market-based' approach to number assignment in the future).
- *Utility*: Is read in this instance to mean both "useful" and / or "fit for purpose."
 - for winners
 - for losers

Defining Terms (cont.)

- *Equitable*: Fairness. Requires a consistent set of rules that is known by all participants and applied equally to all parties such that everybody has the same chance to bid on a number. In an 'equitable' auction process all participants
 - have equal opportunity or access to acquire any toll free number;
 - are provided with the same information; and
 - are subject to the same auction conditions.
- *Efficient*: Is read in terms of the functioning of the market – specifically related to transaction costs to all auction participants and the administrator, and relative to proceeds
 - measured in terms of resources committed (material and time)
 - including time spent on the process before and after the auction
 - Including changes in the value of the item that may occur over time in the event of a delay in releasing the items to the winners.

Primary Characteristics of 833 Auction

- *Single round*
 - the alternative being multiple rounds
- *Sealed bid*
 - keeping each bidder's bid amount private
- *Vickery* second-price auction structure wherein the highest bidder "wins" but pays the price bid by the second-place bidder
 - as opposed to paying the price it bid – which would be the first, or highest, price

Issue 1: Evaluate utility for bidders and identify more useful alternative designs

- Utility to auction participants
 - Utility meaning 'useful'
 - Useful to winners
 - Not useful to those that did not win or that were unable to participate because of complexities
 - Utility meaning 'fit for purpose'
 - Most evidence says no
 - Numbers not available for assignment for 2 ½ years
 - Fewer than 2% of set aside numbers received more than 1 bid
 - Function of over-broad set-aside (2000 numbers requested from each RespOrg)?
 - Lag in time from number request to auction?
 - Complexity of auction and registration?

Issue 1: Evaluate utility for bidders and identify more useful alternative designs

- Utility to auction participants

	Quantity of numbers
Total numbers available in Dec 2019 auction	17,638
Total numbers receiving bids	1,660
Total numbers receiving more than a single bid	254

- Bidders for 1,406 numbers with a single bid had to go through the time and expense of participating in the auction to get a number that had no other bids.
 - The bidder (and ultimate end user) unable to gain use of the number (that they eventually received for free anyway) for an uncharacteristically long delayed time period
 - Some numbers still not available to parties that requested them

Issue 5: Recommend improvements for future toll-free auctions

- **Problems flowing out of Vickrey model**
 - Despite being 'equitable' (all bidders had the same opportunity to present a sealed bid) there were some perverse results
 - The initial trial failed to yield a market-based price for many 833 numbers
 - specially where the winner was the only bidder and paid nothing.
 - Interpreting the 'second price' to be zero in a single bid situation could be considered a misinterpretation of the Vickrey second-price model
 - Where there is no second bid assuming a zero price is inconsistent with the goal of using the second-price as an indication of market value.
 - It is inconsistent with a market solution
 - Single bidder instances should instead have been declared as 'no transaction' under Vickrey auction style used in the December trial

Issue 5: Recommend improvements for future toll-free auctions

- **Problems flowing out of Vickrey model**
 - Analysis of the auction results reveals that for some 833 numbers with more than one bid the gap between the first and second bid prices were quite large.
 - This is likely due to the fact that the Vickrey auction mechanism encourages bidders to bid high figures regardless of the true valuation of the item (i.e. the 833 number).
 - Every auction type has its unique incentive characteristics that dictates the participants' behavior or strategy (using available information) to achieve their desired outcome;
 - With Vickrey, the primary focus is being the highest bidder and winning the item with less concern for facing any penalty for over-bidding.
 - Until recently Vickrey Auctions almost entirely theoretical not practical

Issue 5: Recommend improvements for future toll-free auctions

- Recommended 'mechanism' changes for future auctions
 - Use a more traditional first price single round, sealed-bid auction.
 - It would be no more or less equitable or efficient than the mechanism used in the trial
 - But would result in generating substantially more revenue
 - To be used to support both the auction itself and the overall costs associated with running the toll free number assignment process.
 - Adopt principles to avoid zero price or unreasonably low-price assignments.
 - Set a minimum price or standard floor (e.g. \$1000 per number)
 - If Vickrey continues to be used set floor and / or purchase price at mid-point between 1st and 2nd bid.
 - Return numbers with a single bid back to the normal pool of available numbers.
 - To be made available immediately to the bidding party under traditional number assignment rules (no ownership transfer).

Questions?

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Working Group: Toll Free Numbering Modernization - 2020

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