

Total revenue = \$360,000

21. Note that in this example the bid of \$50,000 for the northeast region license was not a provisionally winning bid after the first round but became a provisionally winning bid after the next round. The new bid of \$160,000 for package of both licenses in the south region, when considered with the previous \$50,000 bid for the northeast region license, was able to beat the previous \$200,000 bid for the package of the northeast region license and both licenses in the south region.

22. Considering bids from all rounds allows more potential combinations of bids, and therefore, potentially greater flexibility for bidders to submit bids that may become part of the provisionally winning set. As in the example, it helps ensure that bids on single licenses or small packages can combine with other bids to become winners, even when a different combination of bids has comprised the provisionally winning set for a number of rounds. Considering bids from all prior rounds also permits the bids of bidders no longer eligible to

participate in the auction to become part of the provisionally winning set when that is the most economically efficient outcome. Moreover, considering all bids throughout the auction encourages sincere bidding.

iii. Mutually Exclusive Rounds

23. As explained in the previous section, all bids placed throughout the course of the auction are considered when determining the winning bids. However, the proposed procedures restrict how the bids are considered. Bids placed by a bidder in one round are considered mutually exclusive of that bidder's bids placed in all other rounds. If a bidder places a bid for one license in one round and for another license in another round, one bid or the other could be a provisionally winning bid, but not both at the same time. Likewise, if a bidder places several bids in one round and several bids in another round, any or all of the bids from one round or the other could be provisionally winning bids, but not bids from both rounds at the same time.

24. Using the example from the previous section, assume that in the first round of the example the \$50,000 bid for each of the six licenses was placed by Bidder 1 and the \$200,000 bid for the package of the northeast region license and both licenses in the south region was placed by Bidder 2. In the next round of the example, the bid of \$160,000 for the package of both licenses in the south region was placed by Bidder 1. Under these assumptions, the provisionally winning bids at the end of the second round could include Bidder 1's bids from one round or the other, but not both—i.e., any or all of Bidder 1's \$50,000 bids for each of the six licenses from the first round, or Bidder 1's bid of \$160,000 for the package of both licenses in the south region from the second round. Since the choice of Bidder 1's bids in the first round achieves greater revenue, the provisionally winning bids after the second round would remain the same as after the first round:

| Channel | Region | | | | |
|---------|----------|----------|----------|-----------|-----------|
| | West | Central | Midwest | South | Northeast |
| 16 | | | | | |
| 17 | \$50,000 | \$50,000 | \$50,000 | \$200,000 | |

Bidder 1

Bidder 2

Total revenue = \$350,000

25. This treatment of bids as mutually exclusive across rounds is done on a per bidder basis. The provisionally winning bids could include Bidder 1's bids from one round and Bidder 2's bids from a different round.

26. This mutually exclusive treatment of bids—for each bidder, allowing its bids from only one round to become provisionally winning bids—allows bidders to mind budget constraints and to pursue backup strategies. For example, if a bidder wants the license in the west region or the license in the central region but not both, the bidder could place a bid for one of the licenses in one round and a bid for the other license in the next round. Because the bids are considered mutually exclusive, only one could become a provisionally winning bid.

iv. Renewing Bids

27. The proposed procedures include bid renewal to provide a mechanism

that bidders can use so that their bids from different rounds are not considered mutually exclusive. For example, assume a bidder places a bid for the west region license in one round. In the following round, the bidder places a bid for the central region license and renews its bid on the west region license. Then, after that round, either bid or both could become a provisionally winning bid.

28. This concludes the "II. Introduction to Package Bidding." In the following "Auction Structure" and "Bidding Procedures," sections, the Bureau seeks comment on the specific package bidding procedures for Auction No. 51.

III. Auction Structure

A. Simultaneous Multiple Round With Package Bidding

29. The Bureau proposes to award all licenses included in Auction No. 51 in a simultaneous multiple-round with

package bidding (SMR-PB) auction. This methodology offers every license for bid at the same time with successive bidding rounds in which bidders may place bids. Bidders will be able to submit bids on individual licenses, as in the Bureau's simultaneous multiple round auction design, but may also submit all-or-nothing bids on packages of licenses. The Bureau seeks comment on this proposal.

B. Upfront Payments and Initial Maximum Eligibility

30. The Bureau has delegated authority and discretion to determine an appropriate upfront payment for each license being auctioned. Upfront payments related to the specific spectrum subject to auction protect against frivolous or insincere bidding and provide the Commission with a source of funds from which to collect payments owed at the close of the auction. The total upfront payment does