

MDS auction the specific bid increment that generally will be utilized.

79. The Commission will also retain the flexibility to vary the minimum bid increment during the course of the MDS auction by announcement. We may, for example, begin the MDS auction with a sizable minimum bid increment and reduce the bid increment as the auction progresses. Starting with a sizable minimum bid increment will move the auction quickly at the beginning, when prices have limited informational content and there is little benefit to either bidders or the Commission of refined price movements, while allowing bidders to express small differences in valuation as the auction nears a close, increasing both efficiency and auction revenues. Small bid increments also reduce the chances of ties. Where a tie occurs, the high bidder will be determined by the order in which the bids were received by the Commission. See Second Report and Order at 2369. Adjustments in the bid increment may be based in part on the level of bidding activity.

80. To gain the full benefit of the information generated by a simultaneous multiple round auction, bidders will need some time between bidding rounds to evaluate back-up strategies and consult with their principals. Prior to the MDS auction, we will announce by public notice the duration of bidding rounds for the auction. We also reserve the discretion during the course of the auction to vary, by public notice or announcement, the duration of bidding rounds or the interval at which bids are accepted. We expect to allow more time for the initial rounds in the MDS auction, while bidders familiarize themselves with the bidding process, and then increase the frequency of rounds as the auction progresses. Thus, we should be able to move the auction toward closure in a reasonable period of time.⁴¹

81. To ensure that a simultaneous MDS auction with a simultaneous stopping rule closes within a reasonable period of time and to increase the information conveyed by bid prices during the auction, we believe that it is necessary to impose an activity rule to prevent bidders from waiting until the end of the auction before participating. Because simultaneous stopping rules generally keep all markets open for bidding as long as anyone wishes to bid,

they also create an incentive for bidders to hold back until prices approach equilibrium before making a bid. As noted in the Second Report and Order, this could lead to very long auctions. See *id.* at 2371. Delaying serious bidding until late in an auction also reduces the information content of prices during the course of the auction. Without an activity rule, bidders cannot know whether a low level of bidding on a particular market means that the market's price is near its final level or if instead many serious bidders are holding back and may bid up the price later in the auction. When bidding closes on a market-by-market basis, an activity rule is less important. This is because failure to bid on a given market in any round may result in loss of the opportunity to bid on that market, if that round turns out to be the last one for that market.

82. In the Second Report and Order, we adopted the three-stage Milgrom-Wilson activity rule as our preferred activity rule when a simultaneous stopping rule is used. *Id.* at 2372. See also Fifth Report and Order at 5553–5556. We plan to employ this activity rule in the MDS auction as well. Under the Milgrom-Wilson activity rule, bidders are required to declare their maximum eligibility in advance of the auction and make an upfront payment proportional to that eligibility level. In the PCS auctions, activity and eligibility are defined in terms of “MHz-pops.” See, e.g., Fifth Report and Order at 5553–5554. Specifically, the number of MHz-pops associated with a PCS license is calculated by multiplying the population of the license service area by the amount of spectrum authorized by the license. We chose MHz-pops because we anticipated that PCS license values would be closely related to the number of MHz-pops in the license service areas. This choice ensures that the measure of bidding activity used in the activity rule is highly correlated with license values. In the MDS auction, bidding activity and eligibility will be defined in terms of dollar values. The Commission will assign an “activity unit” value to each BTA service area for the purpose of measuring bidding activity and eligibility. Specifically, the activity unit value for a BTA service area will be equal to the upfront payment associated with that BTA service area. A bidder's maximum eligibility (which is also the bidder's eligibility for the first round of the auction) will be equal to its total upfront payments.⁴² Because the upfront

payments will be related to the value of the BTA service areas (see *infra* ¶ 103), activity units will fulfill the same function that MHz-pops have fulfilled in the previous PCS auctions.

83. The Milgrom-Wilson activity rule provides a bidder's minimum activity level, measured as a fraction of eligibility in the current round, will increase during the auction. A bidder will be considered “active” on a BTA service area in the current round if it is either the higher bidder at the end of the bid withdrawal period in the previous round, or if it submits a bid in the current round which meets or exceeds the minimum valid bid (i.e., a bid that exceeds the high bid in the previous round by at least the minimum bid increment). A bidder's activity level in a round is the sum of the activity units associated with the BTA service areas on which the bidder is active.

84. The minimum required bidding activity levels for each stage of the MDS auction are as follows. In each round of Stage One of the auction, a bidder who wishes to maintain its current eligibility is required to be active on BTA service areas encompassing at least fifty percent of the activity units for which it is currently eligible. Failure to maintain the requisite activity level will result in a reduction in the amount of activity units associated with BTAs upon which a bidder will be eligible to be active in the next round of bidding (unless an activity rule waiver, as described below, is used). During the first stage, if activity is below the required minimum level, eligibility in the next round will be calculated by multiplying the current round activity by two (2/1). Eligibility for each applicant in the first round of Stage One is determined by the amount of the upfront payment received and the BTAs identified in the applicant's short-form application. In each round of Stage Two, a bidder who wishes to maintain its current eligibility is required to be active on BTA service areas encompassing at least eighty percent of the activity units for which it is eligible in that particular round. During the second stage, if activity is below the required minimum level, eligibility in the next round will be calculated by multiplying the current round activity by five-fourths (5/4). In each round of Stage Three, a bidder who wishes to maintain its current eligibility is required to be active on BTA service areas encompassing ninety-five percent of the activity units for which it is eligible in that particular round. In the

⁴¹ Given our estimates of the value of the BTA service areas and the likely number of bidders, we expect to hold more frequent bidding rounds in the MDS auction than we have in certain other simultaneous multiple round actions, particularly broadband PCS. See Second Report and Order at 2368.

⁴² As explained in ¶ 105, however, a small business bidder eligible for a reduction in its

upfront payment requirement will not have the number of its activity units decreased as a result of submitting a reduced upfront payment.