

Federal Communications Commission

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**Before the
Federal Communications Commission
Washington, D.C. 20544**

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| In the Matter of: |) | |
| |) | |
| Federal-State Joint Board on |) | CC Docket No. 96-45 |
| Universal Service |) | |
| |) | |
| Competitive Bidding |) | |

SECOND FURTHER NOTICE OF PROPOSED RULEMAKING

Adopted: **Released:**

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I. INTRODUCTION

1. In the Telecommunications Act of 1996 (the 1996 Act), Congress directed the Commission to take steps to reform existing universal service support mechanisms.¹ Specifically, Congress directed the Commission to devise methods to ensure that consumers in "rural, insular, and high cost areas" have access to telecommunications and information services.² In its May 8, 1997 Order, the Commission agreed with the Joint Board "that a compelling reason to use competitive bidding is its potential as a market-based approach to determining universal

¹ 47 U.S.C. § 254.

² 47 U.S.C. § 254(b)(3).

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service support, if any, for any given area."³ We determined, however, that further examination is needed of the possible use of competitive bidding to determine universal service support for rural, insular, and high cost areas.⁴

2. In this Second Further Notice of Proposed Rulemaking (FNPRM), we seek to expand upon the existing record on competitive bidding mechanisms and determine whether, and under what circumstances, the potential benefits of such mechanisms outweigh the potential costs. We seek comment on how we should design and implement a system of competitive bidding to determine the amount of universal service support needed by non-rural LECs serving rural, insular, and high cost areas consistent with the requirements in sections 214 and 254 of the Communications Act of 1934 (the Act), as amended. Specifically, we seek comment on defining what privileges or rights the successful bidder in a universal service auction would win, how market areas should be designated for bidding, how to set the level of support payments, when to conduct auctions, and how to do so without endangering service quality. We tentatively conclude that we should adopt a slightly modified version of the GTE approach, granting universal service support to all bidders with bids within some stated percentage of the lowest bid, [add more].

II. BACKGROUND

A. Statutory Provisions

3. The Act establishes a "pro-competitive, de-regulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans"⁵ The Act also establishes universal service principles to ensure that consumers in all regions of the nation, including those in rural, insular, and high cost areas, have access to telecommunications and information services.⁶ Moreover, the Act requires all telecommunications carriers that provide interstate services to contribute to "the specific, predictable, and sufficient mechanisms established by the Commission to preserve and advance universal service."⁷ It further provides that, after the

³ Federal-State Joint Board on Universal Service, *Report and Order*, CC Docket No. 96-45, FCC 97-157 (rel. May 8, 1997) (Order) at para. 320.

⁴ Order at para. 325.

⁵ Joint Explanatory Statement of the Committee of the Conference (S. Rep. No. 230, 104th Cong., 2d Sess.) at 113 (1996) (Joint Explanatory Statement).

⁶ 47 U.S.C. § 254(b)(3).

⁷ 47 U.S.C. § 254(d).

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effective date of the Commission's regulations implementing section 254, "only an eligible telecommunications carrier designated under section 214(e) shall be eligible to receive specific Federal universal service support."⁸ Under section 214, each eligible telecommunications carrier shall:

- (A) offer the services that are supported by Federal universal service support mechanisms under section 254(c), either using its own facilities or a combination of its own facilities and resale of another carrier's services (including the services offered by another eligible telecommunications carrier); and
- (B) advertise the availability of such services and the charges therefor using media of general distribution.⁹

Section 254(e) states that such support "should be explicit and sufficient to achieve the purposes of this section."¹⁰

B. Universal Service Proceeding

4. NPRM, Public Notice, and Informal Forum. On March 8, 1996, the Commission issued a Notice of Proposed Rulemaking and Order Establishing a Joint Board (NPRM) to implement the 1996 Act's provisions requiring us to reform the system of universal service support then in effect.¹¹ In the NPRM, the Commission sought comment on, among other things, how to provide universal service support to rural, insular, and high cost areas, generally,¹² and asked whether competitive bidding could be used to set the level of support.¹³ We sought detailed comment on establishing a mechanism for estimating the forward-looking economic cost of services in rural, insular, and high cost areas.¹⁴

5. In addition, in the NPRM, the Commission specifically asked whether relying on competitive bidding would be consistent with section 214(e), the provision that specifies the

⁸ 47 U.S.C. § 254(e).

⁹ 47 U.S.C. § 214(e)(1).

¹⁰ 47 U.S.C. § 254(e).

¹¹ Federal-State Joint Board on Universal Service, *Notice of Proposed Rulemaking and Order Establishing a Joint Board*, CC Docket No. 96-45, 11 FCC Rcd 18092 (1996) (NPRM).

¹² NPRM, 11 FCC Rcd at 18101-18116.

¹³ NPRM, 11 FCC Rcd at 18111.

¹⁴ NPRM, 11 FCC Rcd at 18108-18111.

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circumstances under which telecommunications carriers are eligible to receive universal service support.¹⁵ The Commission sought comment on the use of a competitive bidding system in which eligible carriers offering all of the services supported by universal service mechanisms would bid on the level of assistance per line that they would need to provide such services at affordable rates, consistent with the Act. The NPRM explained that such an approach would attempt to harness competitive forces to minimize the cost of universal service. In a July 1996 Public Notice, the Common Carrier Bureau asked specific questions in pursuit of further comment on a competitive bidding system.¹⁶ The Commission also conducted *ex parte* meetings relating to competitive bidding, including a March 19, 1997, forum on universal service auctions.¹⁷

6. Joint Board Recommendations. The Joint Board focused its recommendations regarding support for rural, insular, and high cost areas on a mechanism for estimating the forward-looking economic cost¹⁸ of service for such areas. Still, the Joint Board concluded that:

[w]hile the record in this proceeding persuades us that a properly structured competitive bidding system could have significant advantages over other mechanisms used to determine the level of universal service support for high cost areas, we find that the information contained in the record does not support adoption of any particular competitive bidding proposal at this time.¹⁹

The Joint Board cited the potential advantages of competitive bidding including the use of marketplace dynamics to establish the level of universal service support for any given area.²⁰ The Joint Board noted that "[a] properly designed competitive bidding system would reduce the role of regulators in determining the costs of providing universal service once an area becomes

¹⁵ NPRM, 11 FCC Rcd at 18111.

¹⁶ Public Notice, Common Carrier Bureau Seeks Further Comment on Specific Questions in Universal Service Notice of Proposed Rulemaking, DA 96-1078 (rel. July 3, 1996) (Further Comment Public Notice).

¹⁷ We also note that the California Public Utilities Commission conducted a workshop on May 8-9, 1997, to address auction mechanism rules for the California High Cost fund.

¹⁸ Federal-State Joint Board on Universal Service, *Recommended Decision*, CC Docket No. 96-45, 12 FCC Rcd 87, 230-32 (1996) (Recommended Decision). In using the term "forward-looking economic cost," we mean the cost of producing services using the least cost, most efficient, and reasonable technology currently available for purchase with all inputs valued at current prices.

¹⁹ Recommended Decision, 12 FCC Rcd at 265.

²⁰ Recommended Decision, 12 FCC Rcd at 266.

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subject to bidding."²¹ The Joint Board also recognized that a properly structured competitive bidding system could reduce the amount of overall support needed for universal service by reflecting the lower costs of more efficient carriers and new technologies that would be used to set the level of universal service support for the entire area.²²

7. The Joint Board found that sections 254 and 214(e) and the record developed in this proceeding provided some guidance as to how a competitive bidding system should be structured.²³ The Joint Board recommended that any carrier that meets the eligibility criteria for universal service support should be permitted to participate in the auction and that any competitive bidding system should be competitively neutral, favoring neither incumbents nor new entrants.²⁴ It also recommended that the system adopted should minimize in one of two ways the ability of bidders to collude.²⁵ Either the system should prescribe a minimum number of bidders required to achieve competitive neutrality and to minimize collusion, or the system should be designed to be effective for any number of bidders.²⁶ Finally, the Joint Board recommended that, in determining the geographic area that carriers would bid to serve, any final proposed bidding plan use areas sized to promote competition and target universal service support efficiently.²⁷

8. Report and Order. On May 8, 1997, we released a Report and Order on universal service. In the Order, we adopted most of the recommendations of the Joint Board including "a specific timetable for implementation of federal universal service support to rural, insular, and high cost areas."²⁸ We found "that the level of support for service to a particular customer will ultimately be determined based upon the forward-looking economic cost of constructing and operating the network facilities and functions used to provide that service."²⁹ We concluded that

²¹ Recommended Decision, 12 FCC Rcd at 266.

²² Recommended Decision, 12 FCC Rcd at 266.

²³ Recommended Decision, 12 FCC Rcd at 267.

²⁴ Recommended Decision, 12 FCC Rcd at 267.

²⁵ Recommended Decision, 12 FCC Rcd at 267.

²⁶ Recommended Decision, 12 FCC Rcd at 268.

²⁷ Recommended Decision, 12 FCC Rcd at 268.

²⁸ Order at para. 199.

²⁹ Order at para. 199.

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"in determining the amount of federal support, we should subtract a revenue benchmark³⁰ from the forward-looking economic cost of providing the supported services. . . ." ³¹ We also concluded that "the federal universal service mechanism for rural, insular, and high cost areas will support 25% of the difference between the forward-looking economic cost of providing supported service and the appropriate revenue benchmark."³² We also found that "non-rural carriers will begin to receive support based on forward-looking economic cost on January 1, 1999. Rural carriers' support will not be based on forward-looking economic cost until further review."³³

9. In the Order, we found that "a compelling reason to use competitive bidding is its potential as a market-based approach to determining universal service support. . . ." ³⁴ We also found that "a properly structured competitive bidding system would . . . reduce the amount of support needed for universal service."³⁵ Reduced support levels would advance the goal of affordable rates by requiring the collection of less support from consumers. We concluded, however, that further proceedings were needed to examine issues related to the use of competitive bidding to set universal service support levels for rural, insular, and high cost areas.³⁶ Specifically, we found that the record did not contain adequate discussion to enable us either to define a competitive bidding mechanism that would be consistent with the requirements of sections 214(e) and 254, or to adopt specific procedures for implementing a lawful competitive bidding system.³⁷ In this FNPRM, we seek to develop an adequate record.

³⁰ The Joint Board recommended that the amount of support that carriers receive for serving customers in rural and high cost areas should be set by subtracting an amount of revenue, which we refer to as the "benchmark," from the cost of service predicted by the forward-looking cost mechanism. The Joint Board recommended that the benchmark should include revenues generated by services for which the "cost estimated by the proxy models includes the cost of facilities used to provide those services." The Joint Board noted that such services would include local, discretionary, and access services. Recommended Decision, 12 FCC Rcd at 246-247. We adopted the Joint Board's recommendation to employ a revenue-based benchmark, but indicated our intention to examine the issue of its definition more fully. Order at paras. 259, 266.

³¹ Order at para. 200.

³² Order at para. 201.

³³ Order at para. 203.

³⁴ Order at para. 320.

³⁵ Order at para. 320.

³⁶ Order at para. 325.

³⁷ Order at paras. 322-325.

III. GOALS OF COMPETITIVE BIDDING

10. Beginning January 1, 1999, non-rural carriers will receive support for rural, insular, and high cost areas based on the difference between the cost of providing service, as calculated by a forward-looking economic cost mechanism, and a benchmark amount of revenue. Federal universal service mechanisms for rural, insular, and high cost areas will support 25% of the difference between them, with state mechanisms supporting the remaining 75%.³⁸ The Joint Board and Commission agreed, however, that to the extent competitive bidding can be introduced in a practical form, it could provide more accurate estimates of the amount of support needed to compensate service providers for their costs. Moreover, by encouraging more efficient carriers to submit bids based on their lower costs, competitive bidding may harness competition to reduce the total amount of support necessary for universal service in rural, insular, and high cost areas. To help us evaluate potential competitive bidding mechanisms, we offer the following set of goals and seek comment on whether these represent the criteria we should use to evaluate competitive bidding mechanisms.

11. Eliminating Unnecessary Universal Service Support Payments by Stimulating Competition. In this FNPRM, we tentatively conclude that a goal of competitive bidding is to provide a market-based alternative to forward-looking economic cost mechanisms in establishing the amount of universal service support for rural, insular, and high cost areas. Forward-looking economic cost mechanisms and revenue benchmarks rely upon complex government estimates of the support levels required to provide universal service. Given the effects of continuous changes in technology and carrier revenue as customer demand for service changes, these costs mechanisms and revenue benchmarks may yield too much or too little support in some areas over time. To the extent we could stimulate competition to serve those areas with a properly designed bidding system, the bids submitted by the most efficient carriers would indicate the minimum amount needed to support universal service in a particular area.³⁹ Thus, competitive bidding would convert the efficiency gains from new technologies or improved productivity into a reduced need for universal service funds, thereby diminishing the burden on the customers who ultimately finance those contributions.

12. Promoting Competitive Entry. We also note that our decision to make universal service support portable⁴⁰ should facilitate competition within the market, where such

³⁸ Order at para. 201.

³⁹ We recognize that some rural, insular, and high cost service areas may contain so many "profitable" customers, i.e., customers that generate bills greater than even the high cost of serving them, that carriers are willing to serve those customers without receiving any support. In these cases, we would not need to provide support for these market segments, as service would be provided by carriers even without universal service support.

⁴⁰ Order at para. 287 (concluding that "[a] competitive carrier that has been designated as an eligible telecommunications carrier shall receive universal service support to the extent that it captures subscribers' lines

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competition is feasible. Therefore, we also seek a bidding mechanism that permits multiple carriers to receive universal service support for serving a rural, insular, or high cost service area where competition is feasible. Competition in the market for consumers would benefit customers and regulators by enabling customers to enforce state service quality standards by switching carriers when the quality of service from one carrier was inferior to that of another, rather than requiring regulatory intervention. Furthermore, competition may increase product variety, to the benefit of consumers. For example, while the incumbent LEC may offer universal service of minimum quality to consumers at the state regulated rate, a competing LEC might match that offer and also offer higher quality service to consumers at a higher rate, thus giving consumers the opportunity to choose the mix of price and quality they preferred.⁴¹ It may also reduce prices for LEC services other than the basic service package. Designing an auction mechanism likely will require a compromise between the benefits of competition in the market and the goal of eliminating unnecessary support payments. A mechanism likely to cause more firms to offer service is also likely to require higher total support payments and have somewhat higher costs of service provision given the existence of significant economies of density.⁴²

13. Minimizing Administrative Burdens. We also tentatively conclude that we should select a competitive bidding mechanism that minimizes administrative costs for both carriers and regulators. Ideally, a competitive bidding mechanism would impose no greater demands on carriers' resources than they would face in a competitive environment and the auction mechanism would not represent a significant entry barrier. For example, we would not consider that we were burdening potential entrants by requiring them to provide their estimates of support needed as part of a competitive bidding system because we would expect that carriers evaluating a market segment for entry would evaluate both their potential costs of and revenues from entry and therefore, they would already know how much support they would need.

14. Preserving Quality Service. Section 254(b)(1) of the Act establishes the principle that "[q]uality services should be available at just, reasonable, and affordable rates."⁴³ State regulatory commissions have generally adopted rules for ensuring such quality service, and we do not want to adopt competitive bidding rules that could frustrate state efforts in this regard. Therefore, we tentatively conclude that we will reject any competitive bidding mechanism that

formerly served by an ILEC receiving support or new customer lines in that ILEC's study area").

⁴¹ State regulators generally do not limit the rates charged by competitive LECs.

⁴² Economies of density occur if, in a particular area by using a particular technology, the cost to a carrier of serving a customer is lower if the carrier has designed its plant to serve a larger share of the total market. We note that GSA had to make similar compromises when designing the FTS2000, the federal contract for telecommunications services. *See* Appendix B.

⁴³ 47 U.S.C. § 254(b)(1).

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threatens to frustrate state efforts to preserve quality service, or to interrupt the provision of quality services to consumers. We address this issue in more detail, below,⁴⁴ where we seek comment on how we might ensure that competitive bidding does not threaten service quality.

15. Preserving Flexibility. A significant advantage of competitive bidding over a pure cost model approach is the former's ability to reflect changes in the marketplace. Therefore, we tentatively conclude that the design of any competitive bidding mechanism should recognize that market conditions will continue to change. New technologies will be introduced, input prices and service definitions will change, and new firms will gain competence and gradually alter and expand their business plans. The competitive bidding mechanism should allow all of these changes to be reflected in the amount of support determined through the mechanism's application, although we recognize, as discussed below, that increasing the frequency of the bidding will increase administrative costs.

16. Minimizing Inefficiency. We conclude that a properly designed competitive bidding mechanism should not promote inefficiency through unintended consequences of its design. That is, while any competitive bidding mechanism implicitly reflects a compromise between the benefits of promoting competition in the market and the goal of minimizing total support payments, as discussed above, that mechanism should not unintentionally induce inefficient behavior. We find that there is a risk that, in markets with limited competition, bidding mechanisms without appropriate safeguards may do so, and thereby unnecessarily increase universal service support. We also recognize, however, that if there are strong cost synergies⁴⁵ among adjacent service areas, an inappropriately designed competitive bidding mechanism could discourage economically beneficial entry by creating excessive risk that a new entrant may fail to obtain support in the entire region it wishes to serve.

IV. COMPETITIVE BIDDING PROPOSALS

17. The competitive bidding mechanism we propose in Sections V and VI is based, in large part, on the proposal made by GTE. That proposal is the most comprehensive and developed one in the record, and GTE has modified it over time in response to comments and criticisms.⁴⁶ Consultants to Ameritech proposed another fairly detailed mechanism⁴⁷ as have

⁴⁴ See Section VI.D., *infra*.

⁴⁵ Cost synergies exist if the total cost of serving two areas is lower when the areas are supplied together than when each area is supplied separately.

⁴⁶ We also note that there has been a continuing dialogue between GTE's economic consultant, Stanford Professor Paul Milgrom, and Ameritech's economic consultants, Yale Professors Jeremy Bulow and Barry Nalebuff that has led to modifications in the proposals. See, e.g., *ex parte* summary from Charon Harris, GTE, to William Caton, FCC, dated March 31, 1997 (GTE March 31 *ex parte*). The most detailed and current description of the GTE proposal is probably the summary submitted by GTE on June 21, 1997 (GTE June 20 *ex parte*). [add www url - call Scott Randolph]

Frank Kelly and Richard Steinberg of Cambridge University, Great Britain.⁴⁸ Because all three of these proposals have been placed on the record in CC Docket No. 96-45, we offer short summaries of them here, before we review the individual elements of our proposal in detail. In our effort to make a comprehensive review of competitive bidding designs, we also found it helpful to review other instances in which government agencies have used competitive bidding (see Appendix B).

A. The GTE Proposal

18. GTE proposes that there be bidding for support in geographic areas called Census Block Groups (CBGs).⁴⁹ Every six months, carriers desiring to serve a CBG could initiate, through the state commission governing that CBG, an auction for the rights and duties of carrier of last resort (COLR)⁵⁰ in that CBG.⁵¹ Assuming there were enough qualified bidders, the state would employ a single round, sealed-bid auction to set the per-customer support in that CBG.⁵² Bids could be no higher than the "reservation" price for each CBG. That reservation price would be based on the current level of support an incumbent LEC was receiving for that CBG, although each incumbent LEC would be permitted to make a one-time adjustment to the support level within each CBG as the initial support levels were set, as long as the total support to the incumbent LEC across all CBGs remained the same.⁵³ The adjusted support levels increased by a prescribed percentage would then become the reservation prices for each CBG.⁵⁴

⁴⁷ See, e.g., letter from Celia Nogales, Ameritech, to William Caton, FCC, dated May 2, 1997 (*Ameritech May 2 ex parte*).

⁴⁸ Letter from Richard Steinberg, University of Cambridge, to Evan Kwerel, FCC, dated June 23, 1997 (*A Combinatorial Auction with Multiple Winners for COLR*, June 9, 1997) (Kelly-Steinberg). (Available at <http://www.statslab.cam.ac.uk/~frank/AUCTION>).

⁴⁹ GTE June 20 *ex parte* at 14. A census block group is a geographic area defined by the Bureau of the Census which contains approximately 400 households.

⁵⁰ GTE defines a COLR as a carrier eligible for universal service support that undertakes the obligations established by a state agency, within federal guidelines, as a condition of receipt of federal universal service support. GTE further comments at 8 n.19.

⁵¹ GTE June 20 *ex parte* at 19-20.

⁵² GTE June 20 *ex parte* at 18, 20.

⁵³ Thus a LEC could increase the level of support it received for serving some CBGs and decrease it for others as long as the net effect on support was zero.

⁵⁴ GTE June 20 *ex parte* at 1, 16.

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19. Under the GTE proposal, after submitting bids, every bidder that was within 15% of the low bid would be a successful bidder in the auction. If there were no other bidders within 15% of the low bid, the low bidder and next lowest bidder within 25% of the low bid would be a successful bidder. If no other bid was within 25% of the low bid, only the low bidder would be a successful bidder. Each successful bidder would then assume COLR obligations and receive per-customer support equal to the highest level of support sought by a carrier with a successful bid. If there were only one winner, the new support would be set at the reservation price, i.e., the current support increased by the prescribed percentage.⁵⁵ Starting with the lowest bidder, GTE would allow bidders to withdraw from the auction after the successful bidders were determined. If a bidder withdrew, new successful bidders would be determined as if the withdrawn bid had never been made.⁵⁶ If the auction resulted in a new COLR for the area, either in addition to the incumbent or in place of the incumbent, the support levels and obligations for that area would be frozen for three years. No new entrants could receive universal service support during this time, although they could enter and provide service without such support. After the three-year period, carriers could bid on the area again.⁵⁷ GTE's proposal would allow a COLR to transfer or sell its rights and obligations to any qualified carrier, as long as the number of COLRs in the CBG would not decrease.⁵⁸ The GTE proposal also requires penalties for any carrier that defaults on its COLR obligations. GTE also proposes that, when the incumbent LEC desires to exit the market at the current level of support and no other carrier volunteers to serve the market with a bid at or below the reservation price for the service area, we should raise the level of support by some designated percentage. GTE also recognizes that contingent bids may be appropriate if there are substantial economies of density.⁵⁹

B. Proposal of Ameritech Consultants

20. Jeremy Bulow and Barry Nalebuff, consultants for Ameritech, propose that carriers be asked to compete for a portion of a lump-sum support⁶⁰ in return for assuming COLR

⁵⁵ GTE June 20 *ex parte* at 21-22, 25.

⁵⁶ GTE June 20 *ex parte* at 26.

⁵⁷ GTE June 20 *ex parte* at 28.

⁵⁸ GTE June 20 *ex parte* at 28-29.

⁵⁹ GTE June 20 *ex parte* at 29-30.

⁶⁰ These lump-sum payments to carriers are very different from the block grants that Congress rejected in this area. As the Joint Board observed, in quoting the Senate Working Group "[s]uch grants would be incompatible with the statute's architecture of discounts. . . [A]ffordability cannot be determined under a block grant approach." Recommended Decision 12 FCC Rcd at 366-367 (*citing* Senate Working Group further comments at 2). Thus, both we and the Joint Board have rejected them as contrary to Congressional intent. Lump sum payments here would merely serve to pay carriers a fixed amount for providing the universal service specified by the Commission.

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obligations over a subset of customers in a particular area. Under their proposal, all carriers, both COLR and non-COLR, in a particular area would assign customers that they did not find profitable to serve to a COLR pool. After the bidding (for support and associated COLR obligation), the "unprofitable" customers (those no carrier found it profitable to serve) would be randomly assigned to the successful bidders. Bulow and Nalebuff advocate a sealed-bid auction, in which a carrier's bid is the amount it would require to take 100 percent of the COLR pool in a particular area. The lowest bid wins and the carrier making that bid is awarded a pre-designated substantial fraction of the COLR pool, e.g., 70%, along with an equal fraction of the total support. The second lowest bidder may choose to accept the remaining, smaller fraction of the COLR pool, along with a share of the total support equal to that smaller fraction.⁶¹ If the second lowest bidder declines, the third lowest bidder would be offered the same choice. If all other bidders decline the opportunity, the lowest bidder would be assigned 100 percent of the COLR pool and 100 percent of the winning bid (i.e., support). Under this proposal, the total support amount would equal the amount of the lowest bid. Bulow and Nalebuff would allow a COLR to trade its COLR-pool customers to other carriers for cash or other service obligations.

21. Bulow and Nalebuff contend that if there is only one incumbent LEC in a region, then support should be set on a per-subscriber basis to provide an incentive to other carriers to serve the entire market.⁶² If, however, policy considerations determine that there will be more than one COLR, Bulow and Nalebuff contend that fixed-fee support levels the playing field between a COLR and a non-COLR. They also argue that, in the presence of economies of density, competitive bidding could lead to unnecessarily high support, because the most efficient bidder would tend to bid higher than necessary to protect against the possibility that it would be forced to share the COLR customers rather than bidding lower based on the assumption that it would serve 100 percent of the COLR pool. Bulow and Nalebuff thus suggest that the lowest bidder should be awarded a large fraction -- perhaps 70-75 percent -- of the COLR pool.

22. Bulow and Nalebuff argue, as well, that their suggested approach removes the problem that a competitor to the incumbent LEC will try to "cherry pick" the most profitable customers, which could occur under the GTE competitive bidding proposal. In the GTE proposal, the "cherry picking" problem prompts the suggestion that competitive bidding be conducted for areas that are small enough to have homogeneous costs of service (e.g., Census Block Groups). Bulow and Nalebuff argue that their approach would allow competitive bidding over larger and more diverse areas than the GTE proposal would allow, which may be administratively simpler or less costly. They also argue that competitive bidding over larger areas would be preferable if there are cost synergies among small markets.

⁶¹ *Ex parte* meeting on Universal Service Auctions, March 19, 1997.

⁶² *Ex parte* meeting on Universal Service Auctions, March 19, 1997.

C. The Kelly & Steinberg Auction Scheme

23. Frank Kelly and Richard Steinberg propose that per-subscriber support be given to carriers serving “blocks” of customers. Under their proposal, a two-stage auction would set the amount of support over all blocks at the same time. They would base the initial support level for each block on either the historical cost of serving residential customers in the block or on a forward-looking economic cost mechanism's prediction of such service costs, whichever is lower.

24. In the first stage of the auction, bidders would submit a sealed set of "contingent" bids on any blocks in which they were interested.⁶³ The contingent bids would ask for different levels of support depending upon the number of carriers that were chosen to serve the block. For example, they might ask for \$10 in support if they were the sole provider, \$6 if they were to share the block with one other carrier, and \$4.50 if they were to share the block with the two bidders. Each bid would equal the lump-sum payment that the carrier sought for serving its share of customers in that block. The auctioneer would then determine the lowest total support payout for each possible number of successful bidders, e.g., the lowest bid to be sole provider; the sum of the two lowest of those bids contingent on sharing the block with one other carrier.⁶⁴ The auctioneer would then multiply this support by a preferential weighting factor that would attempt to capture the benefit to society from increasing the number of firms competing in a market.⁶⁵ The auctioneer would then select the lowest weighted total support payout and the associated successful bidder or bidders. The bidders with the lowest bids for the contingency of that number of successful bidders would be the first stage winners. For example, if the lowest payout was for two carriers then support would be available to the carriers with lowest bids for sharing support with one other carrier. If there were multiple winners in a block, each successful bidder would be assigned a proportional share of the block, i.e., a "sub-block."

25. The second stage of the auction would consist of multiple rounds of open combinatorial bidding in which bidders offered to serve some combination of blocks and sub-blocks for less support than the first-round successful bidders and bidders in any previous round.⁶⁶ A valid combinatorial bid would consist of a list of requested support amounts, one support amount for each sub-block in the combination. The total value of the combinatorial bid would be the sum of these support amounts. A valid combinatorial bid would need to seek less total support (i.e., have a lower total value of the bid) than previous bids by an exact amount, i.e.,

⁶³ Kelly-Steinberg at 4.

⁶⁴ Kelly-Steinberg at 4.

⁶⁵ Kelly-Steinberg at 4.

⁶⁶ Kelly-Steinberg at 5.

"bid increment." Initially it would need to improve on the combined bids of the first stage successful bidders. The rounds of the second stage would start by considering combinations across two blocks, and then progressively consider larger combinations. Bidders would not be allowed to make combinatorial bids over sub-blocks within a block.

26. To be eligible to bid, bidders would need to remain "active" in the auction, by either holding the low bid in the previous round or submitting an acceptable bid in the present round.⁶⁷ How active a bidder was in the present round would determine how many bids it could place in the next round.⁶⁸ The level of activity needed to be allowed to make bids in the next round would also change as the auction continued.⁶⁹

27. When second-stage bidding activity stopped, the auction would end and final successful bidders would be declared.⁷⁰ The successful bidders would receive per-customer support based on their bid, for serving customers up to their designated proportion of a block, (e.g., one-third of the customers in a block if there had been three successful bidders of the block at the end of the first stage). Multiple successful bidders within the block would then compete for customers within a block. Unserved customers would be assigned to a successful bidder not serving its full share of customers in the block. A successful bidder would be free to attract the business of all the customers in a block, but would only receive support for its share, e.g., one third, of the market that it was assigned in the auction. Throughout the auction process, no bid waivers or bid withdrawals would be allowed.⁷¹

V. HOW MANY SUCCESSFUL BIDDERS AND WHAT THE SUCCESSFUL BIDDER WINS

28. For a competitive bidding system to be effective, bidders must know what they are bidding for: how many bidders may win, what benefits successful bidders will receive, and what obligations successful bidders must assume. Bidders' behavior in an auction for universal service support will be affected by our actions in structuring the process that will determine which bidder or bidders will receive universal service support, and the level of that support. In

⁶⁷ Kelly-Steinberg at 5.

⁶⁸ Kelly-Steinberg at 5 (suggesting bidders initially should be required to remain active on sub-blocks covering 60 percent of the number of customers for which they wish to remain eligible to bid).

⁶⁹ Kelly-Steinberg at 5-6 (suggesting that the activity requirement increase, as the second stage progresses, to 80 percent of the number of desired customers, and finally to 95 percent of such customers).

⁷⁰ Kelly-Steinberg at 6.

⁷¹ Kelly-Steinberg at 7.