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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
)
Implementation of Section 309(j))
of the Communications Act)
Competitive Bidding)

PP Docket No. 93-253

TO: The Commission

COMMENTS OF PAGING NETWORK, INC.

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November 10, 1993

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SUMMARY

AUCTION DESIGN CRITERIA

- Adopting three additional design criteria will enhance the Commission's ability to achieve statutory auction objectives: (1) promote certainty that the party who values a license most highly will obtain it; (2) rely to the maximum extent on existing FCC service definitions and rules; (3) minimize litigation opportunities.
- Only oral, ascending bid auction rules should be adopted at this time. Concentrating on one auction methodology increases the likelihood that the Commission and auction participants will be able to "get it right the first time."

AUCTION METHODOLOGY

- Oral, ascending bidding is the best auction format by every measure. It promotes certainty and efficiency; lowers bidding transaction costs; is fairest and will facilitate license aggregation. By comparison, all other auction formats are seriously flawed.

BIDDING PROCEDURES

- The Commission should auction licenses sequentially, in descending order of population. To further facilitate license aggregation, all licenses within a particular segment of a geographic licensing level (e.g., MTA) should be auctioned before moving across that level to the next segment.
- Combinatorial bidding should not be permitted. This auction format decreases certainty, undercuts efficiency, produces random results and is unfair to those bidding on individual licenses.
- The Commission should not set reservation prices because doing so will delay auctions and may skew their results.
- Except for designated preference entities, winning bidders should be required to pay their bids in full on auction day.
- Preferences should not be implemented through set-asides. Instead, preference entities should be permitted to pay their bids in installments at market interest rates.
- Barriers to entering certain markets, such as narrowband PCS, are so low that preferences are not needed to ensure widespread opportunities to participate in the auction process. Construction and operating costs in certain other markets are so high as to rationally preclude many entities

from entering. Ignoring these economic realities when fashioning a preference policy will distort competition, reduce the efficiency of the auction process, and ultimately may delay the provision of quality service to the public.

- New antitrafficking rules are not needed to prevent "unjust enrichment" during post-auction license transfers, and likely would be counterproductive.
- Except with respect to auction-related financial requirements, new performance rules are not needed to ensure spectrum utilization.
- Generally, existing antitrust laws offer sufficient protection against collusive bidding. The Commission should adopt a rule stating that evidence of collusion will be referred to the U.S. Department of Justice; that anyone found guilty of collusion shall be barred from participating in FCC auctions for five years; and that such a conviction shall be considered in connection with all license applications involving the convicted party.

APPLICATION PROCESSING REQUIREMENTS

- Short and long form applications should be filed prior to auction with special provisions for auctions involving new services such as PCS.
- Waivers add delay and uncertainty and should be discouraged by forfeiting the deposit if waiver is ultimately denied.
- Application amendments should not be accepted before the auction but after the auction the winning applicant should be permitted to amend its application to correct any defects rather than subjecting it to dismissal.
- Petitions to deny should be discouraged by requiring them to be filed before the auction, banning pay offs for their dismissal and permitting amendments after the auction to cure defects.

AUCTION PROCEDURES

- Up-front payments and substantial bid deposits will discourage speculators and gamesmanship. Submit up-front payments with the application and deposits at the close of the auction. Special provisions for PCS.
- In the event of default in payment or denial of application, the bidder loses both the up-front payment and the deposit and cannot participate in future auctions.

USE OF AUCTION PROCEDURES FOR SPECIFIC SERVICES

Personal Communications Service (PCS)

- Devise special procedures to deter speculators, avoid disruptive second auctions of the same frequency and assure participation by bidders who are qualified to construct and operate promptly.
- Require up-front payments of \$.04 per pop, per MHz and immediate payment of entire bid price to discourage speculators and unqualified bidders and avoid reauctions of the same market.
- File short and long form applications but do not submit location specific information until build-out by winner using Form 489.
- Auction frequencies by geographic area, largest to smallest. Auction all frequencies within such area, largest block to smallest. Do not use combinatorial bidding for PCS.
- Combinatorial bidding should be eliminated.
- Preferences should not be permitted to disrupt the process. Groups containing designated entities must be scrutinized carefully for abuse.
- Some clarification and modification of the cellular rules is required before applying them to PCS.

Private Land Mobile Services

- PageNet generally agrees with the Commission's tentative approach for these markets but would apply the procedures suggested for PCS where new classes of service are created.

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COMMENTS OF PAGING NETWORK, INC.

I. INTRODUCTION

Paging Network, Inc. ("PageNet"), by its attorneys, hereby comments on the Commission's Notice of Proposed Rulemaking in the above captioned proceeding. ^{1/} In the NPRM, the Commission makes tentative conclusions and proposals concerning implementation of new sections of the Communications Act granting the Commission express authority to employ competitive bidding procedures to license spectrum in certain circumstances. ^{2/}

Statement of Interest

PageNet, since its inception in 1982, has expanded through internal growth to become the largest paging company in the United States. It currently provides service in 28 states and the District of Columbia, serving over 2.8 million subscribers.

^{1/} Implementation of Section 309(j) of the Communications Act Competitive Bidding, PP Docket No. 92-253, FCC 93-455, released October 12, 1993 ("NPRM").

^{2/} See Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, Title VI, § 6002(a), 107 Stat. 393 (1992), to be codified at 47 U.S.C. § 309 ("Spectrum Auction Act").

PageNet estimates that it holds well over 60 common carrier and 470 private carrier paging licenses, representing over 3,600 transmitters. PageNet has a long standing commitment to offer state of the art paging services to business and individuals at the lowest possible cost and in the most spectrally efficient manner possible.

The Commission's orders in this proceeding will have a substantial impact on PageNet's ability to acquire the addition frequencies it needs to respond to exploding consumer demand in the evolving market for paging services. Therefore, PageNet has a significant interest in the outcome of this proceeding.

Summary

AUCTION DESIGN CRITERIA

- ° Adopting three additional design criteria will enhance the Commission's ability to achieve statutory auction objectives: (1) promote certainty that the party who values a license most highly will obtain it; (2) rely to the maximum extent on existing FCC service definitions and rules; (3) minimize litigation opportunities.
- ° Only oral, ascending bid auction rules should be adopted at this time. Concentrating on one auction methodology increases the likelihood that the Commission and auction participants will be able to "get it right the first time."

AUCTION METHODOLOGY

- ° Oral, ascending bidding is the best auction format by every measure. It promotes certainty and efficiency; lowers bidding transaction costs; is fairest and will facilitate license aggregation. By comparison, all other auction formats are seriously flawed.

BIDDING PROCEDURES

- The Commission should auction licenses sequentially, in descending order of population. To further facilitate license aggregation, all licenses within a particular segment of a geographic licensing level (e.g., MTA) should be auctioned before moving across that level to the next segment.
- Combinatorial bidding should not be permitted. This auction format decreases certainty, undercuts efficiency, produces random results and is unfair to those bidding on individual licenses.
- The Commission should not set reservation prices because doing so will delay auctions and may skew their results.
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- Preferences should not be implemented through set-asides. Instead, preference entities should be permitted to pay their bids in installments at market interest rates.
- Barriers to entering certain markets, such as narrowband PCS, are so low that preferences are not needed to ensure widespread opportunities to participate in the auction process. Construction and operating costs in certain other markets are so high as to rationally preclude many entities from entering. Ignoring these economic realities when fashioning a preference policy will distort competition, reduce the efficiency of the auction process, and ultimately may delay the provision of quality service to the public.
- New antitrafficking rules are not needed to prevent "unjust enrichment" during post-auction license transfers, and likely would be counterproductive.
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- Generally, existing antitrust laws offer sufficient protection against collusive bidding. The Commission should adopt a rule stating that evidence of collusion will be referred to the U.S. Department of Justice; that anyone found guilty of collusion shall be barred from participating in FCC auctions for five years; and that such a conviction shall be considered in connection with all license applications involving the convicted party.

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- Preferences should not be permitted to disrupt the process. Groups containing designated entities must be scrutinized carefully for abuse.
- Some clarification and modification of the cellular rules is required before applying them to PCS.

Private Land Mobile Services

- PageNet generally agrees with the Commission's tentative approach for these markets but would apply the procedures suggested for PCS where new classes of service are created.

II. DISCUSSION

A. BROAD AUCTION DESIGN CRITERIA

The Commission has tentatively concluded that the goals of the auction statute will be achieved by designing auction rules that: (1) are simple and easy to administer; (2) minimize costs to license applicants and the Commission; and (3) reflect the experience of other government agencies who have successfully conducted auctions. ^{3/} In addition to utilizing these three "design criteria," the Commission proposes to incorporate a variety of auction procedures into its rules. ^{4/} The Commission seeks comment on these tentative decisions.

1. The Commission Should Adopt Three Additional Design Criteria

The Commission's proposed design criteria are important guidelines for fashioning auction rules. Adopting the following three additional guidelines will further ensure that the Commission's auction system comports with Congress's goals.

^{3/} NPRM at ¶ 18.

^{4/} Id. at 19.

a. Promote Certainty

The auction statute directs the Commission to adopt competitive bidding procedures that ensure efficient and intensive use of electromagnetic spectrum. ^{5/} This instruction reflects Congress' judgment that the inherent cost and delay of comparative hearings, and the random outcomes of lotteries, do not serve the public interest. ^{6/} In the NPRM, the Commission recognizes that the best way to avoid similar results from occurring in auctions is to formulate rules that increase the certainty that a party who values spectrum most highly will be awarded spectrum in the first instance. ^{7/} The importance of promoting certainty in the auction context should be recognized by making it one of the Commission's explicit design criteria.

b. Rely On Existing Rules

Reliance on existing service definitions and rules also should be an explicit auction design criteria. Such definitions and rules were adopted on a case by case basis after careful Commission consideration of fairness, competitiveness and other public policy concerns. They have stood the test of time and, in many instances, court challenges. There is no evidence that Congress intended the Commission to rewrite or otherwise disturb

^{5/} See Spectrum Auction Act, 47 U.S.C. § 309(j)(3)(D).

^{6/} See, e.g., House Comm. On Budget, Conference Report on the Omnibus Budget Reconciliation Act of 1993, H.R. Rep. No. 103-213, 103rd Cong., 1st Sess., at 481-482 ("Conference Report"); House Comm. On Budget, Report on the Omnibus Budget Reconciliation Act of 1993, H.R. Rep. No. 103-111, 103rd Cong., 1st Sess., at 248-249 ("House Report").

^{7/} See, e.g., NPRM at ¶¶ 37 & 46.

these rules when implementing the auction statute. Using them as the foundation of the auction system is an effective way of satisfying the congressional mandate to conduct simple, easily administered competitive bidding at minimal cost. ^{8/}

c. Minimize Litigation

Congress envisioned auctions to be a means of avoiding protracted administrative and judicial proceedings. ^{9/} As discussed in detail hereafter, the Commission can take numerous steps to ensure that pre- and post-auction licensing processes are conducted in ways that both reduce frivolous litigation opportunities and promote certainty. Adopting these suggestions will lower transaction costs and accelerate license processing, thereby fulfilling Congress' objective. This result makes "minimizing litigation" a particularly worthy design criteria.

2. Only Oral Auction Rules Are Needed At This Time

PageNet strongly agrees with the Commission's decision to presumptively favor the use of oral, ascending bid auction procedures. ^{10/} Given that decision, devoting resources now to developing multiple auction formats is not consistent with the important task of expeditiously developing and implementing efficient auction rules within the statutory deadline.

^{8/} See Spectrum Auction Act, 47 U.S.C. § 309(j)(3); House Report at 247-249.

^{9/} See Spectrum Auction Act, 47 U.S.C. 309(j)(3)(A).

^{10/} See NPRM at ¶ 46.

Concentrating on one auction methodology increases the likelihood that the Commission and auction participants will be able to "get it right the first time."

This recommendation is entirely congruent with the auction statute. Nothing in the legislative history of the statute indicates that Congress' directive to "test multiple alternative [auction] methodologies" means the Commission must test alternatives concurrently.^{11/} Given the abbreviated statutory deadlines for conducting certain auctions, it is far more likely that Congress intended the Commission to develop a basic methodology, apply it, and conduct experiments thereafter as appropriate. The Commission should follow that strategy by amending its rules to incorporate the auction procedures it has identified as most likely to serve the public interest -- oral, ascending bidding -- and defer further consideration of alternative methodologies.

B. AUCTION METHODOLOGY

The Commission proposes to make oral ascending bidding its basic auction format, but it also proposes to use sealed bidding, including Vickrey procedures, in limited circumstances. The Commission seeks comments supporting or refuting these conclusions and their underlying analysis.^{12/}

^{11/} See Spectrum Auction Act, 47 U.S.C. § 309(j)(3).

^{12/} See NPRM at ¶¶ 34-39.

1. **Oral Ascending Bidding Is Far Superior To Other Methods Of Auctioning Spectrum**

PageNet strongly supports the Commission's tentative decision to make oral ascending bidding its principal auction methodology. This decision is based on the Commission's conclusions that of all bidding procedures, oral auctions: (1) generate the lowest transaction costs for bidders; (2) promote certainty from a bidder's perspective and, therefore, are the most outcome-efficient; (3) facilitate aggregation; and (4) engender public confidence in the auction process. Each of these conclusions rests on a solid foundation.

a. **Transaction Costs**

The Commission's choice of auction format will greatly impact bidders' transaction costs because it will influence a crucial element of the auction process: the need for each bidder to acquire information about how other bidders estimate the market value of spectrum. ^{13/} This "need to know" exists because the value of spectrum is dependent on market forces -- the price at which it can be bought or sold in the marketplace. The implication in the auction context is straightforward: the amount a rational person should pay for spectrum depends in large measure on what others are willing to pay. ^{14/} Bidding on any other basis

^{13/} The market value of that spectrum is unknown at this time, else the Commission would simply sell it at a posted price. Its value will be revealed through the auction process in the form of the highest bid.

^{14/} In the jargon of economists, items like spectrum are said to have common, objective values because each bidder's private

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is, at best, equivalent to taking a shot in the dark. At worst, such a bid might actually win, but at a price far above all other bids. In this instance, the winner is said to be "cursed" because he has paid more for the item than anyone in the market thinks it is worth, and he cannot resell it except at a substantial loss.^{15/} Thus, regardless of the auction format, a bidder must have at least some information about other bidders' valuations in order to participate in the process rationally.

No auction format eliminates this "need to know." Rather, formats profoundly effect the level of resources expended to acquire the necessary information. For example, the sealed bid format provides bidders no information whatsoever about their rivals' valuations until after the auction is over (i.e., when the bids are opened). Thus, bidders must obtain the information through other means prior to submitting their bids. This generates substantial up front research costs.^{16/} In the context

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valuation is based in part on the valuations of other bidders. Contrast this with an item like a work of art. Certain individuals value such items subjectively (i.e., wholly apart from the price the item would fetch in the marketplace). The private valuation of this type of bidder is independent of other bidders' valuations. Even if he knew what those other valuations were, such information would not influence his bidding. See R. McAfee & J. McMillan, "Auctions and Bidding," 25 Journal of Economic Literature (June 1987) at 705 ("McAfee & McMillan").

15/ Id. at 704-07.

16/ See, e.g., V. Chari & R. Weber, "How The US Treasury Should Auction Its Debt," Federal Reserve Bank of Minneapolis Quarterly Review, Vol. 16 (Fall 1992) at 4, 9-11 ("Chari & Weber") ("[T]he true social cost of. . .[sealed bidding] is the excessive resources devoted to gathering information

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of Treasury auctions, even though information about the market value of the financial instruments is widely available, and rivals are quite familiar with each other's cost structures, such research costs are thought to be so high as to warrant abandoning seal bidding procedures. ^{17/} PageNet believes such costs may reach extraordinary levels if sealed bids are used to auction spectrum for new services like PCS, since the market value of such spectrum has never been determined, the demand for the spectrum is great, and the auction is expected to attract participation by many different kinds of entities who likely will have little prior knowledge of each other's operations and cost structures.

Contrast this result with the impact of "needing to know" in the context of an oral auction. There, the format itself reveals the necessary information to all participants -- for free -- in the form of competing, ascending bids. Individual bidders are able to process this information in real time and act accordingly: staying in the bidding if the pending offer is lower than their own valuation, and dropping out if it is higher. Since bidders know that the required information will be available at no cost in time to be factored into their bidding decisions, their incentive

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about potential bidders. Channeling these resources to other activities is likely to enhance welfare.").

^{17/} See U.S. Department of the Treasury, U.S. Securities and Exchange Commission, Board of Governors of the Federal Reserve System, "JOINT REPORT ON THE GOVERNMENT SECURITIES MARKET, Government Printing Office, Washington, D.C. (1992); V.Reinhart, "Theory And Evidence On Reform Of The Treasury's Auction Procedures," Finance And Economics Discussion Series, Federal Reserve Board (March 1992) ("Reinhart").

to spend vast resources obtaining it in advance of an auction is relatively weak. In spectrum auctions, the resulting savings redound to the benefit of taxpayers (in the form of higher bids) or consumers (because the savings will lower the winner's operating costs). Either result is more socially beneficial than forcing parties to waste money on bid-preparation. This result underscores the attractiveness of oral auctions relative to other bidding formats.

b. Efficiency

In the NPRM, the Commission concludes that the best auction format is the most efficient one, with "efficiency" defined as placing spectrum in the hands of the entity that values it most highly.^{18/} The Commission also concludes that the oral auction format is the most efficient of all formats. The Commission is right on both counts.

Ensuring that spectrum is awarded to the entity that values it most highly is a crucial consideration in selecting the format used to award licenses. Although post-auction market forces likely may ultimately produce this result regardless of which format is chosen, the public interest will be well served by securing this result in the first instance. The experience with inefficient cellular lotteries is instructive in this regard. That format is universally acknowledged to have awarded licenses to parties who sought them only for speculative purposes. Those who valued the licenses most highly were required to obtain them

^{18/} See NPRM at ¶¶ 34-35.

by bargaining with the speculators, a lengthy and expensive process that delayed the provision of cellular service to the public and drove up operating and service costs.

The switch from lotteries to auctions does not, in itself, guarantee a different result. In sealed bid and Dutch auctions, bidders have strong incentives to shade their bids to avoid the aforementioned "winner's curse."^{19/} The problem is, such parties often shade their bids too much, thereby losing out to another party even though they value the auctioned good more highly.^{20/} Thus, sealed-bid and Dutch auctions can yield the same outcome-inefficient result as a lottery.

This result never occurs in an oral, ascending bid auction. Under this format, the winning bidder pays a price just above the second-highest valuation, thus reducing the "winners curse" phenomenon to the margin. The economic literature confirms that oral, ascending bidding is the best means of ensuring that an auctioned good is awarded to the party who values it most highly.^{21/} This academic analysis is reinforced by real world evidence. Around the globe, in stock exchanges and commodity trading pits, trading in goods and financial instruments is

^{19/} See, e.g., P. Milgrom, "Auctions And Bidding: A Primer," Journal of Economic Perspectives, Vol. 3, No. 3 (Summer 1989) at 9 ("Milgrom"); Chari & Weber at 7-9.

^{20/} See, e.g., J. Smith, "Non-Agressive Bidding Behavior and the "Winner's Curse," Economic Inquiry, Vol. 19 (July 1981), at 380-388.

^{21/} See, e.g., McAfee and McMillan at 714-716; Milgrom at 6-11; V. Reinhart, "An Analysis of Potential Treasury Auction Techniques," Federal Reserve Bulletin (June 1992), at 405-406.

conducted using procedures modeled on the open ascending bid format. In such trading, "getting it right the first time" is a paramount consideration. Viewed together, the academic and market evidence strongly argue for adopting oral ascending bid procedures where, as in the instant rulemaking, efficiency is an important auction goal.

c. Fairness And Ease Of Aggregation

The Commission believes that, in addition to promoting efficiency and lowering transaction costs, oral auctions satisfy fairness considerations and will facilitate aggregation of licenses. ^{22/} PageNet agrees. The oral, "highest bidder wins" auction model should be perceived as fair by all bidders -- and, as importantly, by the general public -- because it is familiar to all concerned and yields a result that is consistent with our market economy. Moreover, oral auctions will facilitate license aggregation by increasing the certainty that a license will be award to the person who values it most highly, thereby enabling aggregation to occur efficiently in the first instance.

2. Other Auction Procedures Are Seriously Flawed

Despite the collective advantages of oral ascending bid auctions, the Commission has tentatively concluded that sealed bid and Vickrey auction procedures will be used in certain instances.

^{22/} NPRM at ¶¶ 37 & 46.

The Commission appears to believe that sealed bid procedures must be used to avert the possibility of collusion in instances where few bidders are expected. ^{23/} This analysis is flawed.

The market for spectrum ensures that instances in which few bidders come forward for licenses will be rare, if they occur at all, except perhaps in very small markets. Even if they do occur, the effectiveness of sealed bidding procedures as a bulwark against collusion is subject to doubt. Attempts to demonstrate those benefits are often based on assumptions unlikely to occur in the real world, such as the availability of perfect information about the value of an auctioned good. ^{24/} Absent such assumptions, the analysis does not hold up. ^{25/}

The Commission provides no explanation for its tentative decision to use Vickrey procedures on an experimental basis when auctioning multiple homogeneous licenses. ^{26/} If this decision arises from a reading of literature touting the theoretical benefits of such procedures, ^{27/} the Commission should be aware

^{23/} See NPRM at 49.

^{24/} See, e.g., M. Robinson, "Collusion And The Choice Of Auction," Rand Journal Of Economics, Vol. 16 (Spring 1985), at 143.

^{25/} Id. at 145; Reinhart at 17 ("[T]here is a gap between models and reality" regarding the benefits of sealed bidding procedures as an anti-collusion mechanism).

^{26/} See NPRM at 48.

^{27/} See, e.g., W. Vickrey, "Counterspeculation, Auctions, and Competitive Sealed Tenders," Journal of Finance, Vol. 16 (March 1961), at 8-37.

that such benefits are not universally acknowledged. ^{28/}
Moreover, as noted previously, experimenting with alternative
formats for experiment's sake alone is not required by the auction
statute. Given the untested nature of Vickrey procedures, PageNet
recommends that the Commission not adopt them at this time.

C. BIDDING PROCEDURES

The Commission seeks comment on proposed bidding rules and
procedures, including the sequence of bidding, limitations on
bidding expenditures, bidding on groups of licenses
("combinatorial" bidding), minimum bids and alternative payment
methods. ^{29/} As a general matter, PageNet notes that the need for
many of these rules arises only if the Commission adopts sealed
bid auction procedures. Thus, the Commission can dispose of
issues, simplify the auction process, and ease administrative
burdens, merely by utilizing exclusively the procedure it already
has determined to be most superior -- oral ascending bidding.

^{28/} See, e.g., M. Rothkopf et al, "Why Are Vickrey Auctions
Rare?" Journal of Political Economy, Vol. 98 (1990) at 94-
109.

^{29/} See NPRM at ¶¶ 51-71.

1. Bidding Sequence

The Commission should auction licenses sequentially. ^{30/}

This approach will ease administrative burdens for the Commission and bidders alike, and will facilitate license aggregation.

In no event should the Commission attempt to speed the bidding process by auctioning multiple licenses simultaneously using sealed bidding procedures. Such a format will magnify all the flaws of sealed bidding. Bidders will have to expend huge resources on pre-bid research costs and, as the Commission already has concluded in the NPRM, complex rules governing post-auction bid withdrawal will be required. ^{31/} These disadvantages offset any possible gains from auctioning licenses simultaneously.

With regard to the actual sequence of auctioning licenses, the Commission seeks to adopt rules that facilitate economically efficient aggregation of licenses across geographic regions and spectrum blocks. ^{32/} This is best accomplished by auctioning licenses in descending order of population. Thus, using narrowband PCS as an example, the Commission would auction all

^{30/} Auctioning licenses "sequentially" means enabling bidders to obtain information about the highest bid on License A before they bid on License B. Thus, the difference between auctioning items "sequentially" and "simultaneously" is in one sense measured by available information, not strictly the amount of time between auctions. Under this view, it may be possible to "sequentially" auction multiple homogeneous licenses at the same time, so long as oral ascending bid procedures are utilized. Such procedures would ensure that a person could obtain information about all pending bids before bidding himself.

^{31/} See NPRM at ¶ 63.

^{32/} See NPRM at ¶ 52.

nationwide licenses, then all MTA-level licenses. To further facilitate aggregation, all licenses within a segment of geographic licensing level should be auctioned before moving across that geographic level. Thus, all narrowband PCS licenses in the most populated MTA would be auctioned before moving to the next most populated MTA.

a. Combinatorial Bidding

PageNet strongly opposes the Commission's combinatorial bidding proposal. Under that proposal, sealed bids on combinations of licenses would be accepted first, and oral bids would be accepted thereafter for individual licenses. The combinatorial bidder will be awarded all the licenses it bid on if its bid price exceeds the sum of individual oral bids on those same licenses. The Commission suggests such "combinatorial" bidding will promote efficiency by reducing the transaction costs of aggregating licenses.^{33/} This suggestion is flat-out wrong. Combinatorial bidding is an inefficient format that will substantially decrease efficiency and will yield results directly contrary to the auction statute's objectives.

The fundamental problem with the proposed structure is it assumes that the highest sealed and oral bids can be rationally compared, but they cannot. The two sets of bidders are playing entirely different bidding games. Comparing the highest bids in each game is like comparing apples and oranges. It is akin to comparing the total points scored by the winner of this year's

^{33/} See id. at ¶ 57 & n.37.

Super Bowl with the total points scored by the winner of this year's NCAA basketball championship. One could tell what the highest number is in each instance, but a comparison would not suggest which team was "better" than the other.

This fundamental flaw undercuts the efficiency of the auction process in many different ways. First and foremost, it robs the auction process of certainty that a license will be awarded to the person who values it most highly. For example, a person who wants only a particular narrowband PCS frequency in the New York MTA can never be sure of obtaining it in the oral bidding on individual frequencies unless he bids a price above the highest combinatorial bid containing that frequency. Otherwise, the success of his bid depends on other people's bids on that frequency in the remaining 46 MTAs, which he can neither control nor influence.

Second, using sealed bidding procedures for the combinatorial bids further reduces auction efficiency. As noted previously, in some instances such bidders will mistakenly bid too low to avoid the winner's curse. Not everyone avoids the curse, however -- some will significantly overbid.^{34/} The impact on the auction process is obvious: Sealed Bidder X may overbid for a group of licenses, denying them Oral Bidders Y and Z, whose bids reflect the licenses' true value.^{35/} The prospect of such an inefficient

^{34/} See J. Kagel et al, "First-Price Common Value Auctions: Bidder Behavior and the 'Winner's Curse,'" *Economic Inquiry*, Vol. 27 (April 1989), at 241-258.

^{35/} This example assumes the Commission will prescribe a method of ensuring that it can identify whether a bid on an individual license actually was "trumped" by a combinatorial
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