

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D. C. 20554

DOCKET FILE COPY ORIGINAL

In the Matter of

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

)
)
)
)
)
)

PP Docket No. 93-253

RECEIVED

NOV 30 1993

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

REPLY COMMENTS

NYNEX Corporation

Edward R. Wholl
Jacqueline E. Holmes Nethersole

120 Bloomingdale Road
White Plains, NY 10605
914-644-5735

Their Attorneys

Dated: November 30, 1993

No. of Copies rec'd
List A B C D E

025

TABLE OF CONTENTS

REPLY COMMENTS

Page No.

SUMMARY.. i

I. INTRODUCTION AND SUMMARY OF POSITION. 1

II. OF THE AUCTIONS METHODS PROPOSED, ELECTRONIC
SIMULTANEOUS ENGLISH AUCTIONS, WITH A
COMBINATORIAL OVERLAY, WILL BEST MEET THE
OBJECTIVES OF THE ACT. 4

 A. Simultaneous English Auctions Produce More
 Efficient Results. 4

 B. Combinatorial Bidding Would Promote Economic
 Efficiency. 7

III. THE COMMISSION SHOULD ADOPT CRITERIA THAT ENSURES
THAT PREFERENCES FOR DESIGNATED ENTITIES
PRODUCE THE DESIRED RESULT. 10

IV. THE CRITERIA USED TO DETERMINE THE AUCTIONABILITY
OF A SERVICE SHOULD PROMOTE REGULATORY PARITY AND
THE OBJECTIVES OF THE BUDGET ACT 13

V. THE PROPOSED RESTRICTIONS ON LEC ELIGIBILITY
SHOULD BE REJECTED 15

VI. CONCLUSION 17

Exhibit 1: Spectrum Auctions For Wireless
Telecommunication Services: Reply Comments

Professor Robert G. Harris
Professor Michael L. Katz

SUMMARY

In this reply, NYNEX responds to the wide range of issues and disparate proposals presented by commentators regarding the auction process and governing rules that should be adopted by the Commission in this proceeding. Almost 200 parties filed comments, demonstrating the importance of this proceeding and its potential far-reaching impact. Commentors offered sharply contrasting views regarding the preferred bidding method, the sequence of bidding, whether combinatorial bidding should be permitted and how designated entities should be treated under the rules.

NYNEX believes that, in choosing among the alternatives offered by commentators, the Commission must strive to design an auction process that best meets certain fundamental objectives including, for example, equity and fairness to bidders. Ultimately, the Commission must adopt rules that serve the public interest and result in spectrum being awarded to parties who value the resource most.

After our review of the comments, it is our belief that the Commission is forced to choose among imperfect alternatives; no one auction design will perfectly satisfy all the fundamental principles that advance the public interest. We believe, however, that a proper balance between the principles of auction design and the interests of individual bidders would best be met by a mechanism which employs an electronic simultaneous auction of all blocks of spectrum through the English bidding method. The process also should permit sealed combinatorial bidding for specific groups of licenses.

We agree with commentators who believe that the auction rules should ensure that designated entities are afforded the preferences intended by Congress and the Commission and that the auctionability of the spectrum to be used for individual services be determined by the majority use to which the spectrum is put. We also show in these replies that proposals that would impose substantial eligibility restrictions on LECs and their cellular affiliates are inherently anticompetitive. The Commission is charged by Congress to create an environment that promotes the rapid deployment of PCS. Eligibility restrictions on LECs and their cellular affiliates would exclude highly qualified parties and inhibit the prompt introduction of PCS.

Although the commentators often agree on certain fundamental principles, there is substantial disagreement on the manner in which the Commission should implement the competitive bidding provisions of the Omnibus Budget Reconciliation Act of 1993 (the "Budget Act"). For example, the Commission is presented with sharply contrasting views on whether its preferred method of bidding should be "oral" or "sealed"; whether "combinatorial bidding" would promote the efficient aggregation of licenses or lead to the undue concentration of spectrum in the hands of a few dominant carriers; whether the sequence of bidding should be simultaneous or sequential and, if the latter, in what order; and whether, and to what extent, "designated entities" should be offered preferential treatment.

In resolving these conflicts, the Commission's objective should be to design and implement a spectrum auction mechanism that attempts to meet certain fundamental principles that promote the public interest while being fair to bidders.² It is likely, however, that no one auction design will perfectly satisfy these principles. As a result, the Commission will be required to carefully balance the interests it seeks to promote against the interests of particular bidding entities.³

² See NYNEX at 4.

³ Attached as Exhibit 1 is a paper entitled "Spectrum Auctions For Wireless Services: Reply Comments" authored by Professors Robert G. Harris and Michael L. Katz. Professors Harris and Katz offer a valuable framework that the Commission can use to resolve the differences between the commentators.

As developed in greater detail in Section II, NYNEX believes that a proper balance between the principles of auction design and the interests of individual bidders would best be met by an auction mechanism that provides for the simultaneous auction of all blocks of spectrum through English auctions. To promote the aggregation of licenses, sealed combinatorial bidding for specific groups of licenses should also be permitted.

In Section III, we address the need to adopt criteria that ensures that the Commission's intended preference for designated entities produces the desired results.

In Section IV, we address the position of those commentators who urge the Commission to determine the auctionability of a service by reference to the majority use to which the spectrum is put. Such a position is inconsistent with the statute and would result in the disparate treatment of licensees who provide functionally equivalent services. In addition, we demonstrate that the claims of several commentators that "intermediate links" should be subject to auctions is unsupported by the statute.

In Section V, we address the proposal of one commentator that substantial eligibility restrictions be placed on the LECs and their cellular affiliates. This proposal is inherently anticompetitive and would, by the exclusion of highly qualified participants, inhibit the rapid introduction and deployment of PCS.

II. OF THE AUCTIONS METHODS PROPOSED, ELECTRONIC SIMULTANEOUS ENGLISH AUCTIONS, WITH A COMBINATORIAL OVERLAY, WILL BEST MEET THE OBJECTIVES OF THE ACT

A. Simultaneous English Auctions Produce More Efficient Results

In its comments, NYNEX proposed that the Commission should adopt electronic, simultaneous English auctions as the preferred bidding system.⁴ Although the commentators offer the Commission an array of different auction mechanisms, including open, sealed sequential and Vickery auctions, NYNEX believes that its proposal will best meet the goals established by Section 309(j) of the Budget Act.⁵ In this regard, NYNEX is encouraged by the support it has generally received from the National Telecommunications and Information Administration ("NTIA"), the agency principally responsible for the development and presentation of domestic and international

⁴ NYNEX at 13-16.

⁵ As Professors Harris and Katz note, no one auction mechanism will perfectly meet all the principles of auction design that should govern the Commission's adoption of an auction mechanism:

For example, no practical auction mechanism can guarantee that the right combinations of licenses are put together by the winning bidders: Some mechanisms favor individual bidders, while others favor combinatorial bidders. The best that the Commission can do is explicitly identify the tradeoffs it faces and then make judicious choices among the imperfect alternatives available.

In making these choices, it is important for the Commission to compare how available alternatives will work overall or on average. An auction design should not be rejected simply because one can construct an example showing that there is some circumstance in which the design fails to achieve the ideal outcome.

telecommunications and information policy, and for management of the federal use of the radio frequency spectrum.⁶

There can be no doubt that in comparison with sequential auctions, simultaneous auctions, coupled with a combinatorial overlay, will permit bidders to "adequately capture the interdependencies in the value that bidders place on PCS licenses."⁷ This interdependency reflects the fact that providers will want to cluster their markets in order to provide their customers with seamless, wide-area coverage.⁸ As NTIA correctly observes, because sequential auctions do not recognize these interdependencies, the results they produce are not as efficient:

In a sequential auction, the bidders for a license would not know whether they subsequently will win additional licenses that they desire. Moreover, the losing bidders for the first license may not bid as aggressively in a subsequent auction for an adjacent license, so the winner of the first license will not need to bid as high in order to win the second. As a consequence, in a sequential auction, PCS licenses will not necessarily go to the bidders that value them most highly, and, as a result, economic efficiency will suffer.⁹

6 While NYNEX and NTIA differ on the combinations that would be permitted to bidders, this is a difference in implementation rather than principle.

7 NTIA at 11.

8 The Commission's cellular policies have encouraged cellular carriers to expand and integrate their systems in order to provide customers with the improved service benefits that come with wide-area networks.

9 NTIA at 11.

As the commentators also recognize, the use of simultaneous bidding avoids the bias inherent in sequential bidding.¹⁰ As Professors Milgrom and Wilson state:

[simultaneous auctions] allows those whose strategies call for assembling large geographic networks to implement their strategies in each region and reduces their need to guess about the prices that will prevail for licenses in other regions. This design also avoids the other disadvantages of sequenced bidding described above, including the tendency of such designs to favor some groups of regional and local bidders over others.¹¹

Those parties who object to the use of electronic simultaneous auctions do so more for administrative rather than substantive reasons. These parties argue that electronic auctions would be too complex to run or participate in.¹² But, as NTIA points out, the use of electronic bidding would not be complex at all.¹³

The most difficult aspect of simultaneous auctions is the adoption of an appropriate stopping rule. NYNEX recommends that the Commission adopt a rule based on a set interval of time passing without the submission of a new bid. Moreover, in order to prevent strategic bidding at the last minute designed simply

10 NTIA at 12, Pacific Bell/Nevada Bell at 23.

11 Pacific Bell/Nevada Bell at Attachment, p. 23.

12 Id.

13 NTIA at 17. If the Commission is concerned that it could not implement an electronic bidding method in the time frame contemplated by the statute, NYNEX would support the use of repeated simultaneous sealed bids recommended by Pacific Bell. This method, while not as good, would provide many of the same benefits as NYNEX's proposal.

to prolong the auction, the Commission should specify that bids be made in some minimum increment.

B. Combinatorial Bidding Would Promote Economic Efficiency

NYNEX, CTIA, NTIA and other commentors support the use of combinatorial bidding because it allows bidders to realize the economies that are permitted through the aggregation of licenses. As CTIA states, combinatorial bidding "allows bidders to express their combinatorial values; bids can now more accurately reflect the valuation of different combinations of goods at the auction.... The market becomes the mechanism for determining the combination of goods."¹⁴ It is for this reason that combinatorial bids permit the realization of the Commission's objective to award licenses to those that value them the most.¹⁵

A number of commentors oppose the use of combinatorial bidding. These commentors claim that combinatorial bidding: (1) would likely cause significant delays in the introduction of PCS services in many parts of the country; (2) would be inconsistent with the objectives of the statute to promote competition and diversity among licenses; and (3) would add

14 CTIA at 11.

15 CTIA at 11-12 (by allowing bidders to convey, directly through the auction process, the independence of license values, combinatorials reduce aftermarket transaction costs, facilitate the efficient aggregation of licenses and ensure that groups of licenses are assigned to their highest valued use).

uncertainty, inefficiency and complexity to the bidding process.¹⁶ These claims are without merit.

AT&T claims that winners of a nationwide PCS license would concentrate their efforts in certain areas, leaving large areas underdeveloped for some time.¹⁷ It is unrealistic to assume that any entity which has the financial resources to successfully bid on a national license would do so without the concomitant resources necessary to build out the system. Moreover, the success of a nationwide system is dependent on the service providers' ability to provide its customers with ubiquitous "anytime, anywhere" coverage. The failure to do so within a reasonable period of time would doom the service from the outset. In any event, a minimum build-out requirement could ensure that threshold service requirements are adhered to by all licensees.

Some commentators, including Southwestern Bell, contend that permitting combinatorial bidding is inconsistent with the goal of diversity.¹⁸ These commentators are incorrect. The Commission's auction mechanism does not restrict the ability of bidders to aggregate licenses through individual oral auctions. Indeed, those who oppose combinatorial bids nonetheless find that the aggregation of licenses, at least to the MTA level, would serve the public interest.¹⁹

¹⁶ See, e.g., AT&T at 4-8, Comcast at 5, Sprint at 6, SWB at 22-24.

¹⁷ AT&T at 5.

¹⁸ See, e.g., SWB at 22-24.

¹⁹ Id.

There can be no doubt that aggregation of licenses will take place. It will happen because the public will insist on it. The development of regional and national networks by cellular carriers and the development of a national ESMR network by Nextel are illustrative of what will likely occur in PCS markets. Under these circumstances, the only issue for the Commission to resolve is whether to implement an auction mechanism that permits the public to receive the benefits associated with such ubiquitous networks today, or permit the "aftermarket" to produce the same result, but with a long and costly transition. NYNEX believes that considerations of economy, efficiency and improved customer service require combinatorial bidding.²⁰

AT&T claims that combinatorial bidding would add uncertainty, inefficiency and complexity to the bidding process.²¹ These claims are unconvincing. Combinatorial bidding does not create "uncertainty"; it merely briefly delays, for some, the knowledge of whether their bids were successful. Such delay does not, under the NYNEX proposal, create any bias against oral bidders. The slight delay occasioned by permitting combinatorial bidding is more than outweighed by the benefits it produces. AT&T's claims regarding inefficiency and complexity are conjectural at best and provide no basis for the rejection of the method.

20 It is also likely that "national bidders" will be significantly diverse in their character. MCI, for example, has put together a consortium in which scores of small companies participate.

21 AT&T at 7.

If the Commission permits combinatorial bidding, as we believe it should, it must address the manner in which the combinations would be established. Some commentators argue that they should be permitted to "customize" their combinations in order to permit them to aggregate licenses in a manner that best meets their needs.²² While we would ordinarily favor providing bidders with as much flexibility as possible, allowing the type of free-for-all that would result from customized combinatorial bidding would be impossible for the Commission to design and implement.²³

Instead, the Commission should establish defined areas that would be available for combinatorial bidding that reflect a community of interest or other public interest criteria. At a minimum, the Commission should permit parties to aggregate the 30 MHz MTA blocks on a national basis and to aggregate the BTA blocks on an MTA level.

III. THE COMMISSION SHOULD ADOPT CRITERIA THAT ENSURES THAT PREFERENCES FOR DESIGNATED ENTITIES PRODUCE THE DESIRED RESULT

The commentators overwhelmingly support the Commission's decision to provide preferred treatment for designated entities to ensure that they have a meaningful opportunity to participate

²² NTIA at 15, Nextel at 10-11, Ameritech at 4-5.

²³ Sprint at 6, Comcast at 5, CTIA at 14.

in spectrum auctions and, in turn, to provide services using competitively awarded spectrum.²⁴

The commentors further agree that the Commission must adopt definitional criteria that will ensure that the preferences adopted for designated entities are not abused by "fronts".²⁵ To accomplish this objective, the Commission should adopt a standard that requires women and minority applicants to be 50.1 percent owned, and controlled, by the designated group.²⁶

It is also critical for the Commission to define "rural telephone companies" narrowly in order that these companies do not receive a preference not intended by the statute. NYNEX agrees that the definition of rural telephone companies proposed by Telocator properly reflects Congress' intent.²⁷ Moreover, NYNEX agrees with Telocator that the Budget Act limits any preference extended to rural telephone

24 See, e.g., Associates of Independent Designated Entities at 3, Cellular Service Inc. at 6-11, Call-Her at 2-12, Arch at 19, TDS at 17, NABOB at 15.

25 See, e.g., McCaw at 19, BellSouth at 27, AT&T at 25-26.

26 We agree with the definition of a women-owned business proposed by Call-Her: a women-owned business is a business concern with at least 51 percent unconditional ownership and controlled by a woman or women. Such unconditional ownership must be reflected in the concern's ownership agreement, and the woman, or women, must manage and operate the business on a daily basis. If the women-owned business attempts to claim its preference through its participation in a joint venture, it must be able to demonstrate that it "controls" the joint venture. (Call-Her at 12). This standard can easily be adapted to other designated entities.

27 Telocator at 10.

companies to those PCS licenses located within the rural telephone company's franchised service area.²⁸

NYNEX, and other commentors, agree that the Commission should promote participation of designated groups in the bidding process through special financial arrangements.²⁹ Bell Atlantic suggests that the participation of designated entities in the process could be enhanced by making the LECs' financial resources and technical expertise available to those entities.³⁰ This suggestion has considerable merit. As such, NYNEX supports Bell Atlantic's proposal to amend the eligibility restrictions adopted in the Second Report and Order in Docket No. 90-314³¹ to permit the LECs to acquire non-controlling interests in designated entities serving markets for which the LECs would otherwise be ineligible under the rules.³²

28 Telocator at 11.

29 See, e.g., BellSouth at 18-27, Telocator at 7, Cellular Service, Inc. at 11, Arch at 19.

30 Bell Atlantic at 15.

31 Amendment of the Commission's Rules to Establish New Personal Communication Services, Second Report and Order, Gen. Docket No. 90-314, released October 22, 1993.

32 NYNEX believes that eligibility restrictions adopted in the Second Report and Order are not well-founded and will not serve the public interest. NYNEX will ask the Commission to eliminate or modify these restrictions in its Petition for Reconsideration to be filed in that proceeding.

IV. THE CRITERIA USED TO DETERMINE THE AUCTIONABILITY OF A SERVICE SHOULD PROMOTE REGULATORY PARITY AND THE OBJECTIVES OF THE BUDGET ACT

The commentators agree that private services should be outside the scope of the Commission's auction authority and, therefore, spectrum to be used by such services should be excluded from competitive bidding.³³ The commentators disagree, however, on the test that should be applied to determine whether a service is private. AT&T and Southwestern Bell, for example, support the Commission's proposal to determine whether specific classes of licenses may be subject to competitive bidding by reviewing the anticipated principal uses for a class of licenses as a whole, not the proposed uses of each applicant.³⁴ Under this type of analysis, AVM services would be considered "private" because they share spectrum which is "predominantly" used by the government.³⁵

The position advocated by AT&T and Southwestern Bell underscores our concern that the Commission's proposal could result in the disparate regulatory treatment of functionally equivalent services. To avoid competitive inequalities, NYNEX believes that the Commission's proposal must be modified to permit parties to claim that individual licenses within classes of "private" services should be subject to auction when more than \$100,000 is received as compensation for the services.

33 See, e.g., AT&T at 17, Pacific at 18.

34 AT&T at 18-19, SWB at 5-6.

35 SWB at 14.

This modification would promote parity while at the same time recognizing that de minimus compensation amounts are not likely to change the private character of a service.

Only a handful of commentators claim that "intermediate links" should be subject to competitive bidding.³⁶ These parties are wrong. As the comments make perfectly clear, microwave links can generally be designed to avoid mutual exclusivity. Moreover, even in mutually exclusive situations, the spectrum allocated to these services is not used in direct end-user, subscription-based services. Thus, they do not meet the criteria of auctionability under Section 309(j)(1).³⁷

If there were any doubt regarding Congress' intent on this issue, it was removed by the November 15, 1993 letter from Chairman Dingell to Chairman Quello:

Paragraphs 28 and 29 discuss the Commission's proposal "that licenses used in services as an intermediate link in the provision of a continuous, end-to-end service to a subscriber would be subject to competitive bidding." Inasmuch as these links are incidental to the provision of a different, and not necessarily spectrum-based, service, subjecting these licenses to competitive bidding procedures would be inappropriate.

36 CTIA at 31, Arch at 10.

37 See, e.g., McCaw at 3, BellSouth at 44-49, Telocator at 18, UTC at 9-8, TDS at i and 4, Richard L. Vega at 4, OPASTCO at 11, Pacific Bell/Nevada Bell at 18, AT&T at 15-16, 20-22, Sprint at 22, MCI at 22.

V. THE PROPOSED RESTRICTIONS ON LEC ELIGIBILITY SHOULD BE REJECTED

MCI argues that to avoid concentrations of control, the Commission should exclude the dominant cellular carriers (and their affiliates) from bidding on one entire band of the 30 MHz MTA licenses whether in or out-of-region.³⁸ MCI's argument is without merit.

As an announced potential bidder for a nationwide license, we can understand MCI's motivation in seeking Commission protection from competitors. However, MCI's request for protection from possible competition is inconsistent with the public interest. Professors Harris and Katz demonstrate that there are significant public interest benefits that will likely flow from allowing LECs or their cellular affiliates the freedom to participate freely and fully in PCS markets.

As the LECs and their affiliates demonstrated by their participation in the cellular industry, their know-how and experience would serve only to stimulate the introduction and deployment of PCS services. Moreover, their participation has helped create the robustly competitive cellular market that the Commission found would justify its forbearance from Title II regulation.³⁹ They can be expected to do the same for PCS services if permitted the opportunity.

³⁸ MCI at 4. MCI is clearly wrong in its characterization of cellular carriers as "dominant." A cellular carrier cannot restrict entry and does not have the power to raise prices.

³⁹ Competition in cellular markets is often most pronounced when service is provided by two LEC-affiliated cellular companies.

MCI also proposes that cellular carriers not be permitted to bid on PCS licenses in markets where they hold cognizable cellular interests notwithstanding their certification that, in the event they are awarded a license, they would promptly bring their systems into compliance.⁴⁰ MCI's proposal is unfair and unsound as a matter of public policy.

The Commission has found that, subject to certain eligibility restrictions, the public interest would be served by a cellular carrier's participation in the provision of PCS. The Commission's eligibility rules may have the effect, however, of making it difficult for current cellular providers to obtain spectrum in areas where they currently have no cellular interest. This result may occur as a result of the cellular carrier's inability to compete for combinatorial licenses because of eligibility restrictions. There is no reason to require a cellular carrier to dispose of its cellular interest in return for a chance to bid. The Commission's objective in adopting the eligibility restriction can be achieved by a far less draconian measure. Cellular carriers should be permitted to bid for any PCS license so long as the applicants certify on entry into the auction process that, in the event that they are awarded a PCS license, they will promptly bring their systems into compliance.⁴¹

40 MCI at 20.

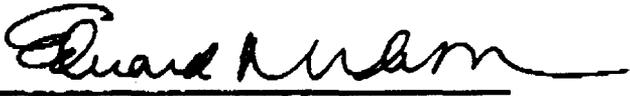
41 See, e.g., Bell Atlantic at 5-8, Ameritech at 2.

VI. CONCLUSION

The Commission has been charged by Congress to adopt and implement an auction mechanism under severe time constraints. This is a particularly difficult task for the Commission given the lack of perfect information and the widely disparate views of the parties. NYNEX recognizes that the Commission will not come up with a perfect solution; such a solution does not exist. We do expect that the Commission will arrive at the best solution — one that affords participants the ability to compete for spectrum in a process that is open, fair and that avoids undue risk and complexity. We believe that our comments and reply comments will assist the Commission in realizing that objective.

Respectfully submitted,

NYNEX Corporation

By: 
Edward R. Wholl
Jacqueline E. Holmes Nethersole

120 Bloomingdale Road
White Plains, NY 10605
914-644-5735

Its Attorneys

Dated: November 30, 1993

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D. C. 20554

DOCKET FILE COPY ORIGINAL

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

)
)
)
)
)

PP Docket No. 93-253

RECEIVED

NOV 30 1993

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

REPLY COMMENTS

NYNEX Corporation ("NYNEX"), by its attorneys,
respectfully submits its reply to the comments filed in response
to the Notice of Proposed Rulemaking ("Notice") released by the
Commission in the above-captioned proceeding.

I. INTRODUCTION AND SUMMARY OF POSITION

There can be little doubt that the licensing of
additional spectrum for PCS and other wireless services, and the
policies and specific rules that will be applicable to that
process, has attracted the attention and interest of the
public. Approximately 200 parties filed comments in response to
the Notice in which a wide range of views are expressed
regarding the appropriate auction process that should be adopted
by the Commission, the services and licenses that should be
subject to auction, and bidder qualification and eligibility
issues.¹

¹ Parties that filed comments are listed in the attachment
to this reply as Appendix A.

**SPECTRUM AUCTIONS FOR WIRELESS TELECOMMUNICATIONS
SERVICES: REPLY COMMENTS**

Professor Robert G. Harris
Professor Michael L. Katz

University of California at Berkeley

I. INTRODUCTION

In response to the Commission's request in its Notice of Proposed Rulemaking, we and many others submitted comments on the design and operation of spectrum auctions for PCS and other wireless communications technologies. The analysis underlying our initial comments indicated that the following procedures would best serve the public interest:

1. The auctions for all of the PCS licenses should be run simultaneously.
2. Each PCS license should be allocated through the use of ascending bidding in an iterative process.
3. Bidders should be able to submit combinatorial bids.

We have reviewed many of the comments filed by other parties, especially those by economic experts. These comments raise many valuable points and provide insightful analyses. After reading these comments, we continue to believe that the three fundamental conclusions stated above are sound ones. In our reply comments, we identify some of the key points of agreement and disagreement. In several instances, we propose specific resolutions to the disagreements and state the logic

behind our findings. In other cases, we lay out a framework for analysis that we believe can be applied by the Commission to resolve issues that have no one "right" answer.

Many of the differences are minor technicalities that can be readily resolved by the Commission. Where there are significant disagreements, they often reflect the irreducible tradeoffs the Commission faces in certain areas of auction design and the fact that commenting parties differ in their opinions concerning what choices should be made among the imperfect alternatives available. The issue of whether the Commission should allow combinatorial bidding, for example, reflects this type of disagreement.

In our initial comments, we identified eight desirable properties of auctions; there is no auction mechanism that perfectly satisfies all of them. For example, no practical auction mechanism can guarantee that the right combinations of licenses are put together by the winning bidders: Some mechanisms favor individual bidders, while others favor combinatorial bidders. The best that the Commission can do is explicitly identify the tradeoffs it faces and then make judicious choices among the imperfect alternatives available.

In making these choices, it is important for the Commission to compare how available alternatives will work overall or on average. An auction design should not be rejected simply because one can construct an example showing that there is some circumstance in which the design fails to achieve the ideal outcome. It is equally important to identify the specific mechanisms that are the source of difficulty. For

example, rather than beginning and ending the analysis of combinatorial bids by asking the question, "Do combinatorial bids induce biases?" it is important to examine how the specific means of implementing combinatorial bidding affect the balance between bidders for individual licenses and bidders attempting to aggregate packages of licenses.

In the remainder of this statement, we will attempt to identify explicitly the tradeoffs inherent in choosing among alternative auction mechanisms. In doing so, we will attempt to identify the specific effects of those alternatives on the resulting performance both of the auction markets for spectrum and the markets for wireless communications services themselves.

II. FUNDAMENTAL ELEMENTS OF AUCTION DESIGN

In our earlier comments, we identified eight principles to which the Commission should adhere in designing and implementing spectrum auctions:

1. The auction process should result in those parties who place the highest value on spectrum being the winning bidders.
2. The auction process should not impose undue risks on participants.
3. The auction process should be designed to promote the flow of information.
4. The auction process should be as transparent and understandable as possible.
5. The auction process should discourage insincere bidding.
6. The auction process should promote ownership by designated entities without introducing undue distortions in the telecommunications marketplace.
7. The auction process should allow parties to aggregate spectrum (both geographically and across frequencies) when doing so creates value.

8. The auction process should allow parties to form alliances when doing so creates value.

In the remainder of this section, we analyze ways in which the auction process can be designed and implemented to embody these public-interest principles.

As noted in the introduction, there are three major components to the overall auction procedure, each of which is discussed in turn.

A. The Auctions for all of the Licenses for a Given Wireless Service Should be Run Simultaneously.

As we and several other commentators noted, sequential auctions result in the bidders being relatively poorly informed in the early rounds.¹ This fact can have adverse consequences for efficiency, risk, fairness, and the ability of bidders to put together packages of licenses.² With simultaneous auctions, there is no need to complete initial auctions in a state of comparative ignorance: When making a bid in any one auction, a bidder can see the leading bids in all of the other auctions as well. Moreover, a system of simultaneous open outcry auctions is fair to all bidders because there is no

¹ In addition to our original comments, see for example the comments of the economic experts for Pacific Bell/Nevada Bell and PacTel.

² Sequential auctions without combinatorial bidding may discourage firms from undertaking efficient aggregations of licenses because a firm bidding in an early auction may fear that the licenses auctioned later will be too expensive to compete the desired package at reasonable cost.