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May 18, 1994

EX PARTE

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, NW, Room 222
Washington, DC 20554

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MAY 18 1994

**FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY**

RE: GEN Docket 93-253

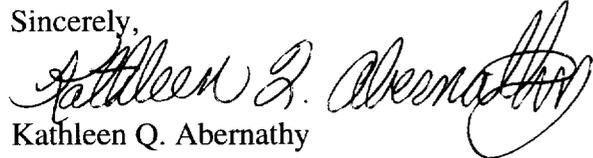
Dear Mr. Caton:

On Wednesday, May 18, 1994, Pam Riley, Mark Stachiw, Preston McAfee and I, on behalf of AirTouch Communications and AirTouch Paging, had a conference call with Evan Kwerel, Kent Nakamura and Jackie Chorney of the Office of Plans and Policy, and Steve Markendorf of the Mobile Services Division of the Common Carrier Bureau to discuss auction rules for Narrowband PCS. The attached document was provided during the call. Please associate this material with the above-referenced proceeding.

Two copies of this notice were submitted to the Secretary of the FCC in accordance with Section 1.1206(a)(1) of the Commission's Rules.

Please stamp and return the provided copy to confirm your receipt. Please contact me at 202-293-4960 should you have any questions or require additional information concerning this matter.

Sincerely,


Kathleen Q. Abernathy

Attachment

cc: Jackie Chorney
Evan Kwerel
Steve Markendorf
Kent Nakamura

No. of Copies rec'd 241
List ABCDE

Narrowband Auction Design Issues

Presentation to:

**Federal Communications Commission
Washington, D.C.**

by

**AirTouch Communications
--AirTouch Paging**

Consultants

**R. Preston McAfee
University of Texas
and Analysis Group, Inc.**

May 18, 1994

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Summary

- I. Important to Announce All Bidding Rules in Advance**

- II. Applications Need Not Specify Particular Licenses of Interest**

- III. Public Notice Process Should be Streamlined and Include Public Comment Period**

- IV. Using Sealed-Bids (Best & Final Offer) Damages Simultaneous Design**

I. Important to Announce Rules in Advance

- Public Notices should not reserve FCC discretion to change bid increments, bid intervals, and ending rules in mid-auction

- Lack of definitive rules will depress license values
 - If bidders lack confidence in process, participation will be affected
 - Bidders unable to implement bidding strategies if rules can change unpredictably

- Value of data from each auction only useful if rules stay constant throughout auction

- Midstream rules changes will be challenged under APA
 - Delay implementation of PCS
 - Damage Commission's credibility

II. Application Need Not Specify Particular Licenses of Interest

- Eligibility determined by size of up-front payment
 - Specification of particular licenses not necessary
 - Saves on application processing costs
 - Reduces chance of application error

- Preserve maximum bidder flexibility
 - Deters fire-sale prices
 - Maximizes competition
 - Results in more efficient outcome

II. Application Need Not Specify Particular Licenses of Interest, continued

- ❑ **Best approach given auction form**
 - Bidder applies for auction, not particular licenses
 - Bidder should be free to shift bids as auction progresses

- ❑ **With streamlined applications, all deemed mutually exclusive**
 - If five licenses are pooled, and five or fewer bids received over course of auction, then no mutual exclusivity and licenses awarded free

- ❑ **For fungible narrowband nationwide licenses, pooling easiest approach**
 - Bidders need not specify frequency
 - Example: Five 50/50/KHz (paired) licenses sold to five highest bidders

III. Public Notice Process Should be Streamlined and Include Public Comment Period

- **Four-step announcement procedure can be reduced to two-step**
 - **No need for Public Notice of defective applications**
 - **Defective applicants can be notified privately**
 - **Combine license acceptance and deposit step**
 1. **Announce rules of simultaneous auction**
 2. **Announce applications and deposits for auction**

- **Brief comment period should be established**
 - **Can run simultaneously with application timelines**
 - **Potential APA problems could be alleviated**

IV. Using Sealed-Bids (Best & Final Offer) Damages Simultaneous Design

- **Best & Final Offer has**
 - **Poor allocation properties**
 - **Substantial uncertainty**
 - **Bidder could win too many licenses, encouraging low bids**
 - **Non simultaneous market-by-market**

- **Switch to market-by-market closing rule instead**
 - **Maximizes prices obtained**
 - **Encourages efficient allocation**
 - **Minimum increment insures fast closure**

A Bid Increment Rule

- If There Are New Bids, Increase The Increment
- If There Are No New Bids, Decrease The Increment

Exponential Rule:

- Start with Base Increment, e.g. \$0.01 per MHz-pop
 - If no new bids received, reset increment to base or half the current increment, whichever is smaller.
 - If new bids received for two consecutive rounds, double the increment.
- May impose Maximum and Minimum Increments
 - Maximum Increments to Increase Information Release (e.g. \$0.05/MHz-pop)
 - Minimum Increments to Speed Convergence (e.g. \$0.0025/MHz-pop)
- Applies Only During Phase 1
- The Activity Rule is Sufficient to Encourage Aggressive Bidding in Phase 2

Example 1:

<u>Round</u>	<u>New Bids</u>	<u>Current Price</u>	<u>Current Increment</u>	<u>Remark</u>
1	78	\$0.01	\$0.01	
2	78	\$0.02	\$0.02	Increment doubled
3	78	\$0.04	\$0.04	Increment doubled
4	62	\$0.08	\$0.05	Maximum Increment
5	48	\$0.13	\$0.05	
6	4	\$0.18	\$0.05	
7	0	\$0.18	\$0.01	Increment reset
8	3	\$0.19	\$0.01	
9	0	\$0.19	\$0.005	Increment reset to half previous
10	0	\$0.19	\$0.0025	Increment halved
11	1	\$0.1925	\$0.0025	
12	0	\$0.1925	\$0.0025	Minimum Increment
13	0	\$0.1925	\$0.0025	

Auction Ends (No Further Action)

Example 2:

<u>Round</u>	<u>New Bids</u>	<u>Current Price</u>	<u>Current Increment</u>	<u>Remark</u>
1	58	\$0.01	\$0.01	
2	55	\$0.02	\$0.02	Increment doubled
3	54	\$0.04	\$0.04	Increment doubled
4	51	\$0.08	\$0.05	Maximum Reached
5	30	\$0.13	\$0.05	
6	0	\$0.13	\$0.01	Increment reset
7	3	\$0.14	\$0.01	
8	0	\$0.14	\$0.005	Increment halved
9	0	\$0.14	\$0.0025	Increment halved
10	1	\$0.1425	\$0.0025	
11	0	\$0.1425	\$0.0025	Minimum Increment

Auction Ends (No Further Action)

Alternative Bid Increment Rule

- Initial *Suggested* Increment is \$0.05 per MHz-pop
- A bidder is Deemed *Active* on a License if
 - (i) Their Bid Exceeds Previous Best Bid by Suggested Increment
 - or (ii) Their Bid Exceeds Previous Best Bid and No One Increases By Suggested Increment
- Suggested Increments are Reduced (to \$0.01) if No One Meets Them
- Halving and Doubling Below \$0.01 Still Apply
- Threatens Bidders with Lost Eligibility if They Don't Bid Aggressively At First
- Rewards Aggressive Bidding
- Applies Only To Stage 1

Example 1, Revisited with Alternative Rule:

<u>Round</u>	<u>New Bids</u>	<u>Current Price</u>	<u>Current Increment</u>	<u>Remark</u>
1	65	\$0.05	\$0.05	
2	59	\$0.10	\$0.05	
3	3	\$0.15	\$0.05	
4	0	\$0.15	\$0.01	Increment Reduced
5	4	\$0.16	\$0.01	
6	4	\$0.17	\$0.01	
7	3	\$0.18	\$0.01	
8	0	\$0.19	\$0.005	Increment Reduced
9	0	\$0.19	\$0.0025	Increment Reduced
10	1	\$0.1925	\$0.0025	Minimum Increment
11	0	\$0.1925	\$0.0025	

Auction Ends (No Further Action)

Example 2:

<u>Round</u>	<u>New Bids</u>	<u>Current Price</u>	<u>Current Increment</u>	<u>Remark</u>
1	52	\$0.05	\$0.05	
2	40	\$0.10	\$0.05	
3	0	\$0.10	\$0.01	Increment reduced
4	35	\$0.11	\$0.01	
5	31	\$0.12	\$0.01	
6	30	\$0.13	\$0.01	
7	3	\$0.14	\$0.01	
8	0	\$0.14	\$0.005	Increment halved
9	0	\$0.14	\$0.0025	Increment halved
10	1	\$0.1425	\$0.0025	
11	0	\$0.1425	\$0.0025	Minimum Increment

Auction Ends (No Further Action)