

Tamara Preiss
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September 27, 2013

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Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
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Re: Expanding the Economic and Innovation Opportunities of Spectrum through Incentive Auctions, GN Docket No. 12-268

On September 25, Charla Rath, Avery Gardiner, Christopher Oatway, and Tamara Preiss, from Verizon, and Dr. Leslie Marx, from Duke University, met with the following FCC staff: Gary Epstein and Edward Smith of the Incentive Auction Task Force; Jim Schlichting, Joel Taubenblatt, Susan Singer, Martha Stancill, Margaret Weiner, Weiren Wang, Paroma Sanyal, Catherine Matraves, Heidi Kroll, and Eliot Maenner of the Wireless Telecommunications Bureau; and Steve Wildman, Paul LaFontaine, Evan Kwerel, and Omar Nayeem of the Office of Strategic Planning & Policy Analysis. Also participating by telephone were Paul Milgrom, Jon Levin, and Ilya Segal of Auctionomics.

Dr. Marx discussed her study, "Economic Analysis of Proposals that Would Restrict Participation in the Incentive Auction," which demonstrates the lack of empirical evidence that some carriers are at risk of foreclosure from access to spectrum unless the Commission restricts Verizon's and AT&T's participation in the upcoming Incentive Auction.¹ She also explained the auction simulations she conducted, which establish that bidding restrictions on AT&T and Verizon will likely result in material reductions in auction revenues and the amount of spectrum re-purposed, if not outright auction failure. The attached slides were used during the meeting.

This letter is being filed pursuant to Section 1.1206 of the Commission's Rules. Should you have any questions, please contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read "Jon Levin".

Attachment

cc: (via e-mail)

Gary Epstein
Edward Smith
Jim Schlichting
Joel Taubenblatt
Susan Singer
Martha Stancill

Margaret Weiner
Weiren Wang
Paroma Sanyal
Catherine Matraves
Heidi Kroll
Eliot Maenner

Steve Wildman
Paul LaFontaine
Evan Kwerel
Omar Nayeem

¹ See "Economic Analysis of Proposals that Would Restrict Participation in the Incentive Auction," attached to Letter from Tamara Preiss, Verizon, to Ruth Milkman, Gary Epstein, and William Lake, FCC, GN Docket No. 12-268 (filed Sept. 18, 2013).

The Consumer and Revenue Benefits of Open Eligibility in the Incentive Auction



Leslie M. Marx

Robert A. Bandeen Professor of Economics, Duke University

September 25, 2013



Open Auctions → Efficient Spectrum Allocation

Auctions that allow maximum participation

- Most efficient means of assigning spectrum licenses
- Ensure that licenses are awarded to bidders that value the spectrum most highly and can put it to its highest and best use

Incentive auction that maximizes participation

- Maximizes the combination of revenues for taxpayers and quantity of spectrum repurposed for mobile broadband



Restricted Auctions → Less Revenue, Less Spectrum

Restricted auction that limits participation:

- Complicates auction
- Not needed to prevent foreclosure (spectrum warehousing)
- Suppresses revenues
- Distorts bidding and allows for strategic manipulations
- Reduces amount of spectrum repurposed for mobile broadband
- Allows some participants to acquire spectrum at below market rates
- Risks auction failure

Conclusion: Given the significant drawbacks, auction restrictions should only be implemented if there is a strong likelihood of competitive harm without restrictions.

No Economic Evidence of Foreclosure Risk

- Foreclosure of low-band spectrum is not possible if the spectrum is available in the market
- Sprint and T-Mobile had many opportunities to buy low-band spectrum at auction and in secondary market but did not.
 - In 2008, they did not buy spectrum in the 700 MHz auction
 - Since 2007, there have been more than 2,000 transactions of low-frequency spectrum.
T-Mobile bought one license. Sprint bought none.
- Sprint and T-Mobile's unlimited usage plans indicate they are not capacity-constrained



Auction Design Will Deter Foreclosure

Attempt to Foreclose Rivals: Costly, Difficult, Unlikely

The auction design discourages foreclosure because:

- **Higher bids** produce more available spectrum, increasing costs of foreclosure
- **Blind bidding:** Verizon and AT&T can't target rivals if they don't know the identity of other bidders. They might end up bidding against each other.
- **"Free rider" issues:** Verizon and AT&T would each prefer that the other spend the money needed to foreclose rivals.
- **Insufficient concentration** in wireless market

Head-to-head competition between Verizon and AT&T proves there is no foreclosure strategy

- 700 MHz auction in 2008: Verizon and AT&T competed against each other to bid **\$4.2 billion more** than would have been necessary if their intent was to foreclose competitors.



Foreclosure can be addressed through:

- Build-out requirements
- FCC and Department of Justice post-auction review

These are effective policy measures that:

- Avoid unnecessary distortions and risk of auction failure
- Are targeted to address any evidence of anti-competitive behavior



Bidding Restrictions Depress Revenues

- **Simulations of past auctions using *actual* bid data show that:**
 - **If Verizon and AT&T were excluded, revenue would have been:**
 - **45% lower** in the 700 MHz auction in 2008
 - **16% lower** in the AWS auction in 2006; T-Mobile would have paid less for its licenses
(see chart on slide 11)
 - **If Verizon and AT&T faced restrictions short of outright exclusion:**
 - Any material reduction in their demand would risk a substantial reduction in revenue and could lead to auction failure
- **Simulations of two-sided auctions show that bidding restrictions:**
 - Reduce maximum possible revenue
 - Reduce maximum possible quantity of repurposed spectrum
(see chart on slide 12)



There is no evidence that the unrestricted presence of Verizon and AT&T will scare away bidders:

- **AWS Auction**

- Verizon, AT&T, and T-Mobile participated without restrictions
- 168 qualified bidders; 104 license winners

- **700 MHz Auction**

- Verizon and AT&T participated without restrictions
- 214 qualified bidders; 101 license winners

- **Sprint and T-Mobile do not claim that they would be deterred from participating and competing for spectrum**

- T-Mobile participated in the AWS auction and spent more money and won more spectrum than either Verizon or AT&T

- **Sprint and T-Mobile do not explain why their own presence would not deter smaller rivals from participating**



T-Mobile's Restriction Proposal Risks Auction Failure by:

- Increasing auction complexity
- Decreasing amount of repurposed spectrum
- Decreasing potential revenues
- Creating incentives for strategic bidding
- Creating exposure risk for bidders
- Enabling Sprint and T-Mobile to win licenses at depressed prices

Empirical evidence demonstrates that:

- Restrictions on participation are not needed to deter foreclosure
- Any attempt at foreclosure would be both difficult and costly.
- Limiting participation in the incentive auction by carriers that place a high value on spectrum will increase the risk of auction failure by:
 - Suppressing revenues
 - Reducing the amount of spectrum repurposed for mobile broadband



AWS Auction Simulation

Figure 11 AWS spectrum auction simulation example (license AW-REA001-F)

Round	Bidder	Actual Bids		"As Bid" simulation	
		Bid (\$ millions)	Random number	Bid (\$ millions)	Random number
9	Verizon	248	0.16		
	Denali	248	0.65	248	0.65
	Dolan	273	0.40	273	0.40
	SpectrumCo (Sprint)	447	0.87	447	0.87
	Wireless DBS LLC	248	0.56	248	0.56
10	Verizon	537	0.21		
	Dolan	537	0.32	537	0.32
12	Verizon	644	0.66		
	T-Mobile	644	0.15	644	0.15
13	T-Mobile	773	0.27	773	0.27
14	Verizon	927	0.12		
15	T-Mobile	1,113	0.74	1,113	0.74
16	Verizon	1,335	0.68		

Source: FCC documentation.

Note: The provisional winning bids for each round are in bold. The original win is highlighted in yellow and the simulated win is in green.



Two-Sided Auction Simulation

Figure 17 Exclusion may cause the illustrative two-sided auction to fail

