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February 20, 2015

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Expanding the Economic and Innovation Opportunities of Spectrum through Incentive Auctions, GN Docket No. 12-268; In the Matter of Updating Part 1 Competitive Bidding Rules, WT Docket No. 14-170.

Dear Ms. Dortch:

On February 18, 2015, Joan Marsh, Tom Lowe, Terry Chevalier and Michael Goggin of AT&T Services, Inc., and Allan Ingraham of Economists, Inc. met with Roger Sherman, Jean Kiddoo, Margaret Wiener, Eliot Maennner, Craig Bomberger, and Gary Michaels of the Wireless Telecommunications Bureau to discuss the AWS3 Auction and implications for the above referenced proceedings.

AT&T noted that the recent AWS-3 auction was very competitive and very successful. The auction was open, with no set-asides or reserved spectrum, and was robustly competitive. Moreover, the success of Dish's DE's who together won more licenses than any other bidder, indicates that set-asides and reserves are not needed—new entrants and smaller bidders can win nationwide spectrum in an open auction.[1] The success of the auction is due in large part to the "open competition" procedures the FCC used and the way it managed the bidding process while the auction was underway.

During the conversation, AT&T discussed the attached presentation, analyzing in part the bidding activity in Auction 97 and suggesting ways to improve the auction procedures and competitive bidding rules in light of the lessons from Auction 97.

First, the Commission should eliminate or reform joint bidding agreements. Entities that wish to coordinate their bidding in an auction should instead apply to form bidding joint ventures. In Auction 97, Dish, together with two newly formed entities in which Dish holds an 85 percent equity interest, engaged in a scheme in which they placed double or even triple bids on numerous licenses throughout the auction. This allowed the Dish entities to accomplish a number of things. First, by combining their bidding units, they were able to exert more buying

[1] Indeed, T-Mobile's claims that it was outbid by Verizon and AT&T in Auction 97 doesn't square with the data. T-Mobile won 151 licenses, and was outbid for 210 licenses on which it had been the previous high bidder. In 155 of those 210 cases, T-Mobile was outbid by a DE.

power than any other applicant because they could deploy approximately 400 million more bid units than any other applicant was permitted to hold. Second, they could "park" auction eligibility and simultaneously reduce their bid exposure. By "stacking" bids on licenses, they could place up to 3 bids on a single license (nominally keeping the bid units for each bid "active,") while only being at risk to have to actually purchase the license once. By using this "stacking," the Dish entities were able to "stash" bidding units. While other participants had to use 80 percent of the bidding units in each round of stage one, the effective activity level for the Dish entities was just over 50 percent. An additional benefit to the Dish entities was to sow confusion among its competitors by projecting "shadow demand." In round 16, for example, the Dish entities placed almost $30 billion in bids (while their actual potential exposure was roughly $12 billion). These "insincere" double and triple bids created the illusion of an additional $17 billion worth of demand.

The Commission's activity rules were designed to encourage "sincere" bidding by requiring bidders to deploy their bidding units early on in the auction, so other auction participants could accurately gauge demand and engage in "price discovery." The Dish entities' bid-stacking conduct distorted this market data. Virtually all of the unfair advantages the Dish entities were able to gain through gaming the joint bidding rules arise from the fact that there was, as a practical matter, a single bidding entity acting through three separate applicants (and therefore able to control three sets of bidding units, to place multiple bids on individual licenses, park eligibility, reduce exposure and distort market signals by creating shadow demand.) By eliminating joint bidding agreements and requiring instead that parties who wish to coordinate their bidding apply to form a bidding joint venture, the Commission could largely prevent this sort of gamesmanship. A bidding joint venture would bid as a single entity, could hold no more bidding units than other bidders, could place only one bid per license and would be subject to the same activity rules as other bidders,

AT&T also noted that the DE rules should be carefully reviewed. The DE rules were designed to provide opportunities for *small* businesses to participate in the wireless business. Even if Dish has a "non-controlling" interest in its DE's, it seems likely that the more than $3 billion in federal subsidies its DE's have claimed would benefit their 85 percent shareholder. And in any event, it is odd to consider any entities that can spend $ 10 billion in a single auction to be "small." The FCC should review its DE rules and make appropriate changes to ensure that the small business subsidies the DE program provides flow to the small, independent businesses they were intended to benefit.

In accordance with Commission rules, this letter is being filed electronically with your office for inclusion in the public record.

Sincerely,

Joan Marsh

cc: Roger Sherman
Jean Kiddoo
Margaret Wiener
Eliot Maenner
Craig Bomberger
Gary Michaels

Summary of Auction 97 – AWS3

Prepared by AT&T for FCC staff

February 18, 2015

Introduction

Auction 97 was a success for all stakeholders -- achieving record prices, with values exceeding expectations and all previous auctions

- Provided needed spectrum capacity for the industry
- Raised sufficient funds to address public priorities and taxpayer needs for FirstNet and deficit reduction
- Provides for the transition funding for DOD and other government users

The Commission was able to implement a largely efficient auction with high demand

- Relative pricing parity across similar blocks
- Very few instance of bidders with non-contiguous 2x10 positions

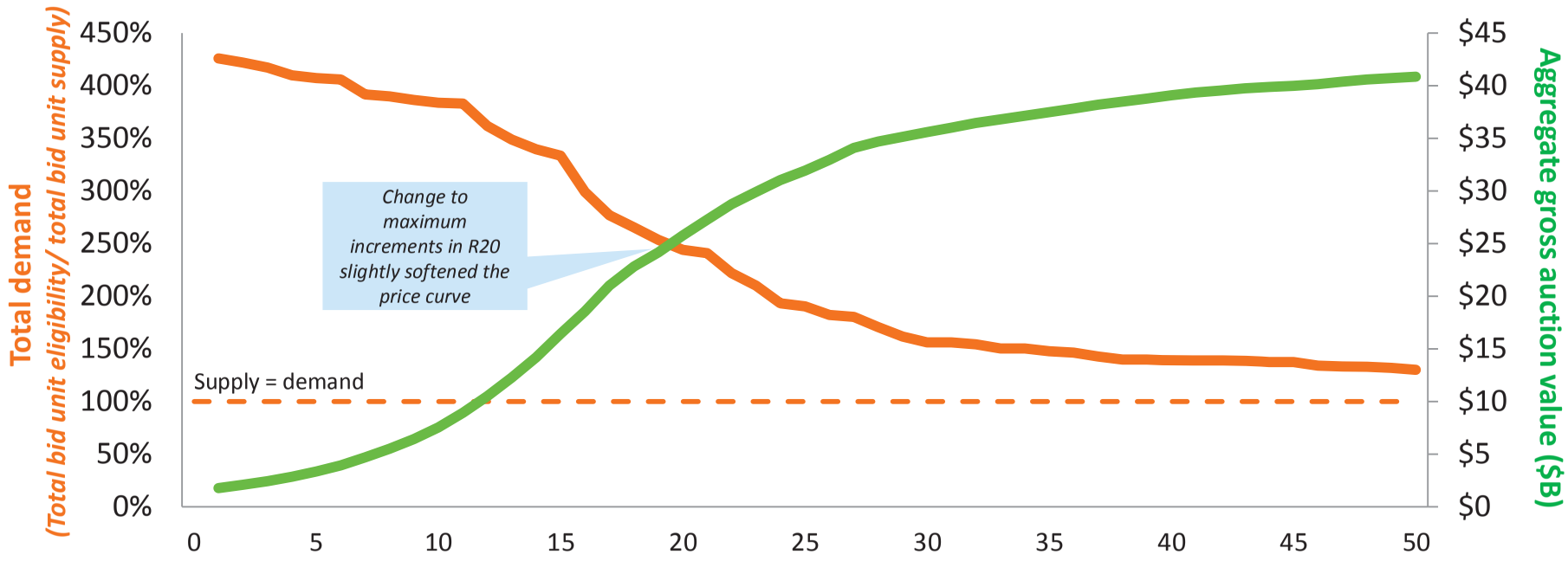
Given a competitive auction with unforeseen events, FCC managed the auction well

- Managed pricing increments in large markets as prices escalated rapidly
- Maintained a longer Stage 1 period to address coordinated bidding from some bidders
- Delayed the auction schedule when spirited bidding occurred in Stage 4
- Refined stopping rules to bring the auction to an orderly close

There are lessons from Auction 97 that the FCC should consider applying to any future auction that it runs

AT&T respectfully provides this analysis of Auction 97 from the point of view of a bidder in the auction to highlight observations on auction tactics, impacts to bidding dynamics, and potential opportunities for future auctions

Significant excess demand resulted in a highly competitive auction



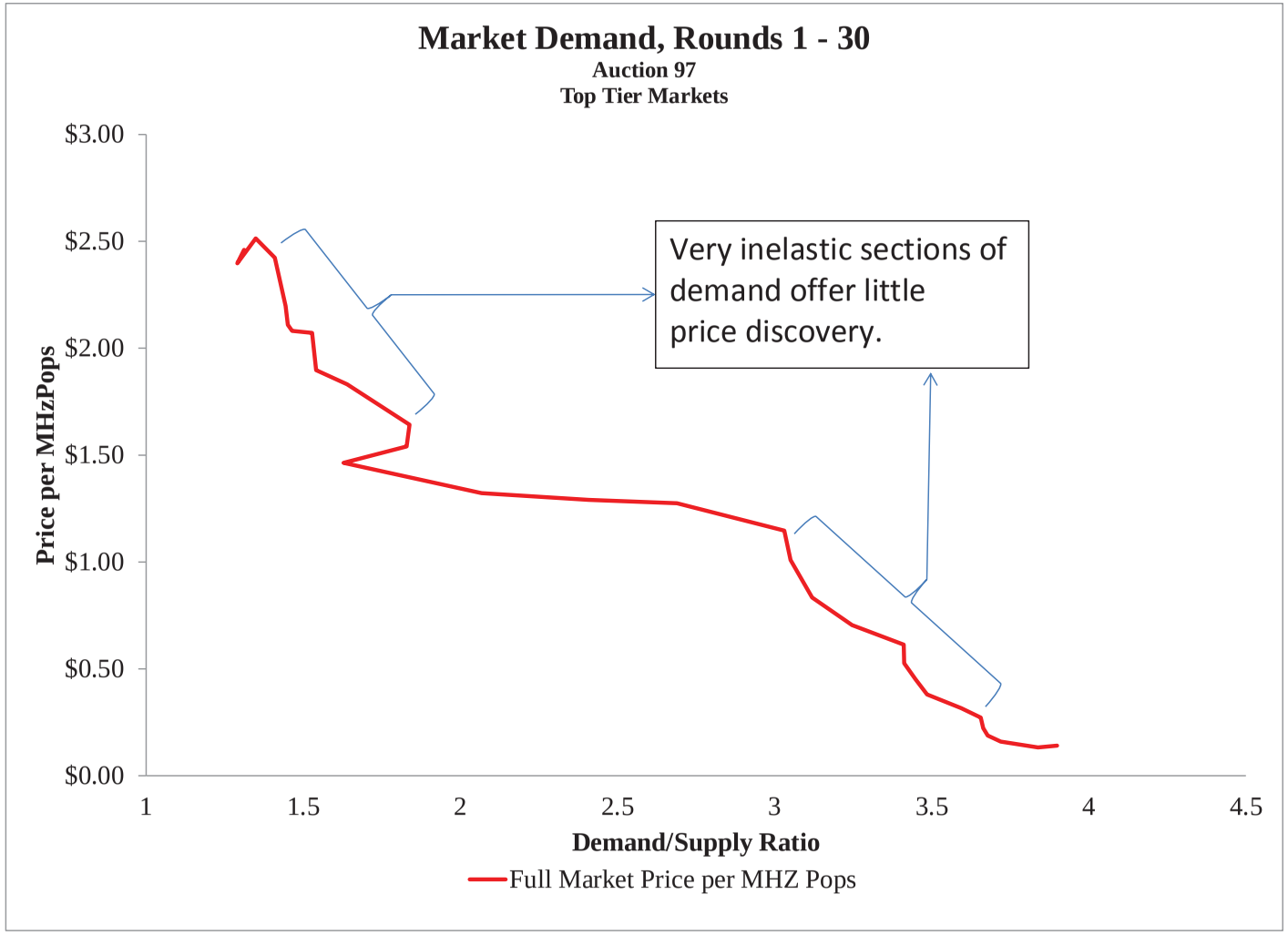
- **Large number of bidders:**
  - 70 bidding entities registered with the FCC to participate; 31 entities won licenses
- **Strong and inelastic demand early:**
  - Initial demand significantly exceeded supply , driving prices above paired reserve by the end of Round 13
  - Excess demand over 100% causing significant price escalation through Round 23
  - Demand highly inelastic until rounds 13 to 25 of the auction
  - After thirty rounds of bidding, prices began to stabilize and top markets began to settle

Two unsettling oddities through the lens of a bidder competing in an anonymous SMRA

1. Highly inelastic demand despite significant price escalation → ***Little price discovery early in the auction***

2. Coordinated bidding to park freely *very large* quantities of bidding units over extended number of rounds → ***Uncertainty in how these bid units might be deployed into the auction***

Inelastic demand provided little information in early rounds



Coordinated bidding created "free" parking for DISH's joint bidding entities

By Rounds 16 to 20, it became apparent that DISH and its joint bidding entities (SNR, Northstar) were submitting multiple bids on the same licenses in the same round

This coordinated multiple bidding provided the following effects for Dish:

- "Zero cost" parking options
- Increased likelihood of winning a tie
- Reduced "effective" activity requirement
- Could delay expressing their true intentions on a large portion of their bidding units

Example: Round 24, all three new bids placed on the New York J block by DISH joint bidding entities

Round	24
Current PWB	AT&T Wireless Services 3 LLC
Bid Units	44,120,000
Min Accepted Bid	$1.813B
New bids	• Northstar Wireless • SNR Wireless • American Wireless I

Bid unit and economic effects

	Bid Units	Gross Financial Exposure
Total bids placed	132,360,000	$5.439B
Max exposure (winning once)	44,120,000	$1.813B
Total savings	**88,240,000**	**$3.626B**
Effective activity	**33% (44M/ 132M)**	

Many double bids in B1 while bidding against "2014 AWS Spectrum"

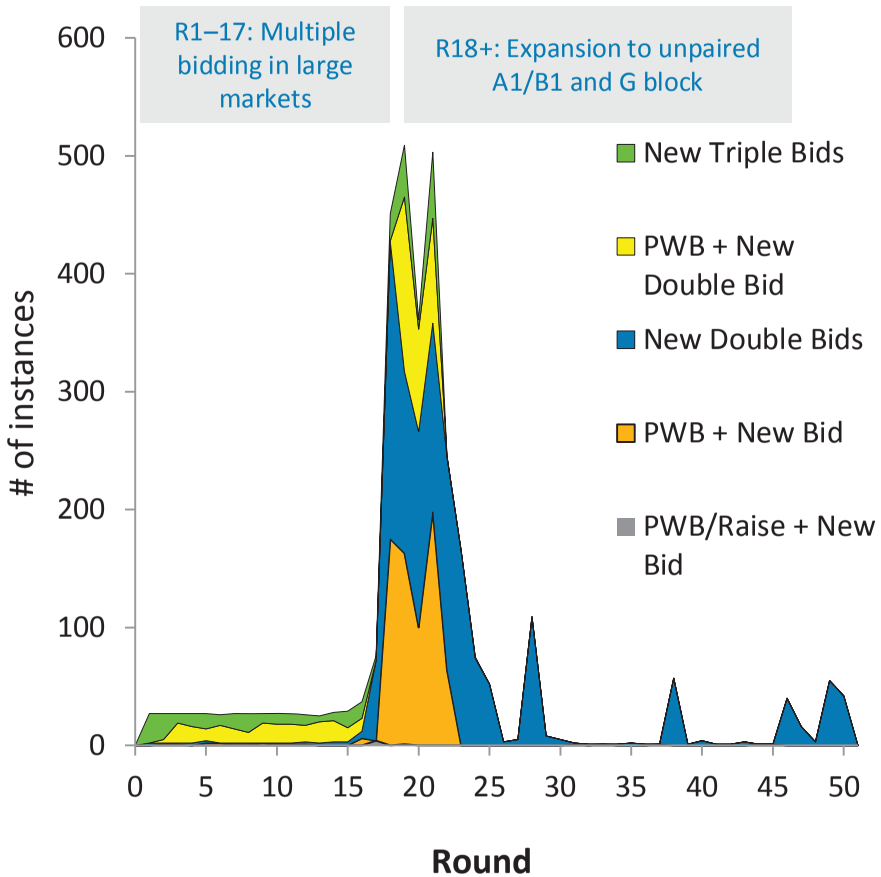
DISH entities utilized the unpaired blocks to also freely store bid units between rounds and redeploy into the paired through a coordinated fashion

- By round 38, top tier markets in paired blocks had largely settled
- A1 and B1 bidding had become spirited with SNR/Northstar competing against "2014 AWS Spectrum" (Jarvinian Wireless)
- When SNR/Northstar were bidding in A1/B1 they often submitted double bids to hoard additional bid units at lower cost
- ***Example Round 38:***
  - *Free eligibility created = Total bid units placed by SNR/ Northstar less number of "unique" licenses bid by SNR/ Northstar*
  - *Free eligibility from unpaired in R38 = 16,848,250 – 11,229,250 =* ***5,619,000 bid units***

Almost 4,000 instances of coordinated bidding by DISH joint bidding entities

Instances of DISH coordinated bidding

Rounds 1 to 50

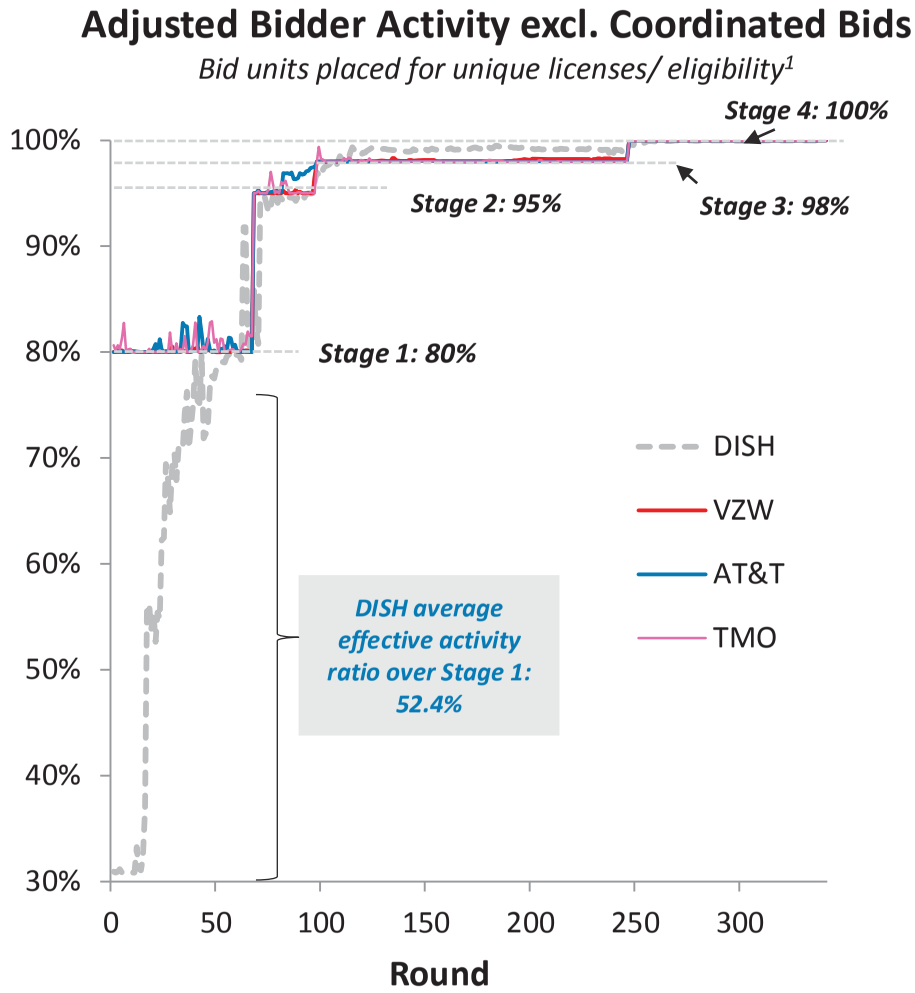


Note: >80% of all DISH joint bidding entities coordinated bidding occurred in first 50 rounds

Five observed types of coordination

	Description	# of instances
New triple bids	• All three entities placed a new bid on a license	328
PWB + two new bids	• One entity was winning bid, but other DISH entities placed a new bid in subsequent round	527
New double bids	• Two entities placed a new bid	2,284
PWB + new bid	• One entity was winning bid, but one entity placed a new bid in subsequent round	757
PWB/ raise + new bid	• Similar to previous, but winning bidder also raised their own high bid	5
	Total Instances	**3,901**

Coordinated bidding effectively lowered the activity rule



[1]Unique licenses refers to bidding a single license in a round and does not count coordinated multiple bids on the same license in the same round; bidders assigned activity requirement in rounds where a waiver was used

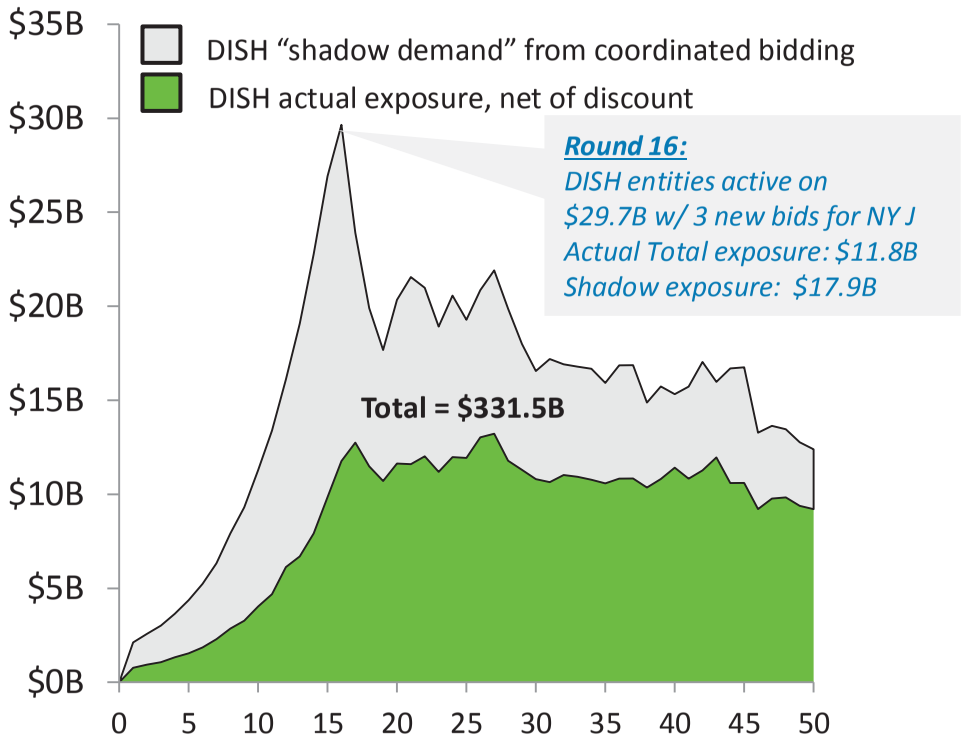
Key Points

- "Activity rule" requires bidders to be active on a certain percentage of bid units
  - If bidders don't actively bid, they lose eligibility and can't bid it later
  - Mitigates a **"snake in the grass"** tactic where bidders can come back into the auction late
- Coordinated bidding on the same license at the same time **lowers the "effective" activity** relative to other bidders
  - Bidders can only win a license "once"; treat joint bidding entities (SNR, Northstar, American Wireless I) as a single entity
  - Calculate effective activity = number of unique bidding units bid in a round
  - Divide effective activity by total eligibility
- Demonstrates DISH's joint bidding entities participated under a **different activity rule than other bidders**
- ***For any other bidder, this is akin to having unlimited and free waivers during the auction***

Rest of Market experienced the coordinated bidding as "shadow demand"

DISH Total Financial Exposure

Rounds 1 to 50

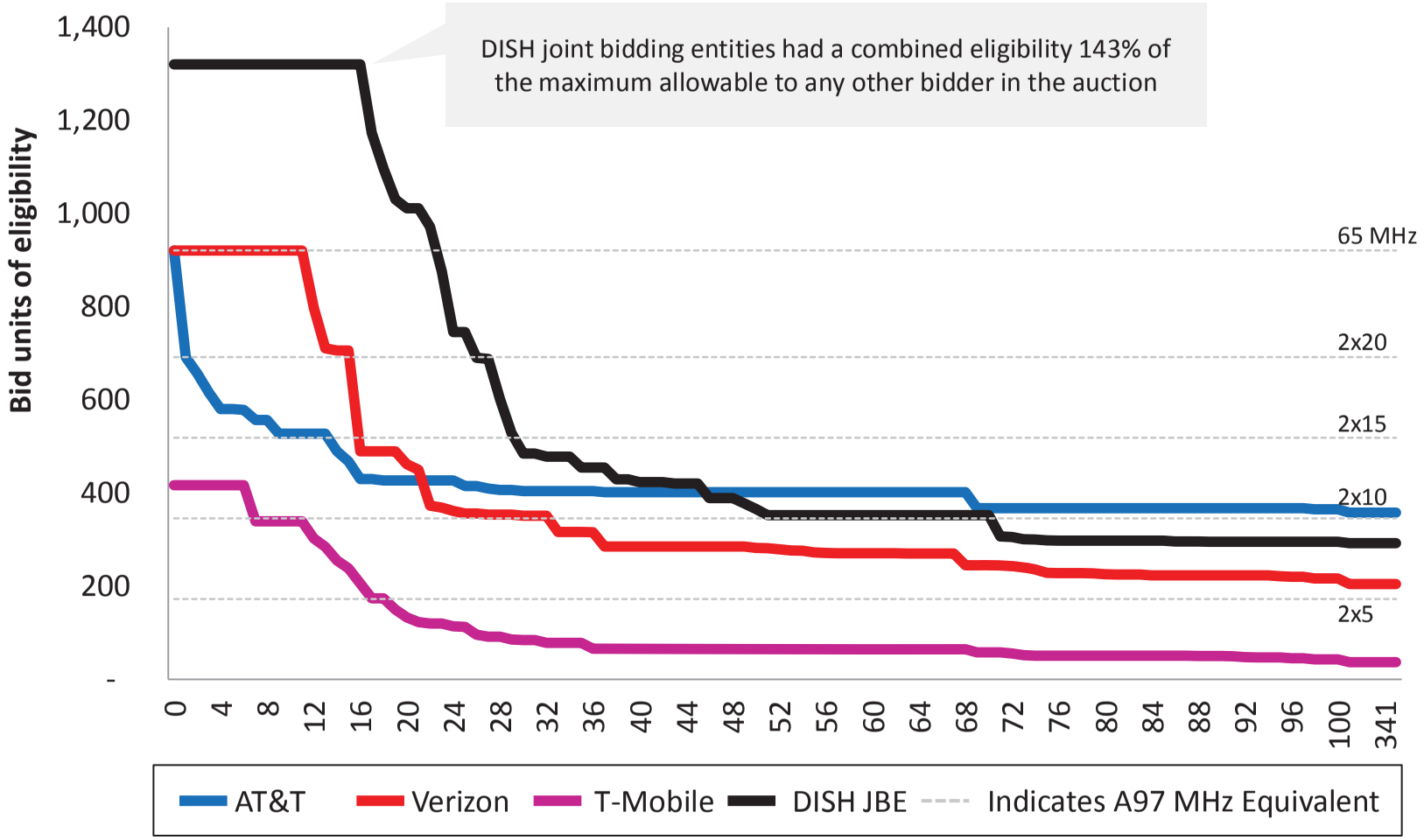


- **Resulted in average shadow demand of $6.6B per round over the first 50 rounds**

Key Points

- Other bidders in the auction had no knowledge of which bids were sincere and which were coordinated due to bidder anonymity
- Thus, a bidder in the auction would determine there was a significant level of demand, especially in larger markets
- In reality, the expressed demand was not in alignment with auction prices creating a "distortion" in price discovery and creating a perception of price inelasticity early in the auction

Bidders managed responses to these auction dynamics partly through their bid unit eligibility



DISH entities were one of the largest forces impacting other bidders in the auction

# of Licenses where Previous High Bidder was Outbid by Winner[1]

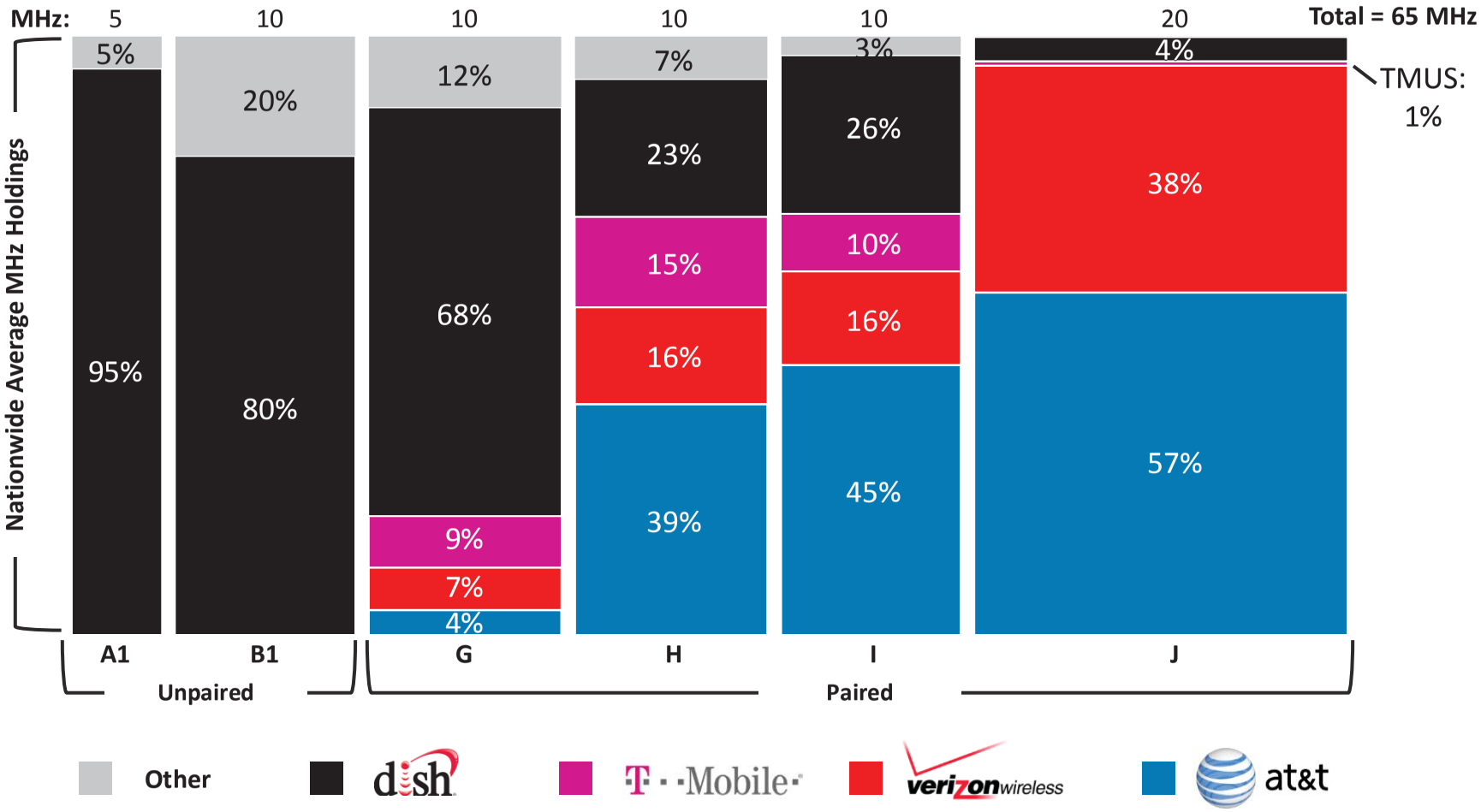
Outbid and Won by:	Previous High Bidder						
	AT&T	Dish	Verizon	T-Mobile	Other DE	Other non-DE	
AT&T	0	85	100	26	38	2	*251*
Dish	52	38	40	132	398	42	*702*
Verizon	45	60	0	16	44	16	*181*
T-Mobile	12	69	32	0	32	6	*151*
Other DE	6	123	22	23	51	30	*255*
Other non-DE	2	28	8	13	22	1	*74*
	117	*403*	*202*	*210*	*585*	*97*	**1,614**

- DISH joint bidding entities **won the most licenses** in the auction (702) due to G block and A1/B1
- From the standpoint of almost all other bidders (including T-Mobile), the **DISH joint bidding umbrella was the most common and most frequent competitor** in the auction
- **DISH entities outbid:** T-Mobile on 132 licenses; AT&T on 52 licenses; Verizon on 40 licenses; Other DE bidders on 398 licenses; Other non-DE bidders on 42 licenses
- Additionally, DISH was the competitor that T-Mobile and other bidders were most likely to have to outbid to win licenses (69 of T-Mobile's 151 licenses; 123 of Other DE bidders' 255 licenses)
- **As part of coordinated bidding, DISH entities even bid themselves off of 38 licenses (36 A1 and 2 B1)**

[1] Excludes withdrawals

Note: DISH represents the DISH joint bidding entities

Auction Results by Block



Note: DISH represents the DISH joint bidding entities

MHz holdings measured using distribution of MHz Pops, which are based on Nielsen's 2014 estimate of 321M pops

Lessons for the Commission

An open auction generates significant competition and demand, while "small bidders" still win nationwide spectrum

- While the successes of the Dish DE's indicate that set asides are unnecessary, any arguments to enlarge set asides for "small bidders" should be viewed with skepticism

Commission needs to revise rules regarding joint bidding entities and affiliated bidding entities

- Should not allow joint bidding entities to bid on the same licenses, period
- *Potential remedy: Any joint bidding entity should be treated as a single bidder*

Commission needs to review the designated entity program to ensure subsidies and benefits accrue to those who need them

- Should not provide bidding credits to large corporations OR bidders who are bidding for nationwide or large positions in the auction

Commission needs to be aware that the greater the complexity in auction design and auction rules, the greater the chance for unforeseen or unintended consequences