



NEW AMERICA
FOUNDATION

PUBLIC INTEREST SPECTRUM COALITION POLICY BACKGROUNDER

***Reforming FCC Spectrum Auction Rules to Promote Broadband Competition:
Wholesale Open Access and Anonymous Bidding***

June 18, 2007

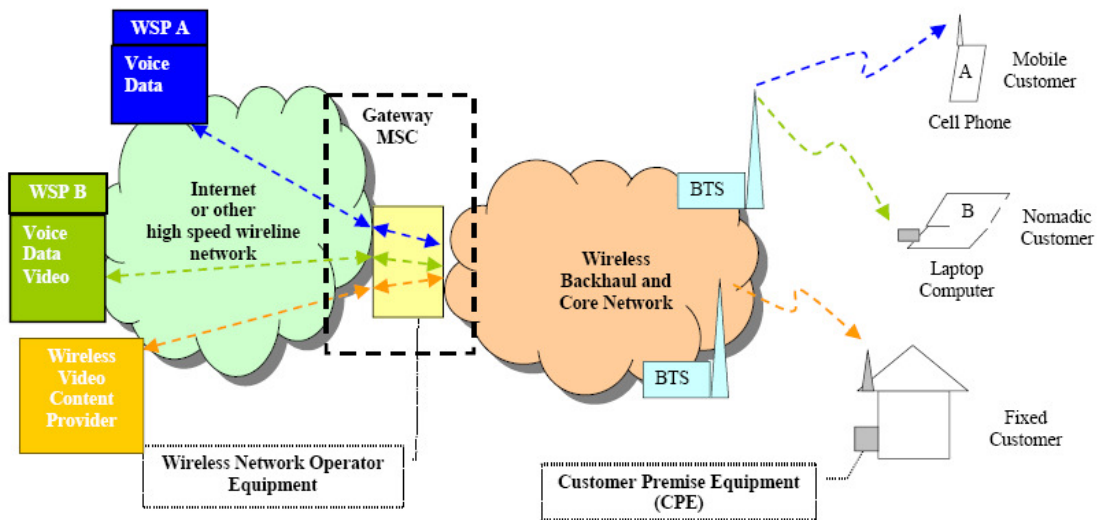
Background: In the coming weeks, the FCC will set the bidding and service rules for the auction of the 700MHz spectrum freed up by the DTV transition—“beachfront” airwaves ideal for the provision of high-speed wireless broadband services. This last big sale of prime spectrum is expected to raise \$10 to \$20 billion in federal revenue. But far more important to the economy and to consumers is whether this auction promotes broadband deployment and price competition in every part of the country—or, instead, further consolidates the nation's over-priced and under-performing broadband duopoly.

Recently, the Public Interest Spectrum Coalition* (PISC), a coalition of consumer and media policy groups, filed comments at the FCC seeking rules to maximize competition and consumer choice in wireless broadband. The groups asked the FCC to remedy flaws in its auction rules by adopting “anonymous” bidding to encourage competitive entry. The group also requested the FCC to ensure “open” (wholesale) access to this valuable portion of the public airwaves to enable vibrant retail competition in wireless broadband services. The following backgrounder explains the basic principles of anonymous bidding and open access.

1. Open Access

- As proposed by the PISC, an open access service rule would require winning bidders for half of the spectrum (30 MHz) to make access to that spectrum available to third parties at wholesale rates. This model has a proven track record: It led to the explosion of competitive Internet Service Providers (more than 6000 of them) in the 1990s. It is also the model adopted by those countries that are far ahead of the United States in terms of broadband speeds, prices and services.
- The open access model would allow any competitive provider, such as a WISP, to make use of licensed, interference-protected 700 MHz spectrum regardless of whether the provider was able to purchase a license in the upcoming auction. It also allows new WISPs (those that want to enter the market after the upcoming auction) to emerge with very low barriers to entry.
- The open access model PISC envisions requires no complex arrangements or new technology. It would simply require the licensee to sell interconnection to third parties at a gateway in the network, which would permit any number of competitors.

* *The Public Interest Spectrum Coalition includes the New America Foundation, the Champaign-Urbana Community Wireless Network, Consumer Federation of America, Consumers Union, EDUCAUSE, Free Press, Media Access Project, the National Hispanic Media Coalition, Public Knowledge, and U.S. Public Interest Research Group.*



Generic Open Access, Supporting Multiple Wireless Service Providers (WSPs) over a Single Network

(Source: Columbia Telecommunications Corporation, "An Engineering Assessment of Select Technical Issues Raised in the 700 MHz Proceeding," May 2007, Figure 3)

- The above Figure shows a system-level configuration of an open access wireless broadband infrastructure that supports multiple wireless service providers. The wireless infrastructure operator provides transmission services at wholesale rates to the various service providers. Service level agreements between the network operator and the service provider would dictate service attributes such as the number of users supported, maximum bandwidth supported, and quality of service.
- In an open access environment, each provider can offer a higher theoretical maximum speed to their customers – their speeds are determined by the bandwidth of the *large* shared spectrum block, rather than the bandwidth of the *smaller* channel.

2. Anonymous Bidding

- The bidding patterns of recent auctions demonstrate that communication and collusion between bidders enabled the largest companies to lock out potential new entrants. The best way to prevent such anticompetitive behavior is through anonymous bidding—if bidders cannot identify one another, signaling and blocking behavior become more difficult.
- A study by Dr. Gregory Rose, consultant to PISC, found that the rules in the 2006 AWS-1 auction were manipulated to exclude new entrants to the marketplace from obtaining spectrum in favor of incumbent cable companies, wireless operators, and telephone companies. These incumbents feared the significant potential competitive threat if a new entrant either (1) acquired a national AWS footprint in the auction or (2) acquired a strong regional or multi-regional base from which it could acquire a national footprint in future auctions. Careful analysis of the patterns of bidding behavior in the auction leads to following conclusions:

- The targeted new entrants were met with a tacitly-collusive strategy of “**blocking bidding**,” with coalitions of multiple major incumbents making bids for the apparent purpose of denying licenses to the new entrant, rather than acquiring the licenses for themselves. A majority of the major incumbents ceased bidding on such licenses after the threatening new entrant ceased bidding. The strategy of blocking was successful. All but two of such new entrants were denied any spectrum in the AWS-1 auction.
 - The principal signaling behavior identified was “**retaliatory bidding**,” which occurred in the AWS-1 auction at a slightly higher level than in the FCC’s 1996-97 PCS D, E, and F Block auctions.
- Both the blocking and retaliatory bidding strategies evidenced in the AWS-1 auction limited competition, adversely affected new entrants and most likely reduced total auction revenue. Both strategies were also available only because bidders were provided with the identities of all other bidders and of the licenses on which they bid in each round.
 - The study concludes with a recommendation that the FCC should adopt anonymous bidding rules for the 700 MHz auction and for future FCC spectrum auctions. Anonymous bidding remains the only auction rule that can hope to prevent the effective use of retaliatory bidding, blocking bidding and other forms of tacit collusion by incumbents and other bidders.
 - While PISC supports anonymous bidding regardless of band plan, *the need for anonymous bidding increases with the number of licenses in the auction*. The more objects in the auction, the greater the ability to convey information through bids (or failures to bid) on the auction. Each additional object creates a new possible signal directly, and in combination with, the existing objects.

Link to full PISC comments on the FNPRM, May 23, 2007:

<http://www.newamerica.net/files/700%20MHz%202007-05-3filing%20on%20FNPRM.pdf>

Contact: Michael Calabrese or Naveen Lakshmipathy
 New America Foundation/Wireless Future Program
calabrese@newamerica.net, lakshmipathy@newamerica.net
 202-986-2700