

Synthesis of Public Policy Issues in 700 MHz Band

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Preview of Policy Implications

- Net neutrality (NN) and wholesale-only requirements harm customers and suppliers
- Codifying a particular business plan into the auction rules is a bad idea
 - Our analysis shows that Frontline's business plan is very risky for both public safety and government
- Bidding credits/set-asides do not increase revenues, and can result in spectrum lying fallow for years (see NextWave)
- Proposal: NN and wholesale-only requirements should not be imposed on any 700 MHz spectrum, including public safety
 - Requirements deter commercial interests from working with public safety

Overview of Issues in 700 MHz Debate

- Possible requirements on spectrum not earmarked for public safety in upper 700 MHz band
 1. Net neutrality requirement (NN)
 2. Wholesale-only requirement (WO)
 3. Public safety obligation (PS)
 4. Set asides/bidding credits (DE)



Wireless Net Neutrality Requirement

- Definition: Prohibit certain restrictions imposed by carriers on customers/suppliers
- The restrictions commonly imposed by carriers are pro-consumer
 - *Term contracts*: Customers have a menu of options, permit discounts on handset
 - *Exclusive distribution*: Suppliers in all segments of the economy use exclusives to incentivize retailers
 - *Pre-approval of hardware/application*: Provides a level of security, encourages carrier accountability
- Most applications are complements and therefore will be supported by network owners
 - Exception is VoIP: Duty to support VoIP will lead to higher data prices, shouldn't regulate based on a single application
- **Market test**: Carrier with most restrictions is rated the highest in customer satisfaction surveys

Wholesale-Only Requirement

- Requires price regulation to have any effect on prices
- Is inefficient in the presence of voluntary contracting between resellers and network owners
- Has no special relationship with public safety
 - A carrier *without* such a requirement can satisfy a public safety obligation just as efficiently

Public Safety and Frontline's Business Model

- Unanswered questions
 - What will be the nature of the network constructed?
 - What technologies will it use?
 - How many towers will be required, and what will they cost?
 - How will the build-out of the network be financed?
 - How many commercial customers does the firm expect to have, who will they be, and how much will they pay?
 - What will Frontline need to charge public safety users to make up the difference between commercial revenues and what is required?
- Specific data missing from standard due diligence
 - Developing and validating *pro forma* income statements
 - Conducting interviews with prospective customers
 - Evaluating the capabilities of key personnel
 - Validating key technological and market assumptions
 - Preparing a detailed plan for obtaining the financing necessary to get the business from start-up

Public Safety and Frontline's Business Model (Continued)

- Great risk for U.S. government and public safety if Frontline model flounders
 - Government investment would be foregone revenue due to requirements
 - Public safety would invest billions in handsets
- Public safety would be required to pay over \$9 billion in access fees over the first six years the network is in operation (2013-2018) for Frontline to pay down its debt and begin returning dividends to its equity investors
 - \$9 billion amounts to about a third of public safety's total projected spending on communications for first responders.
 - It does not include the cost of handsets and other equipment, which would be billions more.
 - Greater auction proceeds implies greater debt for Frontline and therefore a larger contribution from public safety for Frontline business plan to work

Does Impairing Incumbents in an Auction Ever Make Sense?

Frontline Claim	Facts
Verizon's and AT&T's conduct in Auction 35 was intended to keep Cingular out of New York	But Cingular had announced a deal with VoiceStream that would give Cingular the ability to provide wireless service in New York City <i>before</i> the auction began
AT&T used retaliatory bidding in the D, E, and F block auction to foreclose competitors	<ul style="list-style-type: none">• After this auction, the FCC eliminated a bidder's ability to submit single dollar bids and instead required them to submit bids in rounded increments• FCC also implemented blind-bidding in spectrum auctions where there is an insufficient amount of upfront demand to ensure a competitive outcome
No lessons from Auction 66 (AWS)	Verizon and Cingular combined won less than 25 percent of the spectrum in the AWS auction. T-Mobile won 25.8 percent and cable companies (SpectrumCo) won 20.5 percent
Handicapping incumbents in European UMTS auctions was a good thing	Entrants in the UK and German auctions have either failed or have been on the brink of failure for years

Conclusion: Frontline's economic analysis is not credible