Incentive Auctions for Repurposing Broadcasting Spectrum

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Problem

- Develop a *voluntary* market mechanism to efficiently repurpose broadcast spectrum
Repurposing Broadcast Spectrum: Two Auction Designs

- **Sequential auctions**
  - Incentive auction – binding offers to sell spectrum (supply curve)
  - “Forward” auction – binding bids to buy spectrum (demand curve)
  - Determine amount of spectrum cleared (supply = demand)
  - Repack broadcasters and consummate winning offers

- **Double auction (Exchange)**
  - Conduct first three steps above simultaneously
  - Repack broadcasters and consummate winning offers

- **Approaches essentially equivalent**
  - Amount of spectrum cleared, winning sellers and buyers determined using full information about *both* supply and demand
  - But sequential approach is easier to implement
Incentive auction to clear spectrum

- Incumbents make voluntary binding offers to release spectrum
  - Share a channel in same market through multicasting with other broadcasters, while retaining must-carry rights for primary program stream
  - Discontinue OTA broadcasting
  - Move to upper VHF or lower VHF band

- Find the least costly way to clear various amounts of contiguous spectrum in each market based on the price offers from incumbents (create supply curves)
  - FCC can involuntarily repack TV channels within each band to clear contiguous blocks
“Forward” auction for cleared spectrum

- Determine alternative band plans (depending on amount of spectrum made available) for new flexible uses, e.g., mobile broadband
- Participants make binding bids to buy spectrum licenses (create demand curves)
Determine amount of spectrum cleared
A Market Where Target Achieved When Clearing Cost Less Than Auction Revenue
Consummate winning offers and repack broadcasters

- Collect payments from winners of forward auction and assign licenses
- Make payments to winners of incentive auction
- Reassign channels to broadcasters remaining on the air and compensate for moving cost
- Deposit remaining auction revenue in Treasury
Alternative – Double Auction (Exchange) to Simultaneously Clear and License

- FCC conducts an exchange in which broadcasters offer spectrum (by channel sharing, discontinuing OTA broadcasting or moving to VHF) and mobile operators bid on new unencumbered licenses *simultaneously*.

- Exchange simultaneously determines winning sellers, winning buyers and the amount of spectrum cleared.
Thank You

For further information

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