



**SBCCD/KVCR and the
FCC's 600 MHz
Incentive Auction: A
Basic Walk-Through**

June 11, 2015





Agenda



- Background: How Congress and FCC Set the Wheels in Motion
- Importance of UHF Spectrum to the FCC
- Options Available to SBCCD/KVCR
- Reverse Auction – Structure and Qualifying Entities
- Assessing the Value of 600 MHz Spectrum
- Forward Auction Participation
- Complexity – The Interplay Between “Reverse” and “Forward” Auction Components
- Post-Auction Transition for Broadcasters
- Next Steps: Timing and FCC Application Process



+ Background: Congressional
and FCC Actions

+ What is the 600 MHz Incentive Auction?

- A market-based approach, designed by the FCC, to transition 600 MHz channels currently utilized by UHF broadcast television stations into licensed spectrum for mobile wireless broadband providers.
- **Components:** The 600 MHz Incentive Auction (Auction 1000) consists of:
 - A reverse auction (Auction 1001);
 - A forward auction (Auction 1002); and
 - A repacking process.
- **Origins:** Concept begins with the *Middle Class Tax Relief and Job Creation Act of 2012* signed by President Obama on February 22, 2012.
- Codified in 47 U.S.C. §1452(a)(1). “*The Commission shall conduct a reverse auction to determine the amount of compensation that each broadcast television licensee would accept in return for voluntarily relinquishing some or all of its broadcast television usage rights in order to make spectrum available for assignment through a system of competitive bidding...*”
- FCC creates GN Docket No. 12-268 “Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions.”
- FCC Releases *Notice of Proposed Rulemaking*, FCC 12-118, on September 28, 2012.



Major FCC Events and Releases



- **FCC Adopts Incentive Auction *Report and Order* on May 15, 2014.**
 - Establishes Incentive Auction general rules and broad policies.
 - Adopts a new 600 MHz Band Plan in the reorganized UHF frequencies.

- **FCC Adopts Mobile Spectrum Holdings Report and Order on May 15, 2014.**
 - Establishes a market-based spectrum reserve of “up to 30 MHz” in each Partial Economic Area for those carriers that do not hold a significant amount of low-band (below 1 GHz) spectrum.

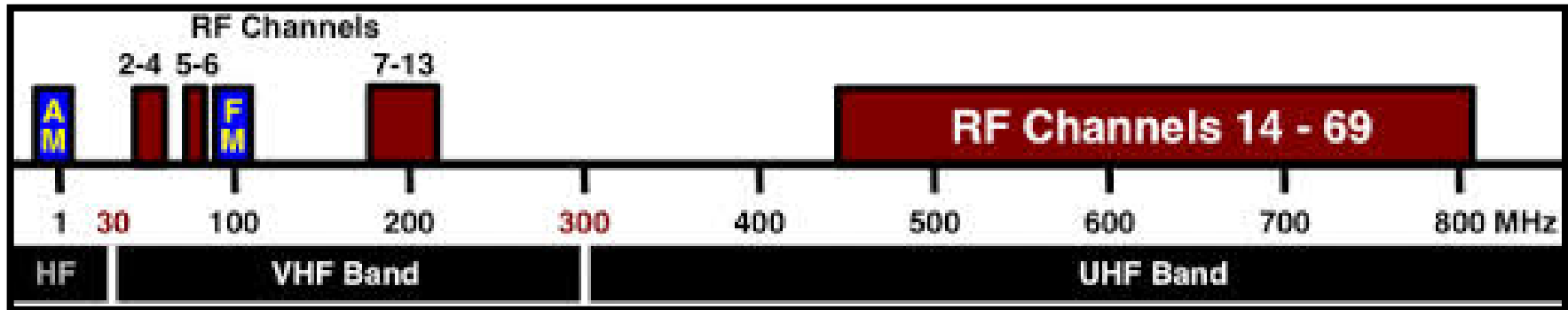
- **FCC releases Incentive Auction Comment *Public Notice* on December 17, 2014.**
 - Contains proposals on crucial design issues such as determination of the initial television spectrum clearing target, opening bid prices, benchmarks for the final stage rule, and the final television channel assignment processes.
 - Includes separate sections on Reverse Auction, Forward Auction and the Integration Process (interplay between Reverse/Forward Auctions).

- **FCC will adopt a final Public Notice in Summer 2015.**
 - It will contain the final Incentive Auction rules and details, application filing dates, and auction date.



+ Why Is UHF Spectrum So Important to the FCC?

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- **UHF Band in United States spans from 300 MHz to 800 MHz.**
 - VHF Channels, while adjacent in “Virtual” number, are at much lower RF frequencies.
 - All of the 700 MHz Band, formerly used by UHF TV Channels 52-69, is now exclusively available for Mobile Wireless Broadband Providers.
 - **The UHF Band that the FCC wants to “reclaim” is immediately adjacent to the spectrum used today by companies like AT&T, Verizon, T-Mobile and Sprint and it is considered highly prized and extremely valuable.**

+ What Does the 600 MHz Band Look Like Now Prior to the Incentive Auction?



- FCC is trying to reclaim as many TV Channels between UHF 21-51 as possible.
- FCC's ultimate goal is creating new 600 MHz Band of Licenses for Mobile Wireless Broadband Carriers.

+ What are the Ranges of VHF and UHF TV Stations? Why is the Re-Packing Process So Tricky?

- There is a national “daisy chain” effect with TV Broadcasters; Decisions in one DMA impact neighboring DMAs.
- Example – Buffalo, NY > Erie, PA > Cleveland, OH

Station WKYC-TV • Analog Channel 3, DTV Channel 2 • Cleveland, OH

Expected Operation on June 13: Special Temporary Authorization

Digital STA (solid): 8.00 kW ERP at 296 m HAAT, Network: NBC
vs. Analog (dashed): 93.3 kW ERP at 312 m HAAT, Network: NBC

Market: Cleveland-Akron, OH

Station WICU-TV • Analog Channel 12, DTV Channel 12 • Erie, PA

Expected Operation on June 13: Granted Construction Permit

Digital CP (solid): 5.40 kW ERP at 307 m HAAT, Network: NBC
vs. Analog (dashed): 316 kW ERP at 305 m HAAT, Network: NBC

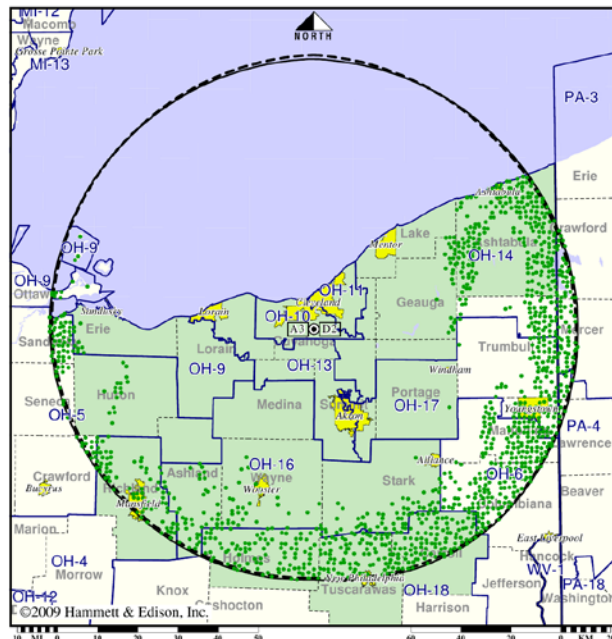
Market: Erie, PA

Station WIVB-TV • Analog Channel 4, DTV Channel 39 • Buffalo, NY

Expected Operation on June 13: Licensed

Digital License (solid): 790 kW ERP at 417 m HAAT, Network: CBS
vs. Analog (dashed): 80.0 kW ERP at 396 m HAAT, Network: CBS

Market: Buffalo, NY



● Coverage gained after DTV transition
No symbol = no change in coverage

Analog service	3,860,861 persons
Digital service	4,352,570
Analog loss	0
Digital gain	491,709
Digital gain	491,709
Net gain	491,709

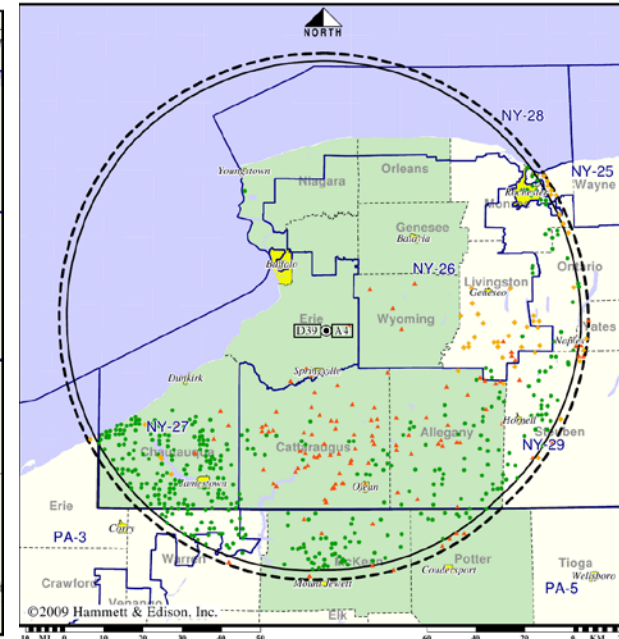
BDSTA-2008129\A\W
WKYC-TV Digital STA



● Coverage gained after DTV transition
No symbol = no change in coverage
◆ Coverage lost but still served by same network
▲ Coverage lost and no other service by same network

Analog service	632,528 persons
Digital service	620,744
Analog loss	26,409
Digital gain	14,625
Net gain	-11,784

BFCDDT-20080317A\EF
WICU-TV Digital CP



● Coverage gained after DTV transition
No symbol = no change in coverage
◆ Coverage lost but still served by same network
▲ Coverage lost and no other service by same network

Analog service	2,087,019 persons
Digital service	2,185,820
Analog loss	44,189
Digital gain	142,990
Net gain	98,801

BLCDT-20020619\ABE
WIVB-TV Digital License

Map set 1

Map set 1

Map set 1



Options Available to SBCCD/KVCR?



What Options are Available to UHF Broadcasters?

- TV Broadcasters between UHF Channels 14 and 51 are facing a major decision:
 - **Option 1.** Do Nothing. If this path is chosen, UHF Broadcasters forced to move “somewhere” between Channels 14 and 51 but without compensation from FCC. Only eligible for very modest engineering costs from a shared general fund.
 - **Option 2.** Move Down to Upper VHF. Station receives auction compensation from FCC, but at an estimated 50-67% reduction from final price of relinquished licenses.
 - **Option 3.** Move Down to Lower VHF. Station receives auction compensation from FCC, but at an estimated 20-33% reduction from final price of relinquished licenses.
 - **Option 4.** Complete License Relinquishment. Station receives greatest auction compensation from the FCC. However, Station loses all broadcast and “must carry” rights.
 - **Option 5.** Channel Sharing. Generally, it enables one Station to relinquish its existing license to FCC (like in **Option 4**), but move its operations to a shared channel with another license holder in either the UHF or VHF Bands who is not participating in the Incentive Auction (like in **Option 1**). Issues both Stations must consider:
 - Limited availability of “channel sharing partners” in your Market/DMA.
 - Channel Sharing Agreements are private contracts, not FCC negotiated.
 - Reduced bandwidth capacity; Impacts number of HD channels and sub-channels.
 - Timing Limitations; Truncated Negotiation Window; Anti-Collusion Period between Application Deadline and Auction Beginning.



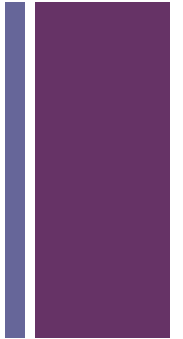
+ Reverse Auction: Qualifying
Entities and Structure

+ Reverse Auction: Qualifying Entities

- **Which type of TV Broadcasters can participate?**
 - Full Power VHF and UHF television broadcasters.
 - Class A VHF and UHF television broadcasters.
- **Which type of TV Broadcasters are not eligible to relinquish their airwaves in exchange for re-location/repacking costs, or, outright buy-out?**
 - Low Power television broadcasters.
 - TV Translator Facilities.
- FCC anticipates that at least 200 UHF and VHF television stations will need to Relinquish, Move-Down, and/or Channel Share in order for sufficient spectrum to become available for the Forward Auction.



Reverse Auction: Structure



- **Reverse Auction Procedure:**
 - FCC announces “Minimum Opening Bids” 60 days prior to Auction beginning.
 - TV Broadcasters have the election to **Participate** or **Not Participate**.
 - Price Range: New York City (\$800M), Juneau, AK (\$2M).
 - Participation does NOT mean you automatically get the Opening Price.
- **Non-Participation means you will (very likely) be re-packed into a lower UHF Channel and the ONLY monetary compensation is some portion of \$1.75B General Relocation Fund authorized by Congress.**
- **First Round: All Participants MUST accept “Minimum Opening Bid” for one of the three following options.**
 - Full Relinquishment, including Channel Sharing (100%).
 - UHF to Low VHF (Channels 2 - 6) (67%-80% of Minimum Opening Bid).
 - UHF to High VHF (Channels 7- 14) (33%-50% of Minimum Opening Bid).
- **At conclusion of each round, FCC “processes” bids and announces new prices. Stations then have three options:**
 - Accept New Price.
 - Reject Price (and get re-packed).
 - Accept price at lesser option (e.g., Moving to High VHF or Low VHF).
- When FCC “feasibility check” at the end of each round shows that enough channels in the market have been cleared based on accepted bids, it will “Freeze” those bids, which will be deemed provisionally accepted.
- Bidding ends when every bidder has either dropped out of the bidding or had its bid provisionally accepted.



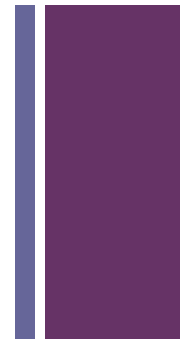
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Assessing the Value of 600 MHz Spectrum

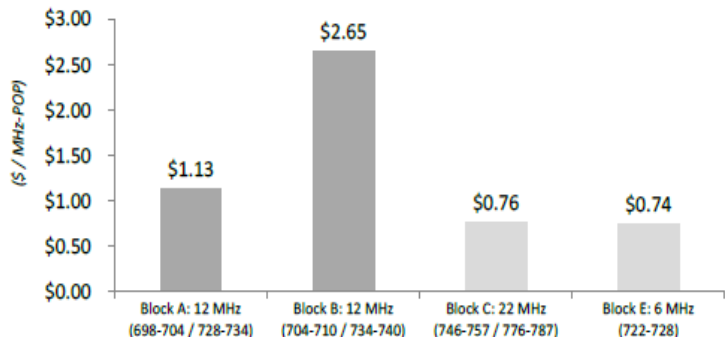
Daryl Zakov



Recent FCC Auction Valuations: Lower 700 MHz Band and AWS-3 Band



Last Auction of Comparable Spectrum Generated Record-Breaking Revenues^(1,2)



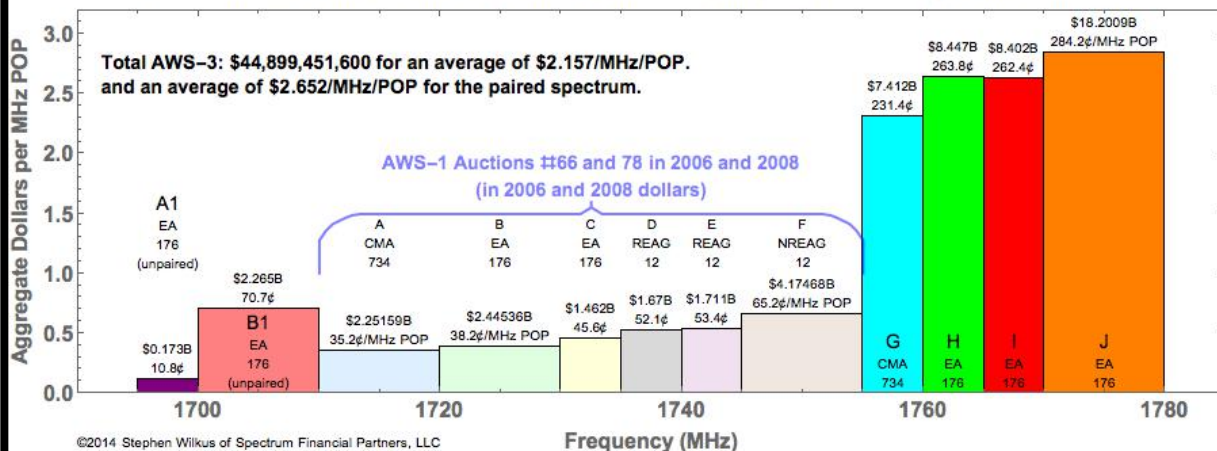
The 2008 700 MHz auction (Auction 73) raised **\$19 billion**

- Average unit price for all blocks: **\$1.28 per MHz-Pop**
- Average unit price for paired blocks (*most comparable to 600 MHz band plan*): **\$1.35 per MHz-Pop**

(1) Cisco Visual Networking Index: Forecast and Methodology, 2013-2018 (June 10, 2014); Compound annual growth rate - year-over-year growth rate of mobile data traffic from 2013 to 2018
 (2) Source for all Auction 73 data: FCC
 Source: FCC

- Auction 73 in 2008, which was “low band” spectrum in the 700 MHz Band, raised **\$19 Billion**.
- Auction 97, which concluded in January 2015 and consists of “high band” spectrum, raised over **\$44 Billion**.
- The 600 MHz Band (UHF Channels) will be the last and best chance for Mobile Wireless Carriers to bid on prime, unencumbered licenses for years to come.

AWS-3 Prices Bid in Auction 97 in round 341, with reference prices of AWS-1 paid in Auction 66&78



Predictions of revenues exceeding \$84 Billion!



Forward Auction Participation

+ Anticipated Carrier Participation

- Press reports indicate that all nationwide carriers (and DISH) are expected to participate in the auction.
 - AT&T committed to spend at least \$9 billion (\$1.41 per MHz/POP) if sufficient spectrum is made available for a nationwide 20 MHz footprint.
- Industry press reports indicate that a number of smaller carriers (C Spire, U.S. Cellular, nTelos, Bluegrass Cellular, Cellcom and Union Wireless) also intend to participate.
- AWS-3 Auction saw participation by 70 qualified bidders included AT&T, Verizon, T-Mobile, DISH (itself and its joint ventures) and 37 designated entities.
- Gross bids totaled nearly \$45 billion.

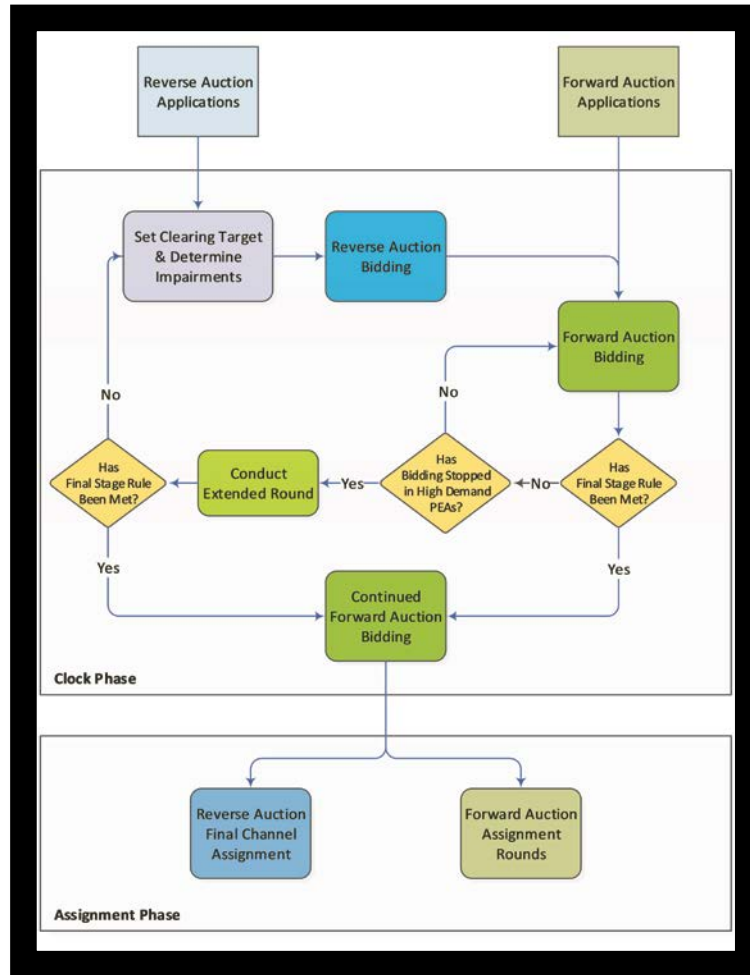


+ Interplay Between Reverse
and Forward Auctions



Auction Mechanics Flow Chart

The FCC Broadcast Incentive Auction is highly complex and requires a deep understanding of the rules, procedures and processes.

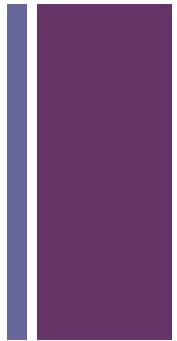




Post-Auction Transition



Reverse Auction: Post-Auction Requirements of TV Broadcasters



- After the auction, the FCC will release a *Channel Reassignment Public Notice* (“PN”) announcing auction results, repacking, and specifying new channel assignments and technical parameters of reassigned channels.
- TV Broadcasters who relinquish spectrum outright and accept financial compensation have **three (3) months** to go completely Off-Air.
 - This includes those stations opting for “channel-sharing” with other broadcasters.
- TV Broadcaster relocating to a new channel (via Repacking) will have **up to 39 months** to cease operating on their pre-auction UHF channel.



Transition Period: Other 600 MHz Operations



- Certain operations (e.g., secondary and unlicensed users such as LPTV and TV translator stations, fixed broadcast auxiliary service (BAS) operations, and unlicensed TV white space devices) may continue operating until a 600 MHz Band wireless licensee “commences operations” in the operator’s licensed spectrum and provides proper notice.
- BAS licensees must vacate *by the end of the Transition Period or earlier* upon 30 days’ advance notice that they are likely to cause harmful interference to a 600 MHz licensee in an area in which it intends to commence operations.
- LPTV and TV translator stations may operate in the 600 MHz Band *indefinitely* on a secondary basis except upon 120 days’ advance written notice that they are likely to cause harmful interference to a 600 MHz licensee in an area in which it intends to commence operations.
- Unlicensed TV white space devices may operate *indefinitely* until notice is provided to a TV band database administrator by a 600 MHz licensee intending to commence operations. This process is being finalized in a separate TV white spaces proceeding.



+ Next Steps:
Auction Timing and FCC
Application Process

Erin Fitzgerald & Linda Braboy



Auction Timing



- Commission expected to adopt Auction Procedures PN this summer (possibly at June or July meetings).
- Incentive Auction Task Force anticipates that applications will be accepted from prospective participants in the Fall of 2015.
- Auction is currently planned for “Early 2016.”
- Possible causes for delay:
 - NAB lawsuit regarding FCC station repacking plan.
 - Briefs were due in January, oral argument was in mid-March.
 - FCC staff expects a decision in mid-2015.



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