



Federal  
Communications  
Commission

## **Broadcast Incentive Auction 101**

**June 25, 26 & 27, 2014**



# Basics of the Broadcast Television Incentive Auction

- Background
- How Will the Auction Work?
- Why Should a Broadcaster Participate?
- What About Broadcasters that Choose Not to Participate?
- What Happens After the Auction Ends?
- What are the FCC's Next Steps?

**Note:** These slides present an unofficial summary of the Incentive Auction Report and Order and rules. Should this summary vary from the Report and Order or rules as released, the official document governs.



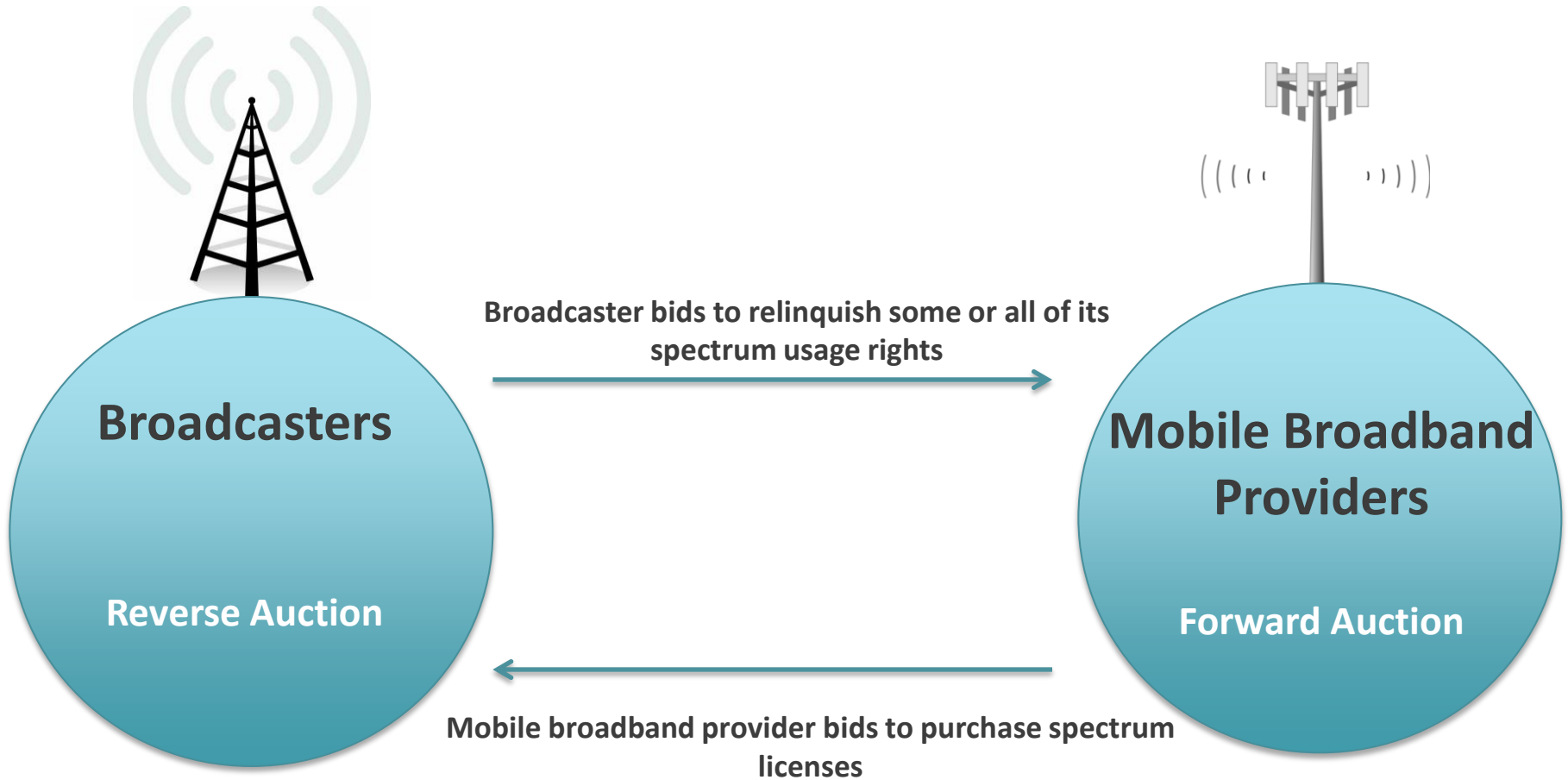
## Background

- The Incentive Auction is an innovative new tool authorized by Congress to help the Commission meet the Nation's accelerating spectrum needs.
- Incentive auctions are a voluntary, market-based means of repurposing spectrum by encouraging full power and Class A television licensees to voluntarily relinquish some or all of their spectrum usage rights in exchange for a share of the proceeds from an auction of new licenses to use the repurposed spectrum.

- The auction presents a significant financial opportunity for many broadcasters, who may be able to receive a substantial premium for the sale of their licenses.
- Congress also authorized the Commission to reorganize (“repack”) the broadcasters remaining on the air, in order to make contiguous spectrum available for the auction of new licenses.
- In June 2014, the FCC released rules to implement the Incentive Auction. Based on these rules, the FCC will develop and seek additional public input on detailed, final auction procedures.



# Key Components of Broadcast Incentive Auction





## Broadcaster Reverse Auction Bid Options

- **Go Off Air:** Bid to relinquish license, receive payment, and go off the air.
- **Channel Share:** Bid to relinquish current channel, receive payment, and share a channel with another broadcaster.
  - Bid can involve a change of bands (*e.g.*, a VHF licensee sharing a UHF channel).
  - Commercial and non commercial stations may share with each other, as may Class A and full power stations.
  - Two Los Angeles stations have successfully shared a channel in a pilot channel sharing program.
- **U to V:** Bid to relinquish a UHF channel, receive payment, and move to either a high VHF (7 to 13) or low VHF (2 to 6) channel.
- **High V to Low V:** Bid to relinquish a high VHF channel, receive payment, and move to a low VHF channel.

# Participate and Stay on the Air: Channel-Sharing

## Stations share single transmitter and antenna

- Pairing through private negotiations
- Capital infusion from auction payment contribution of spectrum
- Post-auction OpEx and CapEx savings

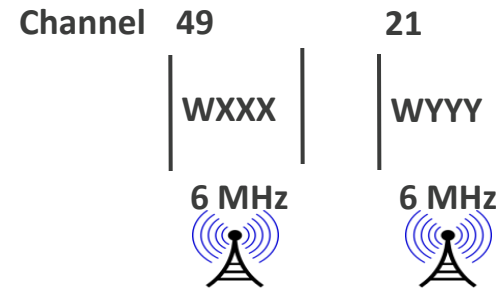
## Each station holds a license to the same shared 6-megahertz channel

- Two licensees on one channel's 19.4 Mbps bit stream
- Can allocate bandwidth dynamically as needed

## Each station remains a primary FCC licensee

- Call letters, channel guide number (PSIP), other indicia of station identity remain
- Includes all current licensee rights (*e.g.*, must carry)

## Current: 12 MHz for Broadcasting



## Potential: 6 MHz for Broadcasting 6 MHz for Auction

- Channel 21 shared by WXXX & WYYY
- Channel 49 sold in forward action





# Channel Sharing

- A channel sharing bidder (“sharee”) will be able to change its community of license if it cannot satisfy the coverage requirement operating from the host’s (“sharer”) transmission site, but must select a new community of license that meets the same or a higher allotment priorities as its current one.
- Channel sharing agreements (“CSAs”) must be executed prior to the auction.
- CSAs must contain provisions that define each licensee’s:
  - Access to facilities;
  - Allocation of bandwidth within the shared channel;
  - Operation, maintenance, repair, and modification of facilities, including a list of all relevant equipment, a description of each party’s financial obligations, and any relevant notice provisions; and
  - Obligations to its sharing partners upon sale of its license, including whether a buyer must assume the existing CSA.
- Sharee and sharer retain separate licensees, and each remain responsible for compliance with FCC rules.



## Channel Sharing

- In the extremely unlikely event that a channel sharing station's license is terminated by the FCC, the remaining channel sharing licensee(s) will still retain their rights to the shared channel.
- The rights to the terminated shared license will revert to the Commission for reassignment, with the final award of the shared license conditioned on the new licensee agreeing to the terms of the existing CSA (subject to future renegotiation by the parties).
- A shared channel license may be assigned or transferred subject to the existing CSA's terms regarding such sales, and to the FCC's application process for such sales.



## Participate and Stay on the Air: “Band Changing” Bids

- ***UHF to High VHF or Low VHF:*** Bid to relinquish a UHF channel, and receive payment. Bidder may specify choice of a high VHF (7 to 13) or low VHF (2 to 6) channel. Winning bidders will have up to 39 months after the auction ends to move to the new channel.
- ***High VHF to Low VHF:*** Bid to relinquish a high VHF channel, receive payment, and move to a low VHF channel. Winning bidders will have up to 39 months after the auction ends to move to the new channel.
- Licensee retains use of full 6 MHz channel.
- FCC will favorably consider post-auction waiver requests for modifications in operating parameters to mitigate over-the-air reception issues.

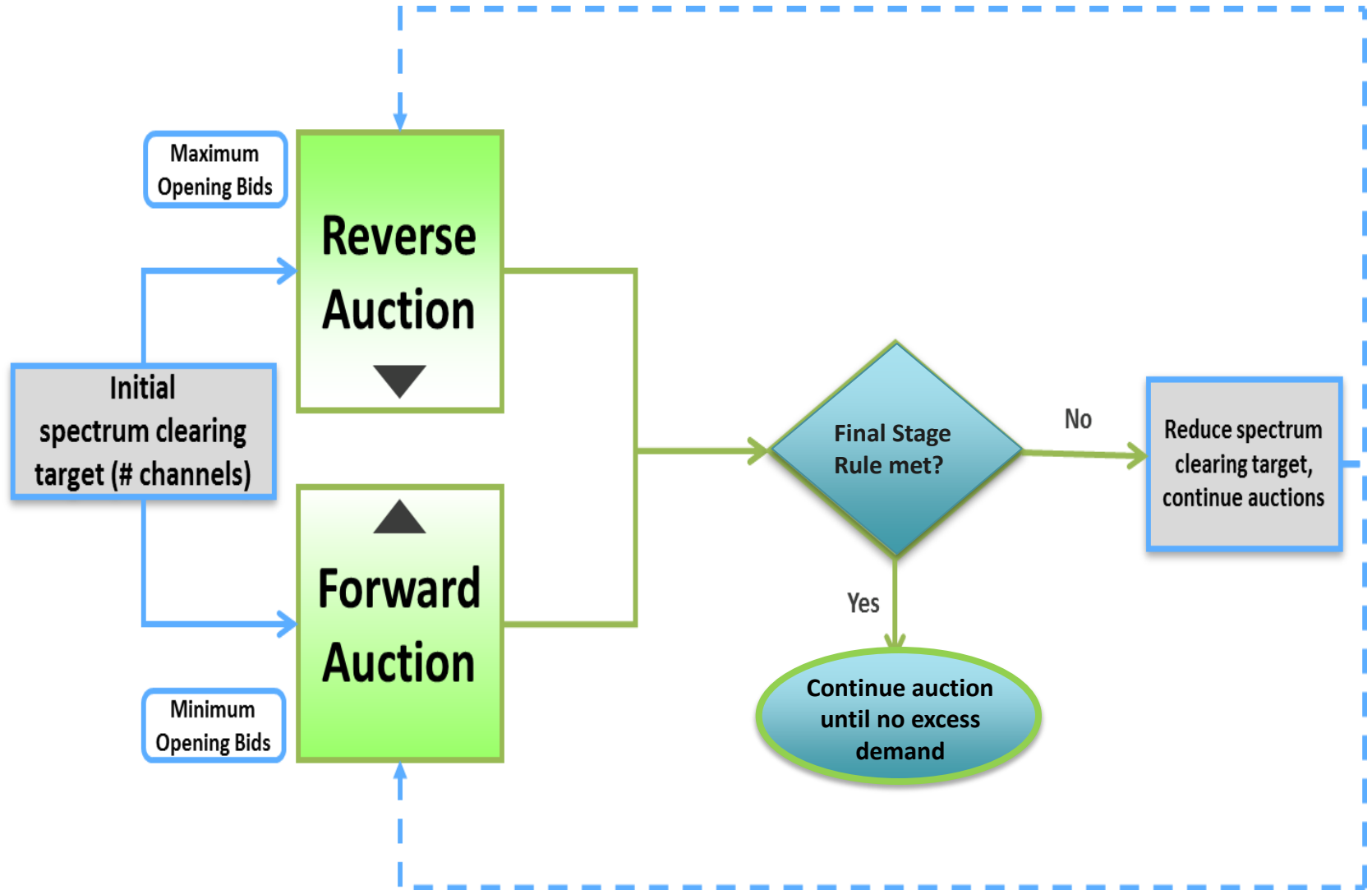


# Incentive Auction Process

- Reverse and forward auctions will be integrated in a series of stages.
- Each stage will consist of a reverse and forward auction bidding process for clearing a given amount of spectrum.
- The reverse auction will use a descending clock format to be transparent and simplify broadcaster participation.
- The forward auction will incorporate innovative design features, including an ascending clock format and bidding for generic blocks.
- Market forces will determine the amount of spectrum cleared and revenues raised.



# Incentive Auction Process

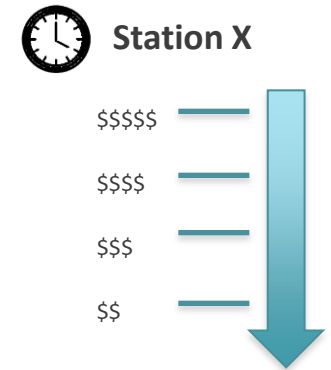




# How the Auction Works—Auction Design Overview

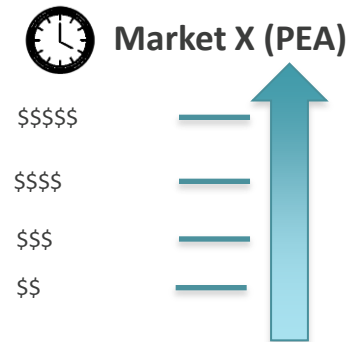
## Reverse Auction

- Will use a descending clock to simplify broadcaster participation



## Forward Auction

- Will use an ascending clock and generic blocks for speed



## Final Stage Rule

- Will determine if the auction closes at the current stage or if another stage is required

Average price for forward auction licenses exceeds \$X per MHz-pop (set by the Commission before auction)

OR

Aggregate bids for forward auction licenses exceeds the same \$X per MHz-pop times the number of wireless MHz-pops for the specified clearing benchmark, T MHz (set by the Commission before auction)

AND

The aggregate bids for forward auction licenses are sufficient to meet statutory minimum plus any residual amount for FirstNet



## How The Auction Works—Reverse Auction

- Before auction, FCC provides opening bid prices to broadcasters for bid options.
  - Each station price reflects objective factors, such as location and interference potential
- Stations indicate whether or not they are willing to participate at that price.
- Participating broadcasters voluntarily bid to relinquish spectrum rights.
- Prices offered to each station are adjusted downward.
- Bidder may drop out at any point and be repacked in same band.
- Price continues to drop until no excess supply of bidding stations (*i.e.*, bidding ends).



## How The Auction Works—Forward Auction

- Ascending clock format - Prices start low and are adjusted upward.
- Bidders bid on desired number of “generic” blocks in a market.
- After final stage, bidders can participate in separate assignment round process to select specific blocks.
- Price continues to rise until no excess demand for blocks.



## When Will the Auction End? — “The Final Stage Rule”

- Final stage rule is a two part rule that allows market forces to determine amount of spectrum cleared and revenues raised, while ensuring funding requirements are met.

Average price for forward auction licenses exceeds \$X per MHz-pop (set by the Commission before auction)

OR

Aggregate bids for forward auction licenses exceeds the same \$X per MHz-pop times the number of wireless MHz-pops for the specified clearing benchmark, T MHz (set by the Commission before auction)

AND

The aggregate bids for forward auction licenses are sufficient to meet statutory minimum plus any residual amount for FirstNet





## Why Should a Broadcaster Consider Participating?

- **Easy and Risk Free** – Auction designed for broadcaster ease and accessibility. Cost of participation and barriers to entry are negligible and bidders need only know their bottom line price and may exit at any time.
- **Confidential** – The decision to participate in the auction is totally confidential, and the identity of participating bidders remains confidential throughout the auction. The identity of broadcasters who initially choose to participate and are not auction winners will be kept confidential for two years after the auction.
- **High Reward** – Potential financial benefits for broadcasters are very high.
- **Once-in-a-Lifetime** – FCC has no plans to hold another incentive auction for broadcast spectrum.
- **Multiple Bid Options** – Range of bid options, tailored for different broadcaster needs, enables substantial payment while allowing for continued broadcast operations.



## Repacking: What about Broadcasters that Stay on the Air?

- Nonparticipating broadcast stations, or those that do not have bids accepted, will continue to operate following the auction.
- The FCC will repack full power and Class A TV stations that remain on the air so that they occupy a smaller portion of the UHF band and enable the reallocation of contiguous nationwide spectrum for the forward auction.
- Repacked stations and winning “band change” bidders will have up to 39 months from the effective date of the repacking to vacate their old channel.
- Repacked broadcasters may seek reimbursement of relocation costs from TV Broadcaster Relocation Fund.

# Facilities to be Protected

- As required by statute, full power and Class A television stations that were licensed as of February 22, 2012, will be protected.
- Certain stations will be protected beyond what is required by statute at the discretion of the FCC if constructed by a Pre-Auction Licensing Deadline announced with at least 90 days notice by the Media Bureau:
  - Some full power stations that were authorized, but not constructed or licensed, as of February 22, 2012.
  - Full power facilities authorized in outstanding construction permits issued to effectuate a channel substitution for a licensed station.
  - Modified facilities of full power and Class A stations that were authorized by construction permits granted on or before April 5, 2013, the date the Media Bureau issued a freeze on the processing of certain applications.
  - Class A facilities authorized by construction permits to implement Class A stations' mandated transition to digital operations.



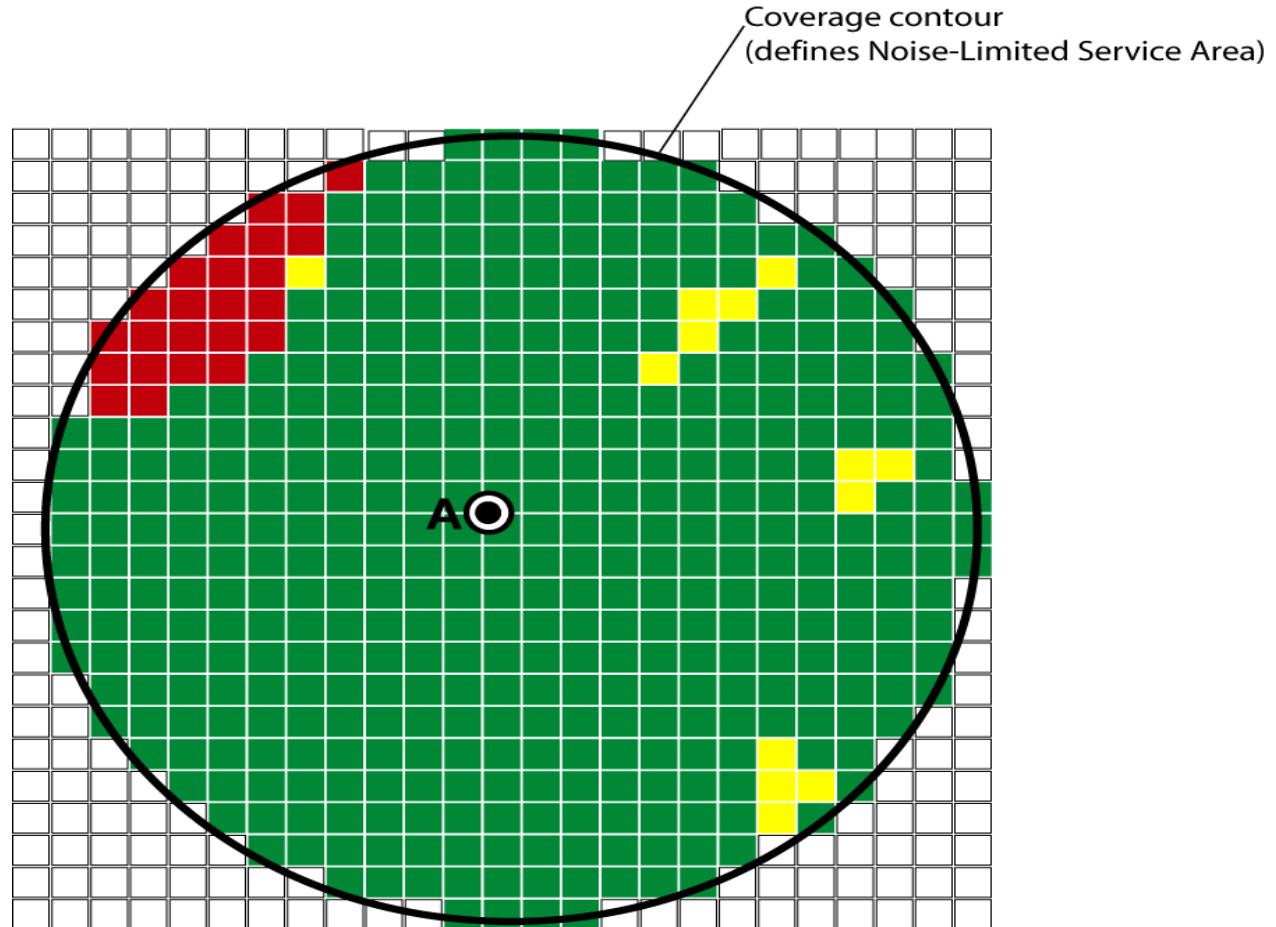
## Implementing the Repacking Process




- Statute requires that the Commission “make all reasonable efforts to preserve, as of [February 22, 2012], the coverage area and population served of each broadcast television licensee, as determined using the methodology described in OET Bulletin 69.”
- FCC developed *TVStudy* software to perform interference analyses to calculate television stations’ coverage areas and population served used the methodology described in OET-69.
- *TVStudy* outputs will be used to generate “constraint files” for evaluation of “feasible” channel assignments.



# What is OET-69?

Interfering Station **B** 

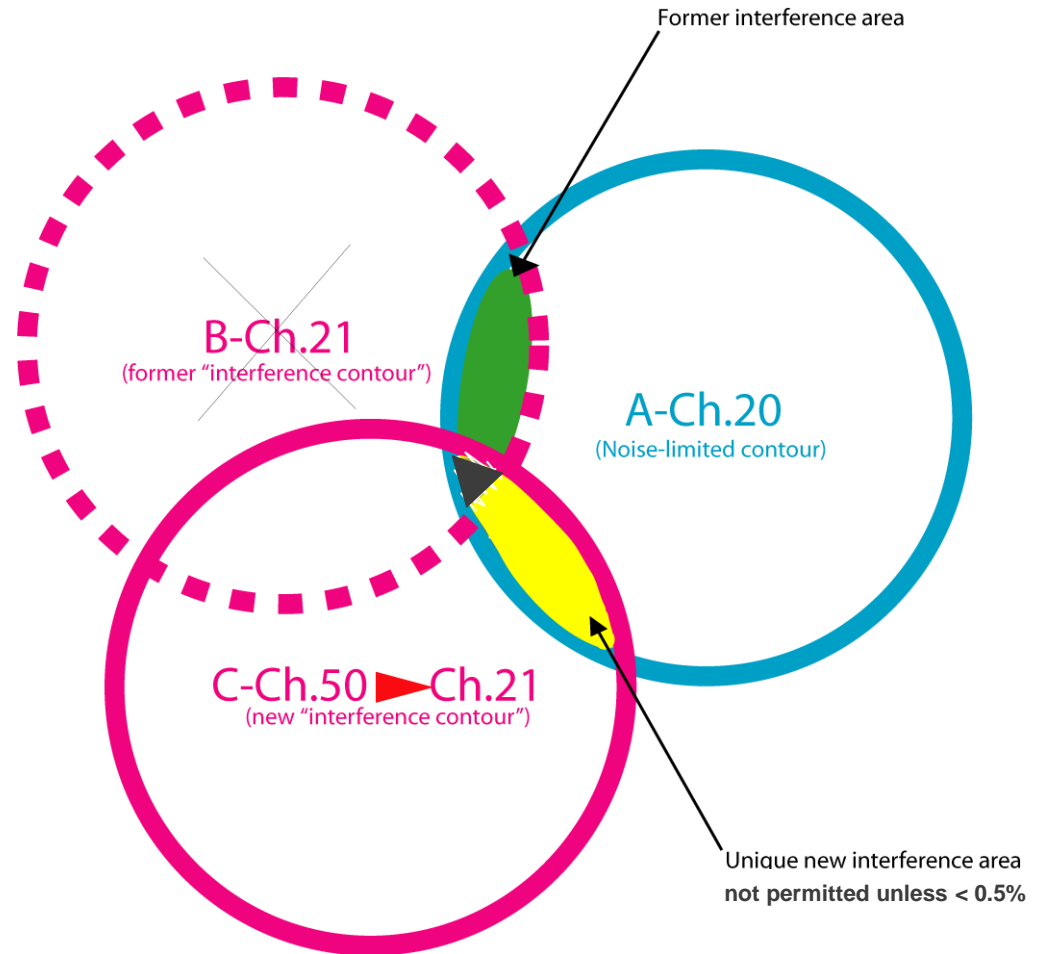


-  Cell with service from Station A
-  Cell with no service due to interference from Station B
-  Cell with no service due to terrain obstruction (weak signal)



# Preserving Population Served

- Repack can only “replace” population interference existing as of 2/22/12
- Potential to gain new viewers (green)
- Channel assignment not permitted if population served loss exceeds 0.5% (yellow) (“pairwise interference”)
- Predicted areas of no change (black)
- New coverage area will replicate station’s contour on its new channel



# Post-Auction Transition: Full Power & Class A Stations

- Winning “off air” and “channel share” bidders must vacate their channels within 3 months of receiving payment.
- Repacked stations and winning “band changing” bidders must:
  - File an application for a construction permit to make the facilities changes necessary to operate on their new channel within 3 months after the auction ends;
  - Complete construction of their new channel by a deadline of up to 36 months, set by the Media Bureau based on the unique circumstances of the station’s move;
  - Cease operation on their pre-auction channel by the conclusion of the transition period 39 months after the auction ends.
- Station combinations that would otherwise be out of compliance with the media ownership rules as a result of the reverse auction will be grandfathered.



# Relocation Cost Reimbursement

- The Spectrum Act:
  - Congress authorized a \$1.75 billion TV Broadcaster Relocation Fund to pay reasonable relocation costs of repacked TV stations and affected MVPDs.
  - Requires the Commission to make all reimbursements within 3 years of the end of the auction.
- An initial allocation of reimbursement funds will be available to stations and MVPDs on an estimated cost basis.
  - Funds will cover up to 80% of the eligible costs for commercial operators and MVPDs, and 90% for non commercial stations;
  - Funds will be placed in designated individual accounts with the U.S. Treasury and will be available for draw down as expenses are incurred.
- At a final allocations stage prior to the end of the 3 year reimbursement period, broadcasters and MVPDs must provide the Commission information regarding their actual costs and may be issued a final allocation to cover the remainder of their eligible costs, if necessary.
- The Media Bureau is developing a non-exhaustive list of eligible expenses.
- Our goal is to make the process as straightforward, prompt and efficient as possible while balancing the need to avoid waste, fraud and abuse.



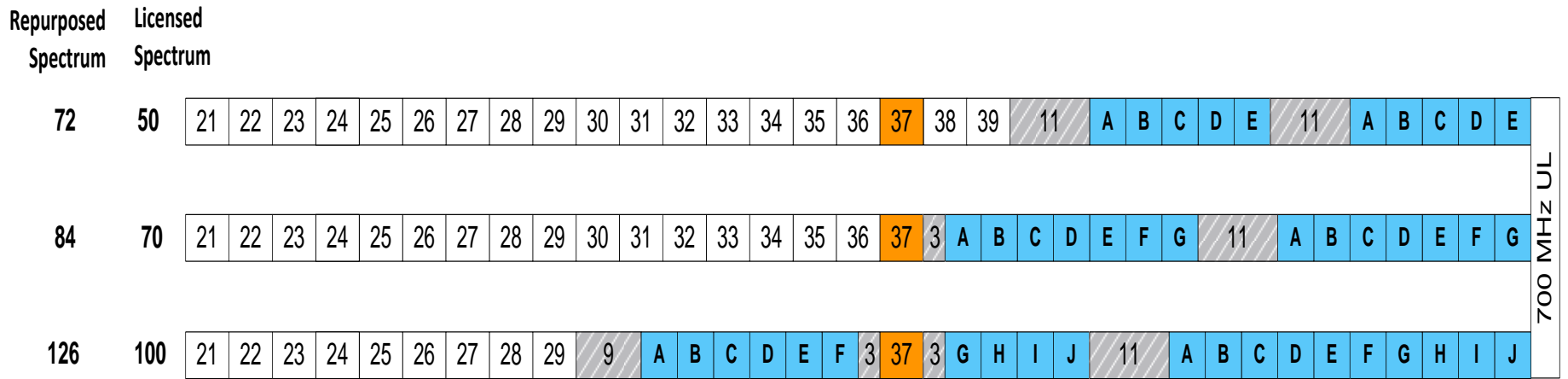


## 600 MHz Band Plan

- Because broadcaster participation is voluntary, we will not know how much spectrum will be repurposed for wireless before the auction.
- Therefore, unlike other auctions, the Incentive Auction rules must provide for a flexible band plan framework rather than a fixed plan and the final band plan will depend on the final outcome of auction.
- Band plan does not relocate WMTS or RAS from channel 37.
- Unlicensed devices and wireless microphones permitted in guard bands.
- Reallocation of TV channels for broadband may result in the displacement of LPTV, TV Translators, and wireless microphones in the existing television band.

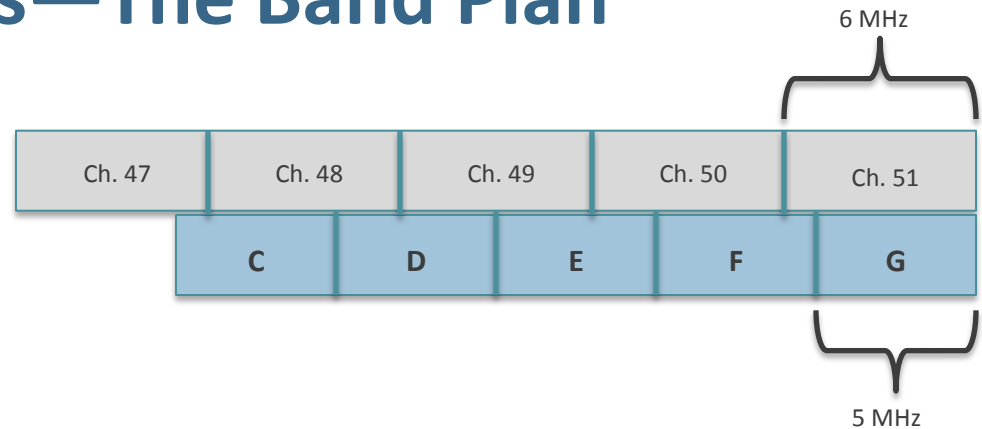


# 600 MHz Band Plan

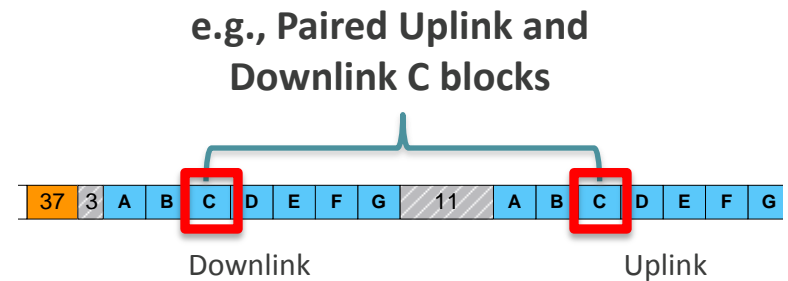


# FC How Broadcast Channels will be Converted to Wireless Licenses—The Band Plan

- 600 MHz Band Plan converts 6 MHz television channels into 5 MHz “building blocks.”



- FDD Band plan consisting of specific paired uplink and downlink bands comprised of those building blocks.





## LPTVs and TV Translators

- Spectrum Act limits auction participation to full power and Class A television licensees.
- After these stations have applied for a construction permit to move to new channels, the Media Bureau will open a special filing window to allow displaced operating LPTV and TV translator stations to select an available channel.
  - DRT displacement applications will be given processing priority over other displacement applications where mutually-exclusive.
- LPTV and TV translator stations may continue operating in the spectrum repurposed for use by new 600 MHz Band licensees unless and until they are notified of displacement, except that stations in the Guard Bands must cease operation at the end of the 39-month transition period.
- FCC is initiating a separate LPTV and TV Translator proceeding to consider how to help alleviate the consequences of displacement.



# Secondary Facilities

- Wireless microphones
  - Broadcasters and cable programming networks may operate licensed wireless mics in a portion of the duplex gap.
  - Users generally may operate wireless mics in the guard bands on an unlicensed basis.
  - Rules for guard band operations will be developed in the forthcoming Part 15/Unlicensed Proceeding.
  - Wireless mics may continue to operate in the spectrum repurposed for use by the new 600 MHz band licensees until the end of the 39 month post-auction transition period.
  - The FCC will initiate a proceeding to find additional spectrum for wireless mic users in other spectrum bands.
- Broadcast Auxiliary Services may operate in the repurposed 600 MHz Band spectrum until the end of the 39 month transition period or notification by a new 600 MHz licensee that it intends to commence operations that likely would receive interference from the BAS operations, whichever occurs first.



## Next Steps: Items Still to Come

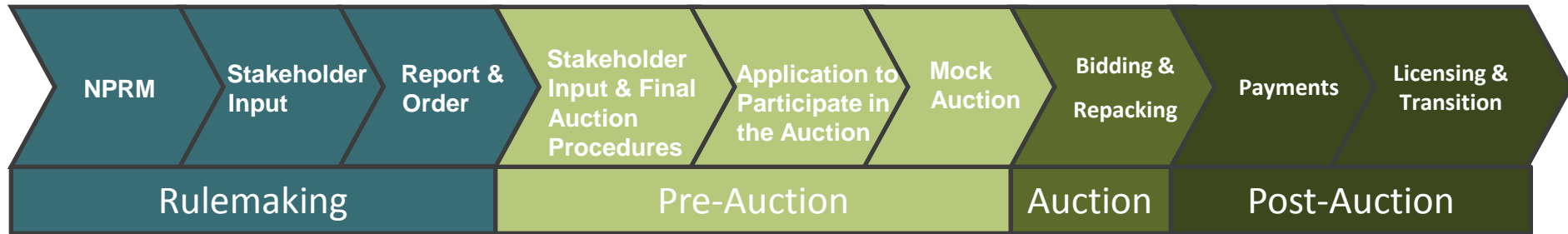
In the Coming Months:

- Inter-service Interference (ISIX) Order and Further Notice of Proposed Rulemaking
- Aggregate Interference R&O
- Designated Entity Rules Proceeding
- Auction Comment PN
- Auction Procedures PN
- Part 15/Unlicensed Proceeding
- Wireless Microphones Spectrum Proceeding
- LPTV and TV Translators Proceeding



# Broadcast Incentive Auction: Process

## Incentive Auction Process Timeline





## Further Resources

- Report & Order: <http://www.fcc.gov/document/fcc-adopts-rules-first-ever-incentive-auction-0>
- LEARN page: [fcc.gov/LEARN](http://fcc.gov/LEARN)
- Frequently Asked Questions:  
<http://wireless.fcc.gov/incentiveauctions/learn-program/faq.html>