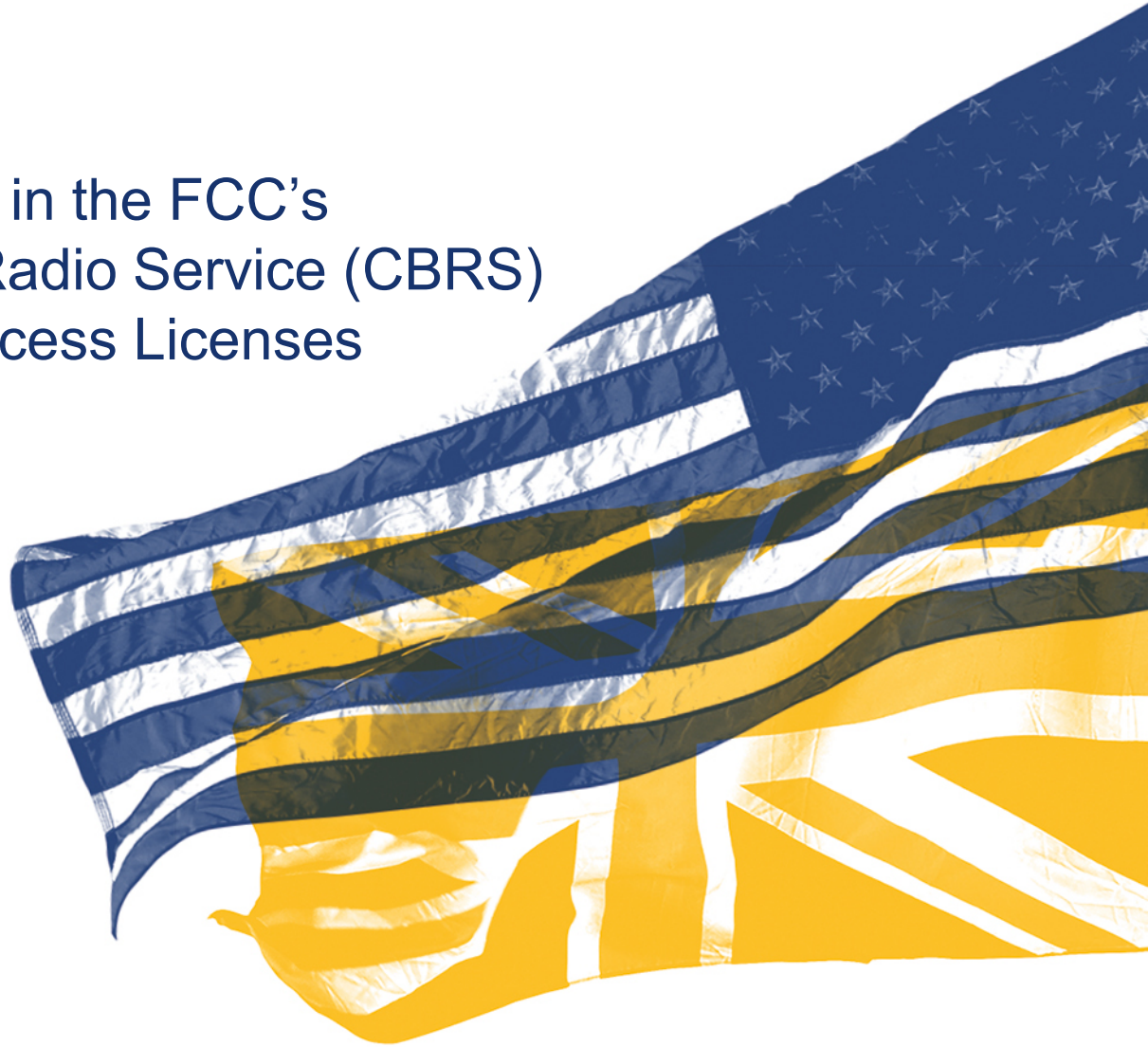


# Play to Win:

Seizing Opportunities in the FCC's  
Citizens Broadband Radio Service (CBRS)  
Auction for Priority Access Licenses

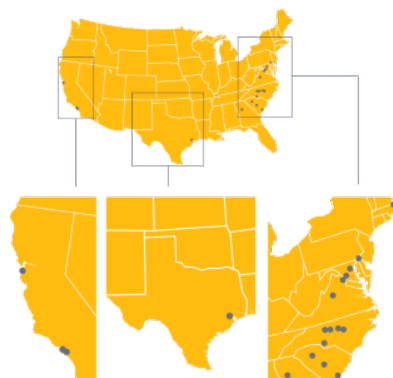
March 19, 2020



# Womble Bond Dickinson at a glance

 **27** Locations  
across the  
US and UK

 More than  
**400** Partners  
**1,000** Lawyers



## US

Boston  
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Winston-Salem  
Charlotte  
Greenville  
Columbia  
Charleston  
Atlanta  
Houston  
Silicon Valley  
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## UK

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Edinburgh  
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Leeds  
London  
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Bristol  
Plymouth

Consolidating  
our national  
reputations and  
regional heritage  
under one powerful  
transatlantic brand

## Our sectors



Representing  
more than

**250**

Publicly Traded  
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in the US and UK



**+150**  
Chambers  
rankings



UK Top  
**20** Law  
firm



US Top  
**80** Law  
firm



Global  
Top 100  
Law firm by  
revenue



# Presenters

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## Bob Silverman

Senior Counsel

Womble Bond Dickinson

Bob advises telecommunications carriers and technology companies seeking to navigate through complex regulatory, commercial and compliance structures.



## Amit Patel

CTO and Sales Director

Nokia – US Major Accounts

Amit supports regional carriers, rural operators and WISPs with LTE deployments, fixed wireless solutions and private LTE applications.



## Marjorie Spivak

Partner

Womble Bond Dickinson

Marjorie represents telecommunications and broadband carriers across the United States advising them on all aspects of regulatory compliance, particularly on tower and antenna site matters.



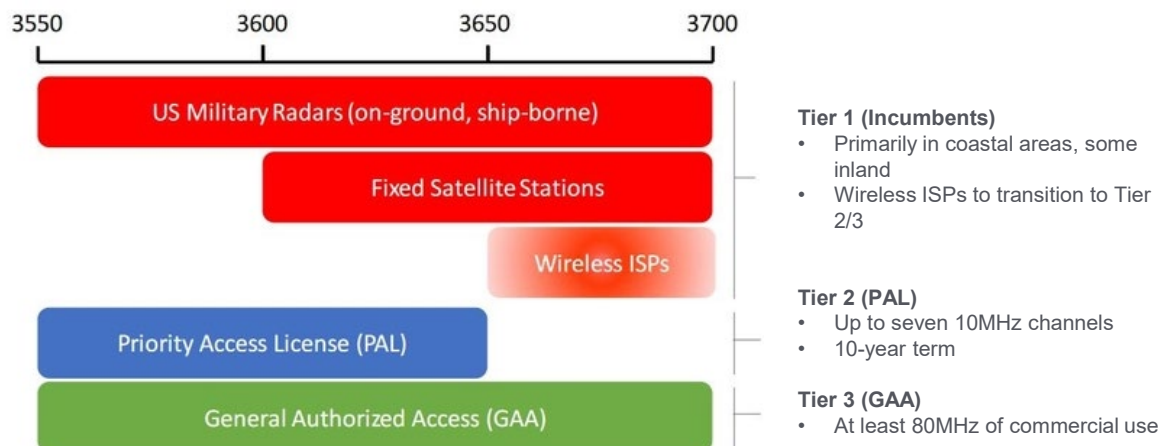
# Webinar Intro and Overview

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- Broadband access *by all* more critical than ever
- CBRs Basics
  - Regulatory Requirements
  - Secondary Markets
- CBRs Use Cases and Equipment
- Preparing for Auction
  - Key Auction Dates
  - Short-Form Application
  - PAL County Selection
  - Bidding Credits
  - Prohibited Communications
  - Auction Procedures Overview
- Next Steps

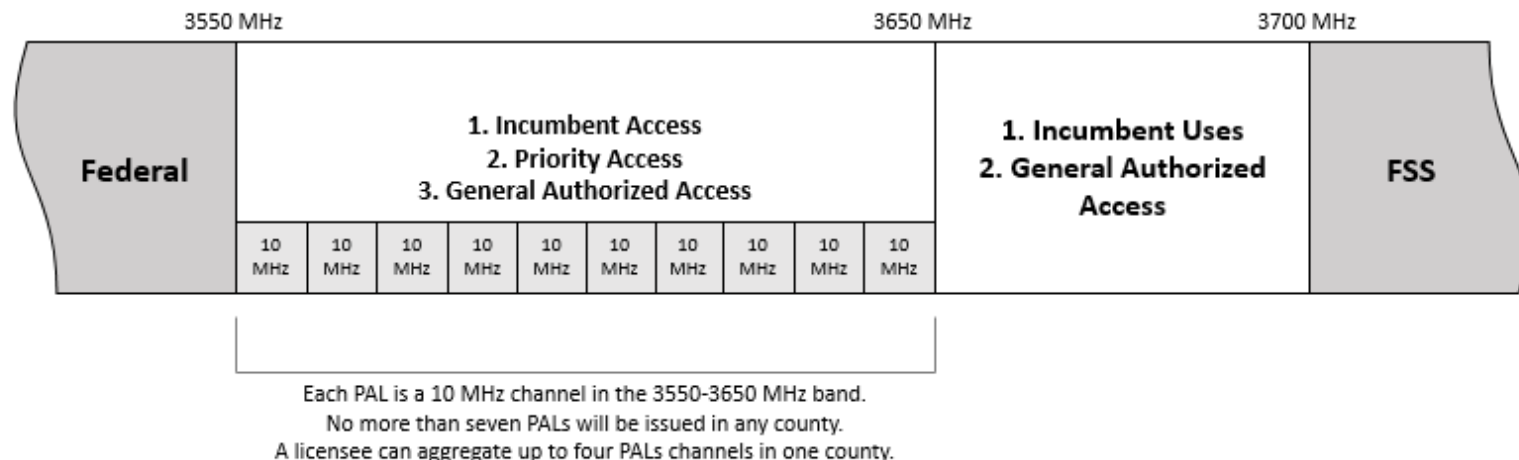
# Citizens Broadband Radio Service (CBRS) Overview

- Three-tiered spectrum authorization framework:
  1. Incumbent Access (federal, FSS, 3.65 GHz),
  2. Priority Access Licenses (PALs), and
  3. General Authorized Access (GAA)



Source: <https://www.fiercewireless.com/tech/cbrs-alliance-gears-up-for-initial-commercial-deployments>

# CBRS Auction 105 – PALs



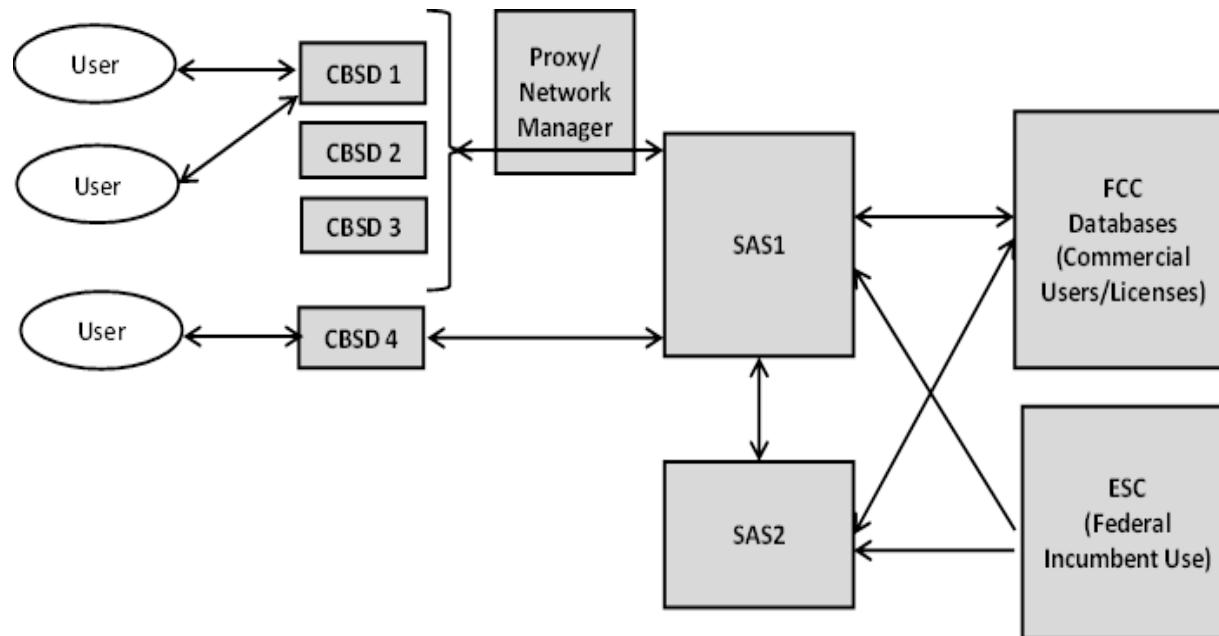
- 3,233 counties x 7 10-MHz PALs = 22,631 PALs
- Limit of four PALs in a county (40 MHz max per licensee)
  - Applicable to licensees and lessees
  - Not included in Spectrum Screen

# Spectrum Access System (SAS) and Environmental Sensing Capability (ESC)

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- SAS: cloud-based systems that manage interference among CBRS devices through dynamic
- ESC: networks of sensors, primarily along coastlines, that detect federal/Navy use of the 3550-3650 MHz band in protection zones to inform SASs of radar operation and the SAS reacts to ensure there is no interference between CBRS and radar operations.
- Register CBRS Devices (CBSDs) before operating
  - May request channel/frequency range but no guarantee
  - PALs gets contiguous channels in same license area *if feasible*

# SAS & ESC



 amdocs\*

COMMSCOPE®

 federated  
wireless™

 Google

 SONY

\* Awaiting ICD Report approval



# PALs Regulatory Requirements

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- 10-year term with expectation of renewal and buildout requirement (discussed further)
- Non-common carrier or common carrier basis
- “Use it or share it” – unused PAL frequencies may be used by GAA
- Secondary market agreements allowed (discussed further)
- PALs must operate CBSDs in compliance with technical rules and certified professional installation (CPI) requirements
  - *Category A (indoor/outdoor)*: lower power; CPI required in certain situations; examples include low power outdoor fixed devices, local indoor LTE mobile access, etc.
  - *Category B (outdoor only)*: higher power; CPI always required; examples include base stations, CPE, eNodeB, subscriber units, etc.

# PALs End-of-Term Performance Requirement

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- “Substantial Service” end-of-term buildout requirement
- Two safe harbors:
  1. Mobile or point-to-multipoint service: at least 50 percent of population coverage in the license area; or
  2. Point-to-point service: constructed and operates, using Category B CBSDs, at least four links in license areas with 134,000 or fewer people, and at least one link per 33,500 people (rounded up) in license areas with populations greater than 134,000.

## OTHERWISE

Individualized showing of substantial service, defined as service that is sound, favorable, and substantially above the level of mediocre service which might minimally warrant renewal (e.g., combination of services)

- PALs must specify CBSDs in license area and certify as to usage

# Secondary Markets: Partitioning / Disaggregation / Leasing

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- PAL Licensees may:
  - Partition and disaggregate, which mandates buildout for each new license
  - Partially assign or transfer licenses
  - Lease portions of their licensed spectrum
- Lease differences - De Facto Transfer v. Spectrum Manager
  - Spectrum manager = “light touch” leasing with pre-certified lessees; SAS confirms lessee eligibility and notifies FCC
  - De facto transfer leases = standard FCC approval
- Be wary of unjust enrichment (discussed further)

# “Innovation Band” - CBRS Use Cases

## Mobile Broadband / 5G

- Mobile traffic offload
- Dense areas
- Future: neutral host roaming scenarios

## Private LTE / Industrial IoT

- Energy
- Utilities
- Manufacturing
- Transportation

## Fixed Wireless

- RAN on macro sites
- Rural markets
- MSO wireless play
- WISP focus

## In-Building

- Healthcare
- Education
- Residential
- Military
- “Big Box” stores



## Equipment: Citizens Broadband Radio Service Devices (CBSDs)



All in One CBRS (MBI)  
(2x2x250mW)  
(CAT A)



All in One CBRS (MBO)  
(2x2x2W)  
(CAT A and B)



CBRS Micro RRH mRRH)  
(4x4x5W)  
(CAT A and B)  
(works with a BBU)

- Nokia began work on CBRS solutions starting in early 2016 and is an original member of the CBRS Alliance
- 100+ CBRS trial and ICD engagements through 2019
- Today we have numerous live deployments for mobile applications, fixed wireless solutions, and private LTE use cases – spanning indoor venues and rural/suburban/urban outdoor areas
- **Fixed Wireless** is the key focus for rural operators and WISPs – MBO can support 337 Mbps DL and mRRH can support 998 bps DL (theoretical speeds)
- **Private LTE** is another key focus for Industries and Enterprise customers – offer an e2e solution with RAN and cloud core/mgmt - [www.nokia.com/private-lte](http://www.nokia.com/private-lte)

# Auction Prep Time: Due Diligence / Participation Strategy / Application

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- Short-form application preparation begins now:
  - Opens: March 26, 2020 @ noon Eastern
  - Closes: **April 9, 2020 @ 6pm Eastern**
- Prohibited communications period effective upon April 9 deadline @ 6pm (discussed further)
- Until then, parties may freely develop and discuss participation and bidding strategies

# Other Key Auction Dates

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- Short-form application tutorial: Posted online
- Upfront Payments: May 21, 2020 @ 6pm Eastern (discussed further)
- Bidding Tutorial: June 11, 2020 or sooner
- Mock Auction: June 22, 2020
- Auction Bidding Commences: June 25, 2020

# FCC Form 175: Short-Form Application

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- **Basic qualifications** to participate in auction
- **Ownership** disclosures (discussed further)
  - Disclosable interest holders, affiliates, etc.
  - No individual/entity may file more than one short-form application or have a controlling interest in more than one short-form applicant
- **Authorized bidder(s)** – up to three; caution against using third party because bidder can bid for just one application
- **Bidding credit** eligibility – various types (discussed further)
- **Bidding Arrangements** - individual v. consortium/joint venture
- **Former Defaulter** eligibility
- **PAL Selection** – locked in with April 9 deadline
- **Changes** permitted freely before deadline, afterward only minor changes (change bidder, administrative changes)



# PAL Selection and Upfront Payments

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- Select *all possible* county-based PAL areas by April 9 deadline
  - *No changes after deadline*
  - Adopted PAL List at <https://www.fcc.gov/file/18097/download>
  - List includes population, minimum opening bid, upfront payment amount, and whether subject to the small market bidding cap
- Upfront Payments (May 21, 2020)
  - \$0.01 / MHz-POP with minimum of \$500 per PAL
  - Upfront payments buy eligibility (bidding units)
  - Different from Minimum Opening Bid, which is double that

# Consortia and Joint Ventures

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- Joint bidding among auction applicants prohibited
  - Arrangements relating to bidding, pricing, or licenses, including post-auction market structure
  - Prohibition - two or more nationwide providers where at least one party is an applicant
- Exception: *non-nationwide providers may form **consortium** or **joint venture** whereby a single entity* is the applicant
  - Enter into agreements before April 9 deadline
  - Identify all parties and agreements (terms/conditions detailed in long-form)
- Distinction for Designated Entities (bidding credit): non-DEs can only participate through one JV only (no consortium)

# Ownership Disclosure

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- Real party/ies-in-interest in applicant
- Ownership structure, direct and indirect
  - Disclosable interest holders ( $\geq 10\%$  interest)
  - Affiliates and affiliates of interest holders
- Post-auction FCC Form 602 - winning bidders file detailed ownership disclosure report
  - FCC-regulated businesses
- Interest holders and affiliations can impact bidding credit eligibility through attribution
- Limited opportunity to revise ownership disclosures after filing short-form and long-form applications

# Bidding Credits: Small Businesses, Two Variants

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## “Very Small Business”

- Attributed average annual gross revenues  $\leq$  \$20 million for the preceding three years
- 25% discount

## “Small Business”

- Attributed average annual gross revenues between \$20 million and \$55 million for the preceding three years
  - 15% discount
- Disclose gross revenues for the preceding three years for applicant, affiliates, controlling interests (including officers and directors), and affiliates of controlling interests
  - Triggers “unjust enrichment” – later assignees or transferees must qualify for *same bidding credit* or be penalized

# Bidding Credits: Rural Service Providers

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- Rural service providers must demonstrate that they:
  1. Provide commercial communications services and, as a whole, have  $\leq 250,000$  wireless, wireline, broadband, and cable subscribers; and
  2. Serve predominantly rural areas (counties with a population density of  $\leq 100$  persons per square mile)
- 15% bidding credit
- Unjust enrichment similarly applies
- Long-form application – provide detailed showing with data regarding subscriber numbers (interest holders, affiliates, affiliates of interest holders) and served rural area counties (POPs)

# Bidding Credits: Tribal Land (Post-Auction)

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- Licenses in certain unserved Tribal Land areas may be eligible for further bidding credits post-auction
- Federally recognized Tribal lands unserved by any telecommunications carrier or that have a wireline penetration rate of 85% or below
- Tribal Lands bidding credit is separate from and in addition to Small Business and Rural Service Provider bidding credits

# Bidding Credits: Limits and Caps

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- FCC capped the bidding credits to prevent abuse
  - Small business capped \$25 million cap
  - Rural Service Provider \$10 million cap
- “Small market” Cap
  - PEAs with POPs of  $\leq 500,000$
  - \$10 million bidding credit cap

# Prohibited Communications

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- Quiet period takes effect with April 9 deadline @ 6pm and ends with long-form application /down payment deadline (TBD)
- Bidders *and applicants* (even non-participating)
- Prohibited from communicating to any other applicant information regarding own, each other's, or any other applicant's bids or bidding strategies
  - Public and private disclosures
  - Indirect / implicit communications
  - Third parties as conduits
- Not covered: fact of Auction 105 participation, general auction info, non-auction related business
- Enforcement via strict disclosure requirement (5 business days)
- Be proactively defensive



# Auction Procedures Overview

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- Ascending clock auction - bid on generic license blocks
- No assignment phase due to SAS dynamic frequency assignment
- Minimum Opening Bid: \$0.02 per MHz-pop, minimum of \$1,000 per PAL
- Bidding
  - Continues until PAL supply no longer exceeds demand
  - Intra-round bidding – *optional*, allows bidding at less than clock price
- Activity Rule
  - Bidders must be active on 90-100% of their eligibility in all clock rounds
  - No waivers
  - New wrinkle: ability to *submit* bids with associated bidding activity *greater than* current bidding eligibility to a limit, though actual processed bid activity would not ever exceed a bidder's eligibility
- Specifics of Auction 105 procedures to be covered later

# Next Steps...

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- Due Diligence
  - Review PAL list
  - Consider current and future spectrum holdings
- Ask Questions – confer with:
  - SAS Administrators and vendors (equipment, services)
  - Possible partners
- Application/Auction Prep
  - Determine bidders
  - Plan for May 21 upfront payments
  - Get Form 175 help (questionnaire available)

# Questions?

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