



Industry Update Session

Virtual | July 2021



Welcome
and
Good Morning

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- This session is being recorded for the OnGo Alliance's use and distribution.
- Use the *Stage Chat* function in Hopin to submit questions during the session. We will try to address clarification questions in real-time, but general questions will be handled after presentations.



SAS Panel: PAL Status

SAS Admin Panel

Masoud Olfat (Federated)
Mark Gibson (CommScope)
Kevin Hanson (Google)

Reminder – please use the *Stage Chat* window to submit questions to the panel.



PAL Secondary Markets: A Status Update and Value to CBRS



PAL Secondary Markets:

A Status Update and Value to CBRS

27 July 2021

Introduction: Max.Solondz@Verizon.com



Value of CBRS PAL Licenses

- Spectrum is a precious resource, especially in urban areas
- CBRS Band Sharing:
 - Tier 2 PAL Licenses in the 3550-3650
 - Claiming of PPAs for CBSD clusters
 - Unused PALs revert to GAA uses
- PAL rights sold by county: indoor users do not need such large allocations
- Spatial & Temporal Rights are a natural fit for disaggregation and Leasing
- FCC Light Touch Leasing Paradigm

WINNF WG5 [PALs & PPA Use Task Group] Documents:

- **WINNF-RC-5004-V1.0.0**

- FCC ULS PAL Sales and Leasing Agreements Data Recommendations**

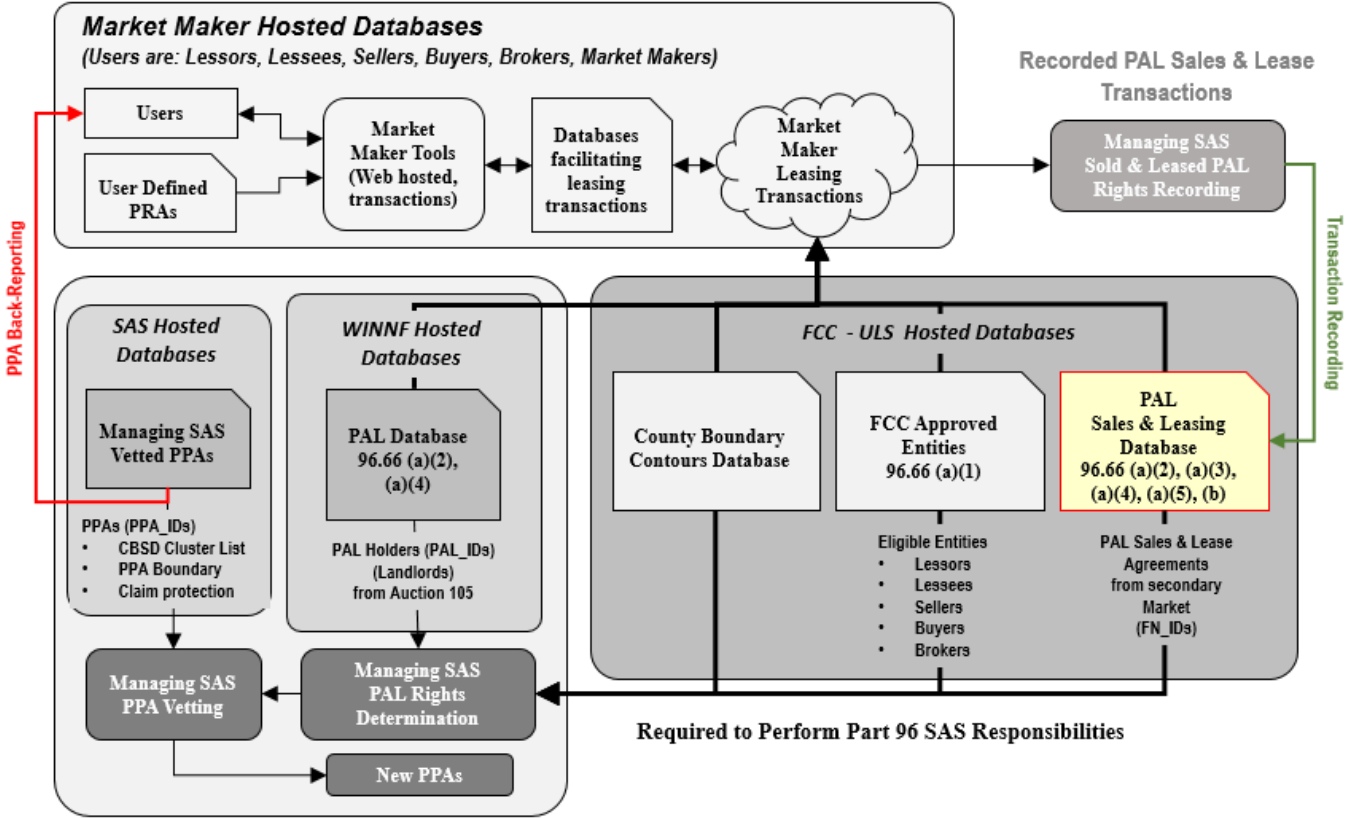
- FCC declined to consider making changes to ULS Leasing Database & Records

- **WINNF-TS-5007-V0.0.0-r5.0 (IR1)**

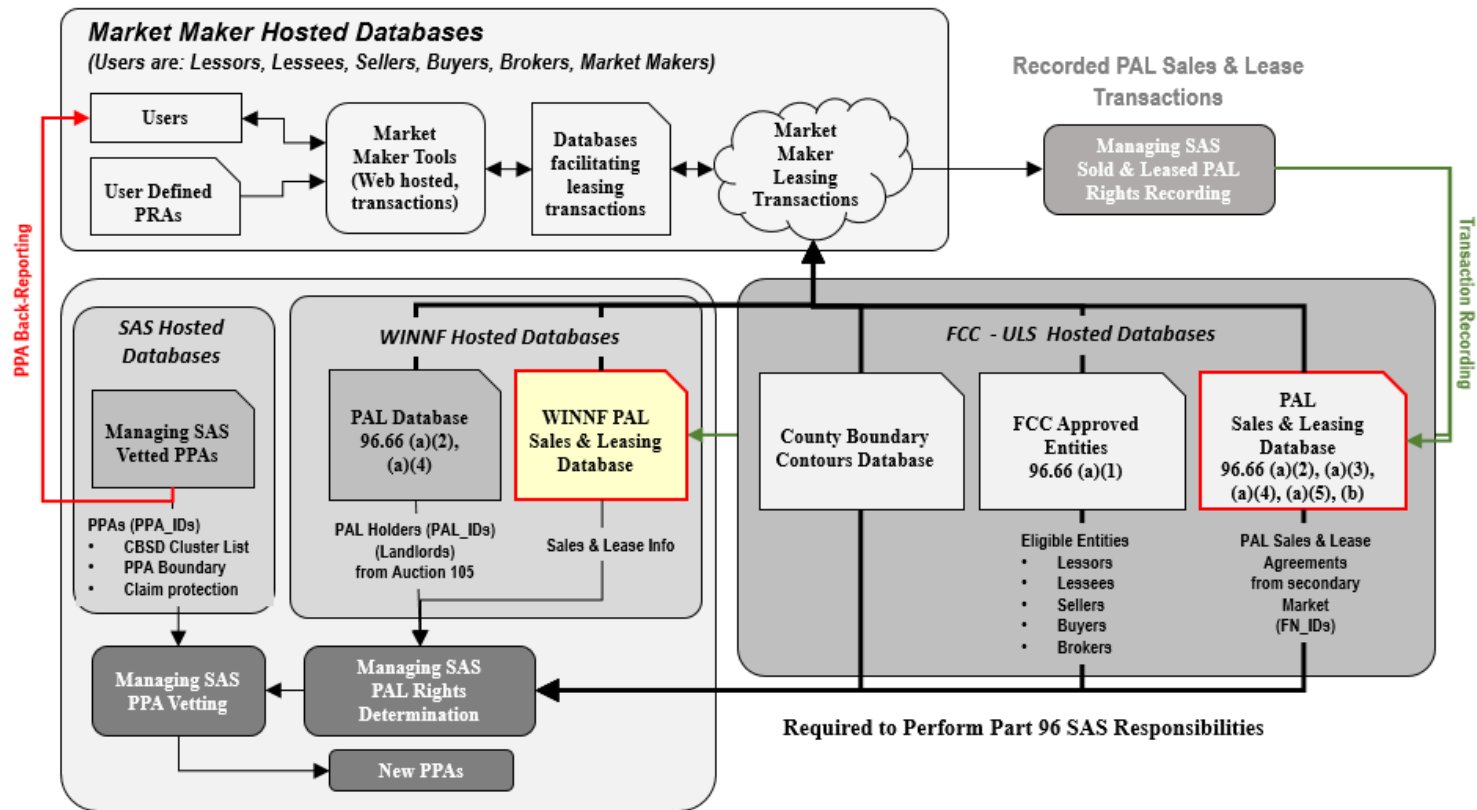
- PAL Sales and Leasing Framework (formerly WINNF-I-00142)**

- assumed changes to FCC ULS Leasing Records Database
 - now requires rework
 - SASs now proving in ULS Leasing Records Database and APIs

Database Framework with FCC ULS



Database Framework with FCC ULS and WINNF Information database



WINNF Proposed Information set:

Recorded Information for PAL Leases (or Sales) Transactions:

- **File Number FN_ID:** unique record identifier created for every transaction
- **> Record Creator ID:** identify the market maker, broker or managing SAS
- **> Sales vs Lease indicator:** to handle both leases and sales under same Light Touch paradigm
- **Seller ID and Buyer ID, or Lessor ID and Lessee ID:** identify participants by FCC FRN
- **Original PAL ID:** original provenance, PAL slot
- **> Original FN ID (precursor area) [polygon area]:** to properly vet the area transaction, provenance
- **(new) (1) Transferred FN ID, [polygon area(s) being transferred]:** the new FN ID
- **> (new) (2) Retained FN ID [polygon area(s) being retained]:** another new FN ID
- **Transaction Start Time & Date**
- **End Date (for Leases)**
- **Record Time Stamp**

WINNF desired information not included in FCC ULS Files & Database

Information not in 608 Form or FCC ULS:

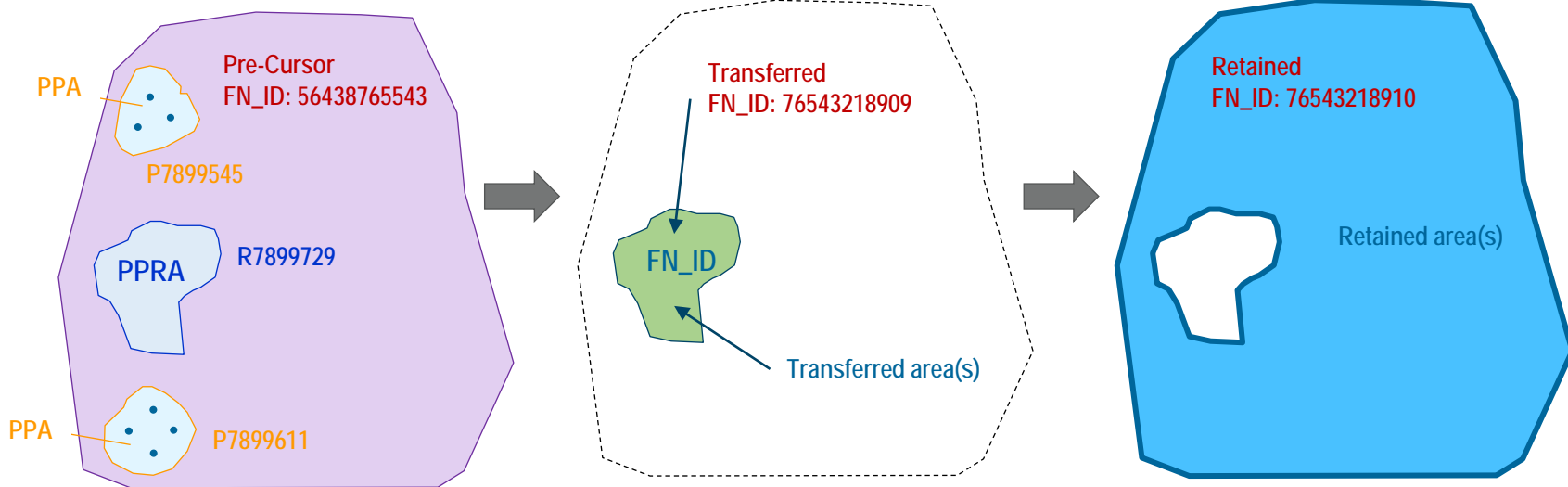
- Record Creator ID:** - identifies the market maker, broker or managing SAS
- Sales vs Lease indicator:** - to handle both leases and sales under same Light Touch paradigm
- Original FN ID (precursor area):** - [polygon area]: to properly vet the area transaction, provenance
- (new) (2) Retained FN ID:** - [polygon area(s) being retained]: another new FN ID

Concept of Filing Retained Areas

County PAL_ID: 34027_D

Buyer or Lessee:
- receives transferred sub-area

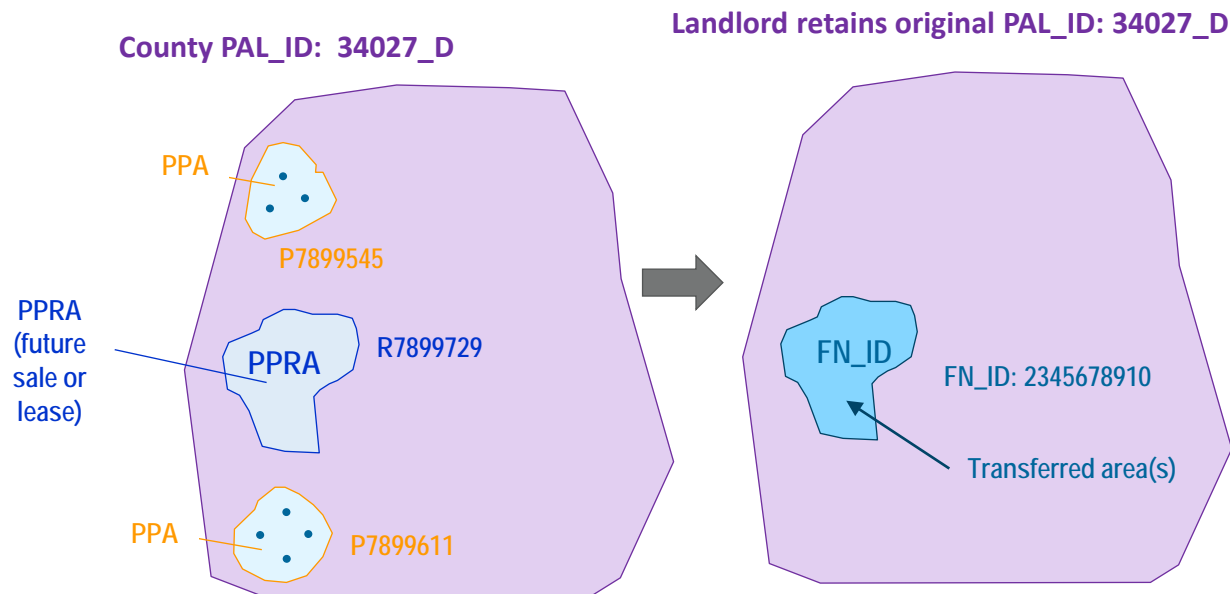
Landlord retains: New FN_ID assigned



- Landlord sells or Leases **PPRA R7899729**
- **Managing SAS** Records corresponding transaction into:
 - FCC ULS **FN_ID: 2345678910** PAL Sales & Leasing Records Database
- Landlord may continue to make new **PPA claims** and **PPRA offers**

- **Managing SAS** need not subtract

Without Retained Areas and Requiring 'Recursion' Assessment



Managing SAS Functions

- Managing SAS must 'subtract' ALL subsequent FN_ID transactions for that PAL to determine retained area of PAL for landlords
- For future landlord PPA claims
- For future landlord PPRA offers

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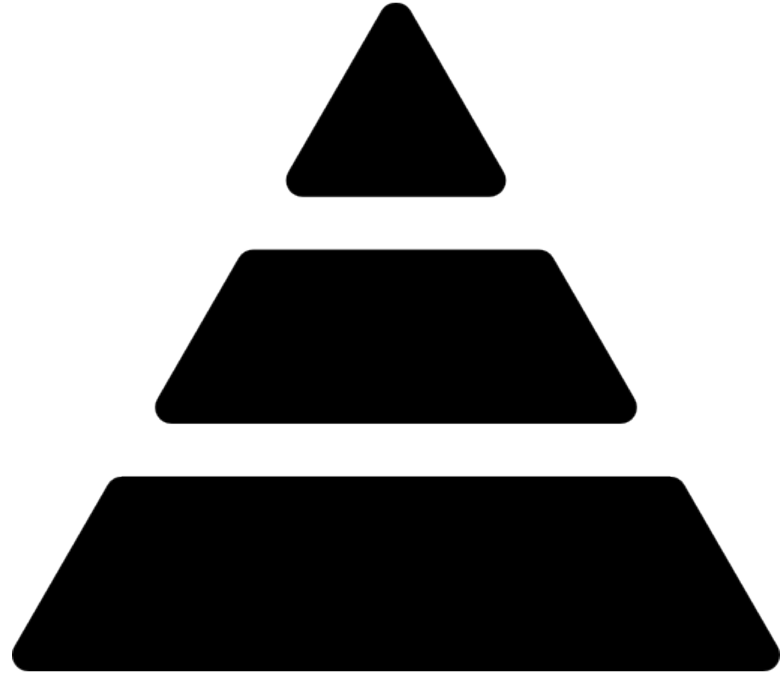
CBRS PAL Secondary Market

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Director of Broadband, Select Spectrum





An industry leading professional licensed spectrum brokerage firm providing brokerage, marketing, transactional advisory and consulting services to a wide range of clients, including but not limited to mobile carriers, WISPs, utilities, rail operators, and other critical infrastructure industry organizations, in the market for FCC spectrum licenses



Actively represents clients holding licenses across 22 different FCC spectrum bands, ranging from 150 MHz to 40 GHz



Facilitated >300 FCC license transactions in the secondary marketplace yielding >\$500 million in proceeds for clients



Successfully completed dozens of transactions of CBRS predecessor licenses in the 3.65 GHz (NN) band



Principals participated in Auction 105 under a consortium structure on behalf of four unique organizations, successfully obtaining PAL licenses in >35 counties

Current Market for PAL spectrum

Supply and Demand for PAL's is continuing to rise

Demand

- Current PAL holders looking to increase capacity in market(s)
- Prospective operators currently operating in GAA, seeking to add a layer of >reliability/sustainability
- Prospective operators via a myriad of industries who are seeking for PAL's for private networks, and are not currently considering GAA
- Finite amount of broadband spectrum satisfactory for intended applications

Supply

- PAL license holders looking to monetize their assets via lease/sale
 - Spectrum Investors looking to monetize spectrum assets and generate ROI
 - Operators/organizations looking to monetize the entirety or portions of counties in which they don't operate or plan to operate, producing short/long term revenue streams, or ROI



Innovative web-based secondary marketplace for PAL spectrum rights, serving as a neutral platform and an exchange allowing buyers, sellers, lessors, lessees, brokers, managers, etc. the ability to source spectrum availability and streamline transactions

Sellers/Lessors

- Provides a highly automated and user-friendly system for prospective users such as operators, investors, and others that hold PAL spectrum rights to monetize all or portions of their PALs

Buyers/Lessees

- **Search**
 - By County/FIPS/Address/State/Coordinate
- **Perform diligence**
 - Spectral (MHz) availability, geographic availability to complete required footprint(s)
- **Inquire, and obtain PAL spectrum rights via sale or lease**

- **Streamlining the transaction** through an intuitive user interface, listing tools, negotiation system and functionality such as:
- Ability to perform **geographic partitions** of PAL licenses
 - Draw polygon on platform
 - Upload shapefile, .kmz, .kml, etc.
 - Supports **operator demand** for **smaller geographic licenses**
- **Significant flexibility** provided for PAL holders to tailor transaction parameters (lease duration, price, etc.) to meet/exceed objectives
- **Search** for available spectrum and easily submit offers to licensees for purchase/lease



Capabilities

Transacting Pre-Light Touch?

- Sellers can sell, buyers can buy, to transact, the 'old school' manual approach is required
- Assignment of Authorization
- Long-term defacto or Spectrum Manager lease, dependent on preference of the Parties
 - Engage knowledgeable advisor and competent legal counsel
 - Speak with YOUR SAS to determine if method is acceptable
 - Post Lease Application filing, upon Grant = FCC Authorization, satisfying Part 96

Leveraging Success in the Secondary Market

- Penetration and visibility with spectrum buyers/lessees in myriad of industries including but not limited to:
 - WISPs
 - Mobile Carriers
 - Electric Utilities
 - Oil and Gas
 - Cable
 - Agriculture
 - Educational Institutions
 - Investors/ Financial Organizations
 - Managed Services Providers
- Widely established connections with ecosystem partners, such as engineering consulting firms, equipment manufacturers, tower companies, etc.
- Maximize PAL value through dedicated marketing, access to public and private comparables, proprietary databases, established relationships, and vast spectrum transaction experience



Point/Counterpoint:
GAA & PAL

Speakers



- PAL: Ray Leppien, Agri-Valley Communications, Inc.
- GAA: Carlos Cardona, Frontier Communications
- Moderator: Preston Marshall, Chair, OnGo Alliance



Thank You!