SPECTRUM SHARING COMMITTEE
RELEASE SCHEDULE

Approved by the Spectrum Sharing Committee Steering Group
24 May 2017
Early Release (Release 0) Publication Timeline

2. Finish/publication dates include planned ballot period throughout this document
Release 1 Publication Timeline (Requirements and Protocols)

- **Operational and Functional Requirements Specification - V1.0.0**
  - Jan 27 '15 - May 13 '16

- **Requirements - V2.0.0**
  - Mar 31 '16 - Feb 3 '17

- **CPI Model**
  - Apr 13 '16 - Sep 6 '16

- **Operational Security Requirements (OPSEC) Specification - V1.0.0**
  - Jan 27 '15 - Jun 21 '16

- **Requirements - V3.0.0**
  - Aug 3 '16 - Jul 6 '17

- **Operational and Functional Requirements Specification - V1.0.0**
  - Jan 27 '15 - May 13 '16

- **Cybersecurity Requirements (COMSEC) Specification - V1.0.0**
  - Jan 27 '15 - Aug 2 '16

- **COMSEC Spec. - V2.0.0**
  - Nov 8 '16 - Apr 24 '17

- **SAS to SAS TS - V1.0.0**
  - Jun 29 '16 - Nov 30 '16

- **SAS to CBSD Protocol Technical Specification - V1.0.0**
  - Feb 19 '16 - Nov 29 '16

- **SAS to CBSD TS - V1.0.0**
  - Feb 15 '17 - Jun 8 '17

- **SAS to CBSD TS - V2.0.0**
  - Feb 15 '17 - Jul 5 '17

- **Amendment - Incumbent Protection**
  - May 10 '17 - Aug 15 '17
Release 1 Publication Timeline (Commercialization)

Start: Jun 24 '15  
Finish: Dec 30 '17

- Release 1 SAS Test and Certification Specification  
  Jul 24 '15 - Aug 21 '17

- Release 1 SAS Test Code Development and Verification  
  Feb 1 '16 - Aug 25 '17

- Release 1 CBSD Test and Certification  
  Dec 5 '16 - Aug 24 '17

- CBRS PKI Certificate P  
  Nov 8 '16 - Apr 24 '17

- PAL/PPA Database  
  Nov 8 '16 - Mar 31 '17

- Root of Trust Operator Accreditation  
  Nov 8 '16 - Jul 19 '17

- CPI Standard - V1.0.0  
  Sep 20 '16 - Sep 20 '17

- CBSD Standard - V1.0  
  May 10 '17 - Oct 3 '17

Amendment 1: Jun 21 '17 - Sep 1

Amendment 2: Jul 25 '17 - Aug 1

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## Commercialization Milestones

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### WINNF
- **Start SAS product Certification**
- **First SAS products Certified (Oct ‘17)**
- **CBSD Test & Certification Specs Rel 1**
- **First CBSD products Certified (Nov ‘17)**
- **Start ESC product Approval**
- **First ESC products Approved (Nov ‘17)**
- **SAS Test & Certification Specs Rel 1**
- **CBSD Test & Certification Specs Rel 1**
- **CPI Accreditation**
- **CBSD Protocol Test Accreditation**

### FCC
- **2nd R&O (5/16)**
- **SAS Certification process**
- **ESC Approval process**
- **GAA Cat A & B deployment starts (Dec ‘17)**
- **PAL Auction**
- **CBSO/Proxy Certification process**

* denotes significant milestones.
Standards That Comprise Release 1 (New Items in Red)

WINNF-15-S-0112-V3.0.0 Operational and Functional Requirements
WINNF-17-S-XXXX-V1.0.0 Incumbent Protection Amendment for WINNF-15-S-0112-V3.0.0
WINNF-15-S-0065-V2.0.0 CBRS Communications Security Technical Specification
WINNF-15-S-0071-V1.0.0 CBRS Operational Security Technical Specification
WINNF-16-S-0016-V2.0.0 SAS to CBSD Protocol Specification
WINNF-16-S-0096-V2.0.0 SAS to SAS Protocol Specification
WINNF-16-S-0061-V1.0.0 SAS Test and Certification Specification
WINNF-17-S-XXXX-V1.0.0 Incumbent Protection Amendment for WINNF-17-S-0061-V1.0.0
WINNF-17-S-0122-V1.0.0 CBSD Test and Certification Specification
WINNF-16-S-0245-V1.0.0 PAL Database Specification
WINNF-17-S-0022-V1.0.0 CBRS PKI Certificate Policy
WINNF-16-S-0247-V1.0.0 CPI Accreditation Standard
WINNF-17-S-XXXX-V1.0.0 CBSD Protocol Test Accreditation Standard
Border Area Management
• Requirements on Implementing international agreements to protect Canada and Mexico

CBSD Measurement Reporting
• Initial requirements for CBSD measurements of their local interference environment, and reporting those data back to the SAS.

CBSD Registration Processing
• The requirements for how a CBSD registers with a SAS, including owner registration, professional installer registration and CBSD registration.

CBSD Protocol Test Accreditation Standard (NEW)

Communications Security
• The communications security policies governing SAS and CBSD communications interfaces.

Certificate Authority Accreditation Standard

Certified Professional Installer Accreditation Standard
• Guidelines for adoption of uniform industry working standards and curriculum required to be consistent with the protection of spectrum, both licensed and GAA, for sharing in the 3550-3700 MHz band.

Note: Detailed feature list associated with each release is captured in the SSC CBRS Requirements Traceability Matrix (WINNF-17-SSC-0003)
Domain Proxy
- The baseline Operational and Functional Requirements of the CBRS Domain Proxy for initial testing and trials.

Dynamic Protection Zones

Environmental Sensing Capability (ESC)
- The requirements for implementation of an Environment Sensing Capability, and protecting federal incumbents.

Exception Management
- The requirements for how trouble tickets or exceptions are managed, including from FCC input, reports from incumbents, and reports from PAL.

FSS Protection

Grandfathered Wireless Device Protection

Operations Security
- The overall system operational security requirements to include handling of incumbent data, obfuscation of spectrum data, and processes associated with auditing and governance of the SAS infrastructure.
PAL Protection Area Definition

- Requirements on how PALs report their coverage area to the SAS for end-to-end use of the licenses. This includes how PAL licensees define PAL Protection Areas (PPAs), request to operate in a particular geographic area within their license boundary (PPA), how PPA credentials and IDs are defined, conveyed and managed, and how the SAS accomplishes such protections.

Protocol Support for Priority Access Licensing

Propagation Modeling

- Identify appropriate 3.5 GHz propagation models for Incumbent and PAL protection and PPA definition, determine relative benefits and limitations, develop agreement on baseline needs such as underlying data, and define standardized interference aggregation methodologies.

SAS to SAS Information Sharing

- Initial support for SAS-SAS Synchronization and Information exchange.

Spectrum Grant Request Processing

- The requirements for how a CBSD requests and relinquish grants, and how grants are reassigned or terminated.
Following the release of revision 1 specifications, change requests will be collected from the Forum’s public issues management portal.
Release 2 Publication Timeline

- **Operational and Functional Requirements - V4.0.0**
  - Jul 12 '16 - Sep 22 '17

- **SAS to SAS Protocol Specification - V3.0.0**
  - Nov 3 '16 - Oct 26 '17

- **SAS to CBSD Protocol Specification - V3.0.0**
  - Dec 8 '16 - Nov 17 '17

- **Test and Cert Specs - V2.0.0**
  - Oct 2 '17 - Mar 23 '18

- **WG5 Projects (Details TBD)**
  - Aug 5 '16 - Jan 22 '18
CBSD to CBSD Operation

Channel Assignment Optimization
- Full support of WINnForum requirements on how spectrum is assigned across SASs, including PAL.

GAA Coexistence
- A framework for providing fair shared access to CBRS radio resources while mitigating the negative impacts from multiple signals, possibly across multiple air interface technologies, utilizing overlapping and/or neighboring radio resources. This can be used by other organizations in establishing technology specific coexistence agreements.

PAL Leasing

Standardized Non-protocol Procedures (e.g., owner registration)

Enhancements from Release 1