SPECTRUM SHARING COMMITTEE
RELEASE SCHEDULE

Approved by the Spectrum Sharing Committee Steering Group
27 September 2017
2. Finish/publication dates include planned ballot period throughout this document
Release 1 Standards Publication Timeline

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

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

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

- Requirements - V1.1.0
  - Mar 31 ’16 - Feb 3 ’17

- Requirements - V1.2.0
  - Aug 3 ’16 - Jul 13 ’17

- Requirements - V1.3.0
  - May 10 ’17 - Sep 28 ’17

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

- SAS to CBSD Protocol Technical Specification - V1.0
  - Feb 19 ’16 - Nov 29 ’16

- SAS to CBSD TS - V1.1.0
  - Feb 15 ’17 - Aug 14 ’17

- PAL/PPA Database Spec
  - Nov 8 ’16 - Mar 31 ’17

- CBRS PKI Certificate Policy
  - Nov 8 ’16 - Apr 24 ’17

- Root of Trust Operator Accreditation
  - Nov 8 ’16 - Aug 9 ’17

- CPI Standard - V1.0.0
  - Sep 20 ’16 - Oct 18 ’17

- CPI Training
  - Oct 19 – Dec 31’17

- SAS to SAS v1.2
  - Sep 06 – Oct 19 ’17

Start:
Jan 27 ’15

Finish:
Dec 30 ’17
Release 1 Test and Certification Timeline

Start
Jul 24 '15

Release 1 SAS Protocol Test and Certification Specification (V1.0.0)
Jul 24 '15 - Nov 30 '17

Release 1 SAS Protocol Test Code
Feb 1 '16 - Dec 13 '17

Release 1 Functional Test Spec (V1.1.0)
May 10 '17 - Dec 21 '17

Release 1 SAS Functional Test Code
Jun 21 '17 - Dec 29 '17

Release 1 CBSD Test and Certification Specification (V1.0.0)
Dec 5 '16 - Nov 29 '17

Release 1 CBSD Test Code Development
Mar 1 '17 - Dec 8 '17

CBSD Test Program
Aug 10 '17 - Dec 8 '17

Finish
Dec 31 '17

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Commercializing CBRS: Standards and Ecosystem Support

10 WinnForum Standards and Supporting Ecosystem Development

- SAS Test Specification
- CBSD Test Specification
- PAL Database
- SAS to CBSD Protocol Specification
- SAS to SAS Protocol Specification
- Communications Security
- Operations Security
- Operational and Functional Requirements
- Approved CBSD Testing
- Approved PKI Certificate Authority
- Approved CPI Training Program
- Measurement Database
- Air Interface Database
- CBSD Test Harness
- SAS Test Harness

Results:
4 Key Certifications

- Certified SAS
- Certified CBSD
- Certified ESC
- Certified Professional Installer
Standards That Comprise Release 1

WINNF-TS-0112-V1.3.0 Operational and Functional Requirements
WINNF-TS-0065-V1.1.0 CBRS Communications Security Technical Specification
WINNF-TS-0071-V1.0.0 CBRS Operational Security Technical Specification
WINNF-TS-0016-V1.1.0 SAS to CBSD Protocol Specification
WINNF-TS-0096-V1.2.0 SAS to SAS Protocol Specification
WINNF-TS-0061-V1.1.0 SAS Test and Certification Specification
WINNF-TS-0122-V1.0.0 CBSD Test and Certification Specification
WINNF-TS-0245-V1.0.0 PAL Database Specification
WINNF-TS-0022-V1.0.0 CBRS PKI Certificate Policy
WINNF-TS-0247-V1.0.0 CPI Training Program 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.

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

Certificate Authority Accreditation Standard

Certified Professional Installer Training Program 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.
What is addressed in the Release 1 (3 of 3)

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.
One year cycle for future Major Releases, inclusive of both technical and test and certification specification development

- Adherence to timeline determines what’s “in” or “out” of the specification
- Project approval and prioritization of new feature development will be managed by the Steering Group (see next slide)

Standards maintenance will be managed through technical updates to existing version

- E.g., 1.1, 1.2, 1.3, etc.
“Projects” are Initiated through the Committee Steering Group (SG)

1. Partner Project Requests
2. Member Project Requests
3. 3rd Party Specifications & Standards
4. Regulatory Proceedings
5. Project Requests, Business Models, Requirements & Use Cases
6. Project Requests, Business Models, Requirements & Use Cases
7. Market Data
8. Reports & Recommendations
9. Reports, Specifications & Recommendations

Work Group

Steering Group

Slide 12
# Backlog/Future Release Features

## Backlog (Target WG)
- Leasing (WG1)
- Evolution of Propagation Models (WG1)
- Simplification and Optimization of Requirements from Release 1 (WG1)
- Support for Revised Rules as Required (WG1)
- Automated Exception Handling (WG1)
- Enhanced PAL Support (WG3)
- Registration Update (WG3)
- Enhanced Measurement Reporting (WG3)
- PAL Channel Assignment (WG5)

## In Progress
- CBSD as CPE
- GAA Coexistence

## Complete