



CBRS PKI Root of Trust Operator Requirements

Document WINNF-16-P-0235

Version V1.0.0

24 April 2017



TERMS, CONDITIONS & NOTICES

This document has been prepared by the Spectrum Sharing Committee Working Group 5 to assist The Software Defined Radio Forum Inc. (or its successors or assigns, hereafter “the Forum”). It may be amended or withdrawn at a later time and it is not binding on any member of the Forum or of the Spectrum Sharing Committee Working Group 5.

Contributors to this document that have submitted copyrighted materials (the Submission) to the Forum for use in this document retain copyright ownership of their original work, while at the same time granting the Forum a non-exclusive, irrevocable, worldwide, perpetual, royalty-free license under the Submitter’s copyrights in the Submission to reproduce, distribute, publish, display, perform, and create derivative works of the Submission based on that original work for the purpose of developing this document under the Forum's own copyright.

Permission is granted to the Forum’s participants to copy any portion of this document for legitimate purposes of the Forum. Copying for monetary gain or for other non-Forum related purposes is prohibited.

THIS DOCUMENT IS BEING OFFERED WITHOUT ANY WARRANTY WHATSOEVER, AND IN PARTICULAR, ANY WARRANTY OF NON-INFRINGEMENT IS EXPRESSLY DISCLAIMED. ANY USE OF THIS SPECIFICATION SHALL BE MADE ENTIRELY AT THE IMPLEMENTER'S OWN RISK, AND NEITHER THE FORUM, NOR ANY OF ITS MEMBERS OR SUBMITTERS, SHALL HAVE ANY LIABILITY WHATSOEVER TO ANY IMPLEMENTER OR THIRD PARTY FOR ANY DAMAGES OF ANY NATURE WHATSOEVER, DIRECTLY OR INDIRECTLY, ARISING FROM THE USE OF THIS DOCUMENT.

Recipients of this document are requested to submit, with their comments, notification of any relevant patent claims or other intellectual property rights of which they may be aware that might be infringed by any implementation of the specification set forth in this document, and to provide supporting documentation.

This document was developed following the Forum's policy on restricted or controlled information (Policy 009) to ensure that that the document can be shared openly with other member organizations around the world. Additional Information on this policy can be found here: http://www.wirelessinnovation.org/page/Policies_and_Procedures

Although this document contains no restricted or controlled information, the specific implementation of concepts contain herein may be controlled under the laws of the country of origin for that implementation. Readers are encouraged, therefore, to consult with a cognizant authority prior to any further development.

Wireless Innovation Forum TM and SDR Forum TM are trademarks of the Software Defined Radio Forum Inc.

CBRS PKI Root of Trust Operator Requirements

Any entity seeking to operate a Root of Trust certificate for the CBRS PKI must respond to a request by the Forum for such proposals, and provide a statement from an independent WebTrust licensed practitioner qualified to perform WebTrust CA audits of its satisfaction of the requirements within the time frame indicated in that request along with appropriate supporting documentation.

To be requested by the WinnForum to create a Root of Trust certificate for the CBRS PKI, a Certificate Authority shall meet the following requirements:

1. Agree to create Root of Trust certificates only when directly requested to do so by a balloted resolution of the Forum, and to generate only those certificates explicitly requested, and of the types requested.
2. Agree to create no other similar certificates which could be reasonably confused with the one(s) it is specifically requested to create by a balloted resolution of the WinnForum.
3. Distribute and label the public keys of such certificates as Root of Trust public key material on a basis permitting use of this public key material without charge by the CBRS ecosystem, including but not limited to the embedding of such public key material in devices and software.
4. Establish a process to remain aware of changes to the CBRS Communications Security specification and comply with applicable changes to that specification.
5. Apply the CBRS PKI Validation Guidelines and Certificate Policy on a non-discriminatory basis in assessing SubCA certificate signing requests from other entities.
6. Enter into use agreements with entities requesting certificates to be signed by the Root of Trust certificate, or by other keys managed by the Root of Trust operator, according to the requirements of the CBRS PKI Certificate Policy.
7. Enter into use agreements with entities requesting CA certificates to be signed by the Root of Trust certificate, or by other keys managed by the Root of Trust operator, that require the use of the CBRS PKI Validation Guidelines as published by the WinnForum, and according to use agreements in the CBRS PKI Certificate Policy.
8. Demonstrate N years of continuous CA business operations.
9. Comply with any enforcement-related instructions from FCC.
10. Provide secure offline storage for the CBRS PKI Root of Trust certificate key material according to industry best practices for such storage.
11. Provide satisfactory assessments of any unresolved CA practice irregularities as brought to the attention of the WinnForum by members during the evaluation period.
12. Identify a licensed WebTrust practitioner qualified to perform WebTrust CA audits with which it has an ongoing relationship, and which has performed a qualifications check of the suitability of the Certificate Authority according to these requirements.
 - a. CAs shall contact the auditor directly, and shall enter into such agreement and pay such price as the auditor shall determine.

- b. The auditor shall submit an audit report to WinnForum using an approved form provided by WinnForum for that purpose.
 - c. A completed report shall state that the applicant CA had met the accreditation criteria, and shall include substantiating data.
 - d. WinnForum shall review the report to confirm that the accreditation criteria had been met.
13. Commit to providing updates to WinnForum in cooperation with its WebTrust auditor regarding ongoing compliance with Root of Trust operator requirements at least every 2 years and in advance of material business changes for which advance notice is reasonable (e.g. transfer of control, cessation of service).
14. Agree the CA would be entitled to enter into a certification mark agreement with WinnForum which would entitle the CA to display a WinnForum owned mark indicating that the CA was a "WinnForum Accredited CA".
 - a. The agreement will entitle WinnForum to revoke the accreditation for appropriate reasons, such as a CA's certificates becoming compromised, the criteria for accreditation changing, and so on.
 - b. Should a CA believe that it had been unfairly denied accreditation, the CA can petition the Board of Directors for reconsideration.
15. Agree that if the operator ceases to operate the CBRS PKI Root of Trust certificate, it will notify the WinnForum sufficiently in advance of such cessation so that another operator can be found, and to cooperate with WinnForum to arrange within a reasonable time period for the custodianship of the Root of Trust certificate key material to be transferred to another operator as directed by the WinnForum.
16. Provide to the Forum or its members, upon request, auditing reports related to management of the Root of Trust key material, as required by the CBRS Communications Security specification developed by the Forum.
17. Commit to notify WinnForum membership promptly in the case of any reportable security irregularity regarding the management of the Root of Trust key material.