



**Signaling Protocols and Procedures for
Citizens Broadband Radio Service (CBRS):
WinnForum Recognized
CBRS Grouping Information**

Document WINNF-SSC-0010

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WinnForum Recognized CBRS Grouping Information

1 Introduction

This document specifies Citizens Broadband Radio Service (CBRS) Grouping Information supported by the standards developed by the Wireless Innovation Forum for the CBRS band.

2 Scope

This document specifies CBRS Grouping Information. There are two types of Grouping Information:

- Grouping Parameters: used to describe Citizens Broadband Radio Service Devices (CBSDs)
- Grouping Configuration: used to send information to CBSDs.

The entity or individual that defines a particular Grouping Information is responsible for fully defining the Grouping Information such that implementation can be accomplished [n.1].

3 References

3.1 Normative references

The following referenced documents are necessary for the application of the present document.

- [n.1] “Spectrum Sharing Committee Policy and Procedure CBRS Grouping Information Registration,” WINNF-SSC-0009.
- [n.2] “Signaling Protocols and Procedures for Citizens Broadband Radio Service (CBRS): Spectrum Access System (SAS) - Citizens Broadband Radio Service Device (CBSD) Interface Technical Specification,” WINNF-TS-0016.
- [n.3] “Signaling Protocols and Procedures for Citizens Broadband Radio Service (CBRS): Spectrum Access System (SAS) - SAS Interface Technical Specification,” WINNF-TS-0096.
- [n.4] “Requirements for Commercial Operation in the U.S. 3550-3700 MHz Citizens Broadband Radio Service Band,” WINNF-TS-0112.
- [n.4] “CBRS Coexistence Technical Specifications,” CBRSA-TS-2001.

4 Definitions and abbreviations

4.1 Definitions

BTS: Base Transceiver Station. A network component that facilitates communication between user equipment (UE) and a CBSD.

BTS-CBSD: A CBSD that serves one or more points. The points may be EUDs or CPE-CBSDs.

CBRS: Citizens Broadband Radio Service. CBRS is a 150 MHz wide broadcast band of the 3.5 GHz band used by the United States government for radar systems.

CBRS band: The 3550-3700 MHz Citizens Broadband Radio Service band.

CPE-CBSD: A CBSD used as customer premises equipment, the served CBSD which is a client of the BTS-CBSD, which may operate at a higher power level than an EUD, and which transmits during the same time slots as an EUD.

Citizens Broadband Radio Service Device (CBSD): Fixed Stations, or networks of such stations, that operate on a Priority Access or General Authorized Access basis in the Citizens Broadband Radio Service band.

CPE: Customer Premises Equipment. A CBSD located on the customer's premises as opposed to being located on the Service Provider's premises.

Domain Proxy (DP): The DP is a logical entity that can represent one or more CBSD(s) to the SAS. The DP presents a consistent and secure interface to the SAS that can convey all messages pertaining to the SAS-CBSD interface for client CBSDs.

End User Device (EUD): A device used directly by an end-user to communicate. It can be a hand-held telephone, a laptop computer equipped with a mobile broadband adapter, or any other device. Also known as User Equipment (UE).

Spectrum Access System (SAS): A system that authorizes and manages use of spectrum for the Citizens Broadband Radio Service in accordance with subpart F.

4.2 Abbreviations

BTS	Base Transceiver Station
CBRS	Citizens Broadband Radio Service
CBSD	Citizens Broadband Radio Service Device
CPE	Customer Premises Equipment
DP	Domain Proxy
EUD	End User Device
SAS	Spectrum Access System

5 Version Compatibility

Version 1 of this document is compatible with:

- V2.0.0 of [n.2] and is not reflected in earlier versions of [n.2]
- V2.0.0 of [n.3] and is not reflected in earlier versions of [n.3].

6 Grouping Parameters

The *GroupParam* JSON object is used to send information from the CBSD/DP and is defined in Table 1.

Table 1: *GroupParam* Object

Parameter	Presence	Description
NAME: <i>groupType</i> DATA TYPE: string	Required	Identifies the type of group that the CBSD belongs to. Values of this parameter are contained in the following subsections.
NAME: <i>groupId</i> DATA TYPE: string	Required	Identifies a particular group of the specified type of group (<i>groupType</i>). Values of <i>groupId</i> can be specified by other organizations, entities, or individuals.
NAME: <i>groupInfo</i> DATA TYPE: object: <i>GroupInfo</i>	Optional	This JSON object must be specified by the organization, entity or individual that specifies the <i>groupId</i> .

6.1 *groupType*: “INTERFERENCE_COORDINATION” (deprecated)

6.2 *groupType*: “COEXISTENCE_GROUP”

The *groupType* value of “COEXISTENCE_GROUP” has been defined by the WinnForum.

This group type identifies a group of CBSDs that coordinate their own interference within the group according to a common interference management policy [n.4].

The *groupId* values associated with this *groupType* are found in the following subsections.

6.2.1 *groupId*: “CBRS_ALLIANCE”

The *groupId* value of “CBRS_ALLIANCE” has been defined by the CBRS Alliance.

6.2.1.1 *groupInfo*:

The definition of the *groupInfo* parameter associated with this *groupId* value is found in CBRS Alliance document CBRSA-TS-2001 [n.4].

7 Grouping Configuration

The *GroupConfig* JSON object is used to send information to the CBSD/DP and is defined in Table 2.

All parameters of the *GroupConfig* object are Optional. Any organization, entity or individual can specify parameters in the *GroupConfig* object. The JSON object type of the parameter must be specified by the organization, entity or individual.

Table 2: *GroupConfig* Object3

Parameter	Presence	Description
NAME: <i>cbrsAllianceConfig</i> DATA TYPE: object: <i>CbrsAllianceConfig</i>	Optional	See Section 7.1

The objects used in *GroupConfig* Object are found in the following subsections.

7.1 *CbrsAllianceConfig* Object

The definition of the *CbrsAllianceConfig* object is found in CBRS Alliance document CBRSA-TS-2001 [n.4].

8 Document History

Document history		
V1.0.0	31 January 2019	Initial Version approved for Publication by SSC Steering Group