IEEE P802.22
Wireless RANs

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| A-WRAN Descriptions |
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Abstract

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| --- | --- | --- | --- |
| 5 | TR | In the legacy/base standard, the BS ID and other parameters in the CBP MAC PDU, are carried in the SCH data that is copied into the CBP MAC PDU header that is defined in Table 8 of the base standard. In the current draft, the A-BS ID comes from the FCH PHY-OM2, while most of the other parameters come from the ExtFCH. The “SCH data” field of Table 8 only accommodates the legacy structure of the coexistence parameters, and doesn’t accommodate how this data is spread over the FCH PHY-OM2 and/or ExtFCH. No specific resolution is provided in this section. | Modify “SCH Data” field of Table 8 to accommodate the relevant data as structured in SCH, FCH PHY-OM2, and/or FCH PHY-OM2+ExtFCH. --or-- Add a second/new CBP MAC PDU format, that is exclusive for use by A-BS, A-CPE, and newer S-CPEs that reflects the relevant data that is spread over FCH PHY-OM2 and ExtFCH. Refer to section 6 of 22-14/128r0 |

1. Proposed Resolution

Table 8 in 802.22 Standard is shown in below.



* Revise the title of Table 8 from “CBP MAC PDU format” to “CBP MAC PDU format (PHY OM1)”
* Add Table 8a for “CBP\_MAC\_PDU format (PHY OM2)” as follows

Table 8a – CBP MAC PDU format (PHY OM2)

|  |  |  |
| --- | --- | --- |
| Syntax | Size | Notes |
| CBP\_MAC\_PDU\_Format() { |  |  |
| Length | 8 bits | The length of bytes of the CBP MAC PDU including the MAC header and the CRC. |
| FCH and Extended FCH Index | 4 bits | FCH and Extended FCH Data included in the CBP\_MAC\_PDU contains the sum of the following elements (see Table A1 and Table B1)0000: 8 first parameters of the FCH for PHY OM2 (Table A1) = 11 bytes 1000: 10 parameters related to intra-frame QP of the Extended FCH (Table B1) = 12 bytes0100: 2 parameters on related to inter-frame QP of the Extended FCH (Table B1) = 2 bytes0010: 3 parameters on SCW scheduling of the Extended FCH (Table B1) = 6 bytes0001: 3 parameters on DS/US Split of the Extended FCH (Table B1) = 3 bytesNote that this last 3 parameters segment can only be included in CBP burst transmitted by A-BSs |
| FCH and Extended FCH Data | Variable (interger number of bytes) | Data extracted from the FCH and Extended FCH transmitted by A-BS sourcing this CBP. This data includes the A-BS\_ID. Only the useful information contained in the FCH and Extended FCH should be replicated here. This indicates that the FCH and Extended FCH should be built with IEs only present when needed. Table A1 and Table B1 should be modified accordingly. |
| Frame Number | 8 bits | The frame number in which the CBP burst was transmitted |
| HCS | 8 bits | Header Check Sequence. |
| IEs | Variable (interger number of bytes) | CBP information elements (see 7.6.1.3.1) |
| } |  |  |

***Modify text for step (3) of section 8.6.2.5.1 of base standard as follows***

***<Start of modification>***

3) Prior to applying the ECSSR-PV signature scheme to verify a signature in a received CBP MAC PDU (see Table 8 for PHY OM1 or Table8a for PHY OM2), a BS that receives messages shall use the Public Key Reconstruction Data (BEU , see 8.6.2.4.1) to reconstruct the public key of each BS implicit certificate that it has installed.

***<End of modification>***

***Add text for step (5) at the end of section 8.6.2.5.1 of base standard as follows***

***<Start of modification>***

5) In this section, the “CBP MAC PDU header” can take on different data depending which PHY OM the CBP MAC PDU burst is being transmitted on/with. For CBP MAC PDU transmitted on PHY OM1, the CBP MAC PDU header includes the “Length”, “SCH Data Index”, “SCH Data”, “Frame Number”, and “HCS” fields as defined in Table 8. For CBP MAC PDU transmitted on PHY OM2, the CBP MAC PDU header includes the “Length”, “FCH and Extended FCH Index”, “FCH and Extended FCH Data”, “Frame Number”, and “HCS” fields as defined in Table 8a.

***<End of modification>***