IEEE P802.11
Wireless LANs

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| CID 3085 |
| Date: 2022-07-06 |
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Abstract

This document proposes comment resolutions for LB264 CID 3085.

*Discussion :*

CID 3085 is shown on the next page.

Proposed Resolution:

* CID 3085 : Revised.

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| **CID** | **Draft** | **Clause Number(C)** | **Page(C)** | **Line(C)** | **Comment** | **Proposed Change** |
| 3085 | 3 | 11.55.3.2 | 83 | 61 | Text limits to Beacons and does not mention S1G Beacons. Hence unclear if EBCS is available for 802.11ah. | Review the references to Beacon and add reference to S1G Beacon.In general, desire is only include elements into the S1G Beacon if needed in every beacon. If the information is only needed prior to association then the information is in the probe request/response and is generally left out of the S1G Beacon. |

Discussion :

The Beacon contains the following elements pertinent to P802.11bc & S1G,

* Extended Capabilities element
* EBCS Parameters element
* EBCS TIM element

The S1G Beacon has the Extended Capabilities element as optionally present. If the Extended Capabilities element is not present, the S1G STA can obtain the Extended Capabilities element by transmitting a Probe Request.

The EBCS Parameter element will be included in the S1G Beacon if dot11EBCSSupportActivated is true and the length of dot11EBCSTrafficStreamTableis larger than 0, otherwise not present.

The EBCS TIM element is present in Beacons provided dot11EBCSTIMInBeacon is true and traffic is buffered. Hence include in the S1G Beacon with the same conditions.

Discussion :

For S1G PV1 Probe Response, will need to update the PV1 Probe Response Option element.

Discussion : The following change is to allow an S1G STA to request a PV1 Probe Response, including the EBCS Parameters element, by sending a Probe Request with the PV1 Probe Response Option element.

*Proposed change: for clause 9.4.2.209*

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| * Probe Response Option Bitmap subfield 4
 |
| Bit position | Subfield | Item requested | Reference |
| 0 | Request Mobility Domain | Mobility Domain element | 9.4.2.46 (Mobility Domain element (MDE)) |
| 1 | Request QoS Traffic Capability | QoS Traffic Capability element | 9.4.2.77 (QoS Traffic Capability element) |
| 2 | Request Channel Usage | Channel Usage element | 9.4.2.85 (Channel Usage element) |
| 3 | Request Time Advertisement | Time Advertisement element | 9.4.2.60 (Time Advertisement element) |
| 4 | Request Time Zone | Request Time Zone element | 9.4.2.86 (Time Zone element) |
| 5 | Request IBSS Parameter Set | IBSS Parameter Set element | 9.4.2.6 (IBSS Parameter Set element) |
| <ANA> | Request EBCS Parameters | EBCS Parameters element | <ANA>(EBCS Parameters element) |
| 6-7~~-<ANA>~~ | Reserved |  |  |

*Proposed change: for clause 9.4.2.297*

The EBCS DTIM Count field indicates how many Beacon or S1G Beacon frames (including the current frame) appear before the next EBCS DTIM. An EBCS DTIM count of 0 indicates that the current EBCS TIM is an EBCS DTIM.

*Proposed first change: for clause 11.55.3.2*

An EBCS AP, which is an S1G AP, may advertise its EBCS capabilities in the EBCS Support field in the Extended Capabilities element in S1G Beacon frames and PV1 Probe Response frames. An EBCS AP, which is an S1G AP, shall advertise its EBCS capabilities in the EBCS Support field in the Extended Capabilities element in Probe Response frames.

An EBCS AP, which is not an S1G AP, shall advertise its EBCS capabilities in the EBCS Support field in the Extended Capabilities

element in Beacon frames and Probe Response frames. An EBCS AP that has EBCS DL enabled shall transmit

EBCS Info frames periodically at the transmission rate that is specified by dot11EBCSInfoInterval. The

interval between two consecutive EBCA Info frames is specified by dot11EBCSInfoInterval. An EBCS AP

shall advertise the timing of the next EBCS Info frame transmission in the EBCS Info Frame TX Countdown

field in the EBCS Parameters element and shall not signal an upcoming EBCS Info frame via the TIM element

(see 9.4.2.5 (TIM element)) in Beacon frames. The EBCS Info frame shall be transmitted among the set of

group addressed frames transmitted immediately after the Beacon frame identified by the EBCS Info Frame

TX Countdown field set equal to 1 in the EBCS Parameters element. Details of EBCS Info frame generation

are described in 11.55.3.4 (EBCS Info frame generation and usage).

*Proposed second change: for clause 11.55.3.2*

An EBCS AP shall transmit the EBCS TIM element in Beacons or S1G Beacons if dot11EBCSTIMInBeacon is true, otherwise in EBCS Info frames.

*Proposed third change: for clause 11.55.3.2*

NOTE—An EBCS AP might transmit EBCS Info frames and EBCS Data frames that contain the same Frame Body field multiple times consecutively to increase redundancy. Beacon, S1G Beacon, Probe Request/Response/PV1 Probe Response, ANQP Request/Response, Authentication, Association Request/Response and EBCS Content Request/Response frames, and 4-way handshake are optional to receive EBCS traffic streams.

*Proposed change: for clause 11.55.3.3*

An EBCS receiver finds an EBCS capable AP by receiving a Beacon frame, S1G Beacon frame, PV1 Probe Response frame or a Probe Response frame with the EBCS Support field in the Extended Capability element equal to 1, by receiving an EBCS Info frame or by receiving an ANQP Response frame that includes the EBCS ANQP-element. To validate the source of an EBCS traffic stream, an EBCS receiver shall use the content of received EBCS Info frames. An EBCS receiver is able to know when the next EBCS Info frame is transmitted by inspecting the EBCS Parameters element in Beacon frames, S1G Beacon frames, PV1 Probe Response frame and Probe Response frames or the Enhanced Broadcast Services ANQP-element in ANQP Response frames. An EBCS receiver may select the EBCS traffic streams to receive and consume. Details of the usage of the EBCS Info frame is described in 11.55.3.4 (EBCS Info frame generation and usage).

*Proposed change: for clause 11.55.4.3*

An EBCS non-AP STA may transmit an EBCS UL frame without receiving a Beacon frame, S1G Beacon frame, PV1 Probe Response frame or a Probe Response frame with the EBCS Relaying Supported field of the Extended Capabilities element set to 1.

*Proposed first change: for clause Annex C*

dot11EBCSDTIMPeriod OBJECT-TYPE

 SYNTAX Unsigned32 (1..255)

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity. Changes take effect for

 the next MLME-START.request primitive. This attribute specifies the number

 of beacon intervals that elapse between transmission of Beacon frames or S1G

 Beacon frames containing an EBCS TIM element whose DTIM Count field is 0.

 This value is transmitted in the DTIM Period field of Beacon frames."

*Proposed second change: for clause Annex C*

dot11EBCSTIMInBeacon OBJECT-TYPE

 SYNTAX TruthValue

 MAX-ACCESS read-write

 STATUS current

 DESCRIPTION

 "This is a control variable.

 It is written by an external management entity or the SME. Changes take

 effect as soon as practical in the implementation. This attribute when

 true, indicates that the EBCS TIM element is included in the Beacon

 frame or S1G Beacon frame."

**References:**