IEEE P802.11
Wireless LANs

|  |
| --- |
| Proposed Spec Text for CR |
| Date: 2020-09-15 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Xiaofei Wang | InterDigital Inc. |  | +1-607-592-2727 | Xiaofei.wang@interdigital.com |
| Rui Yang |  |  |
|  |  |  |  |  |

Abstract

This submission proposes spec text for CR for CID 329, 20, 33, 337, 330, 260, 26, 190, 189 and 212. The baseline for this comment resolution document is 802.11bc Draft 0.1.

***TGbc Editor: Please insert the following sections at P24L17 after the subclause 9.4.2.bc.248:***

## 9.4.2.249 eBCS Request element

The eBCS Request element is used by an eBCS STA to indicate request for one or more eBCSs to its associated AP. The format of this element is shown in Figure 9-xxx1 (eBCS Request element).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Element ID | Length | Element ID Extension | eBCS Request Information Set |
| Octets: | 1 | 1 | 1 | variable |
| 1. eBCS Request element format
 |

The Element ID, Length, and Element ID Extension fields are defined in 9.4.2.1 (General).

The eBCS Request Information Set contains one or more eBCS Request Info subfields.

The format of the eBCS Request Info subfield is shown in Figure 9-xxx2 (eBCS Request Info subfield).

|  |  |  |  |
| --- | --- | --- | --- |
|  | eBCS Request Info Control | Content ID | Requested Time to Termination |
| Octets: | 1 | 1 | 0 or 4 |
| 1. eBCS Request Info subfield format
 |

The format of the eBCS Request Info Control subfield is shown in Figure 9-xxx3 (eBCS Request Info Control subfield).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | B0 | B1     |  | B7 |
|  | Requested Time To Termination Present | Reserved |
| Bits: | 1 |  | 7 |  |
| 1. eBCS Request Info Control subfield format
 |

The value 1 in the Requested Time To Termination subfield indicates that a Requested Time To Termination subfield is present in the same eBCS Request Info subfield.

The Content ID is 1 octet in length and indicates the ID of the eBCS being requested.

The Requested Time To Termination subfield is 4 octets in length and indicates the period in number of TBTTs during which the eBCS identified by the Content ID included in the same eBCS Request Info subfield is being requested.

## 9.4.2.249 eBCS Response element

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Element ID | Length | Element ID Extension | eBCS Response Information Set |
| Octets: | 1 | 1 | 1 | variable |
| 1. eBCS Response element format
 |

The Element ID, Length, and Element ID Extension fields are defined in 9.4.2.1 (General).

The eBCS Response Information Set contains one or more eBCS Response Info subfields.

The format of the eBCS Response Info subfield is shown in Figure 9-xxx5 (eBCS Response Info subfield).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | eBCS Response Info Control | Content ID | Time To Termination | eBCS SP Duration | eBCS SP Interval |
| Octets: | 1 | 1 | 0 or 4 | 0 or 2 | 0 or 2 |
| 1. eBCS Response Info subfield format
 |

The format of the eBCS Response Info Control subfield is shown in Figure 9-xxx6 (eBCS Request Info Control subfield).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | B0 | B1     | B2 | B3                       B7 |
|  | eBCS Request Status | Time to Termination Present | eBCS SP Duration Present | eBCS SP Interval Present | Reserved |
| Bits: | 1 | 1 | 1 | 1 | 5 |
| 1. eBCS Response Info Control subfield format
 |

The value 1 in the eBCS Request Status subfield indicates that the request for the eBCS identified by the Content ID included in the same eBCS Response Info subfield is successful. The value 0 in the eBCS Request Status subfield indicates that the request for the eBCS identified by the Content ID included in the same eBCS Response Info subfield is denied.

The value 1 in the Time To Termination Present indicates that a Time To Termination subfield is included in the same eBCS Response Info subfield. The value 0 indicates that the same eBCS Response Info subfield does not contain a Time To Termination subfield.

The value 1 in the eBCS SP Duration Present indicates that a eBCS SP Duration subfield is included in the same eBCS Response Info subfield. The value 0 indicates that the same eBCS Response Info subfield does not contain a eBCS SP Duration subfield.

The value 1 in the eBCS SP Interval Present indicates that a eBCS SP Interval subfield is included in the same eBCS Response Info subfield. The value 0 indicates that the same eBCS Response Info subfield does not contain a eBCS SP Interval subfield.

The Content ID is 1 octet in length and indicates the ID of the eBCS.

The Time To Termination subfield is 4 octets in length and indicates the time to termination in number of TBTTs during which the eBCS identified by the Content ID included in the same eBCS Request Info subfield is broadcast.

The eBCS SP Duration is two octets in length and indicates the expected duration of each eBCS service period in TUs.

The eBCS SP Interval is two octets in length and indicates the target interval between consecutive eBCS service periods for the eBCS identified by the Content ID in the same eBCS Response Info subfield in TUs.

***TGbc Editor: Please modify the following subclauses 9.6.31 and 9.6.32 starting at P36L8 as follows:***

## 9.6.31 eBCS Action details

## 9.6.31.1 eBCS Action field

Several Action frame formats are defined to support eBCS functionalities. An eBCS Action field, in the octet field immediately after the Category field, differentiates the formats. The eBCS Action field values associated with each frame format are defined in Table 9-xxx1 (eBCS Action field values).

|  |
| --- |
| 1. -- eBCS Action field values
 |
| Value | Meaning |
| 0 | eBCS Request |
| 1 | eBCS Response |
| 2-255 | Reserved |

## 9.6.31.2 eBCS Request Frame format

The eBCS Request frame is an Action frame of category eBCS. The eBCS Request frame is transmitted by a STA to its associated eBCS AP to request one or more eBCS services. The Action field of a eBCS Response frame contains the information shown in Table 9-xxx2 – (eBCS Request Setup frame Action field format).

|  |
| --- |
| 1. -- eBCS Request frame Action field format
 |
| Order | Information |
| 1 | Category |
| 2 | eBCS Action |
| 3 | Dialog Token |
| 4 | eBCS Request element (see 9.4.2.249 (eBCS Request element)) |

The Category field is defined in Table 9-53 (Category values).

The eBCS Action field is set to 0 as defined in Table 9-xxx1 (eBCS Action field values).

The Dialog Token field is defined in 9.4.1.12 (Dialog Token field).

In an eBCS Request frame, the Dialog Token field is set to a nonzero value chosen by the transmitting STA to identify the request/response transaction.

The eBCS Request element field contains an eBCS Request element as defined in 9.4.2.249 (eBCS Request element).

## 9.6.31.3 eBCS Response Frame format

The eBCS Response frame is an Action frame of category eBCS. The eBCS Response frame is transmitted by an eBCS AP to an associated eBCS STA in response to a received eBCS Request frame received from the eBCS STA. The Action field of a eBCS Response frame contains the information shown in Table 9-xxx3 – (eBCS Response Setup frame Action field format).

|  |
| --- |
| 1. -- eBCS Response frame Action field format
 |
| Order | Information |
| 1 | Category |
| 2 | eBCS Action |
| 3 | Dialog Token |
| 4 | eBCS Response element (see 9.4.2.250 (eBCS Response element)) |

The Category field is defined in Table 9-53 (Category values).

The eBCS Action field is set to 0 as defined in Table 9-xxx1 (eBCS Action field values).

The Dialog Token field is defined in 9.4.1.12 (Dialog Token field).

In an eBCS Response frame, the Dialog Token field is set to a value contained in the Dialog Toke field in the corresponding received eBCS Request frame.

The eBCS Response element field contains an eBCS Response element as defined in 9.4.2.250 (eBCS Response element).

***TGbc Editor: Please modify subclause 11.22.6.bc eBCS Negotiation Procedure for Associated STAs as follows starting at P47L52:***

## 11.22.6.bc eBCS Negotiation Procedure for Associated STAs

An eBCS STA may transmit an eBCS Request frame to its associated eBCS AP to request one or more eBCSs provided by the eBCS AP. If an eBCS AP has indicated that one or more eBCSs require association, an eBCS STA shall associate with the eBCS AP and subsequently transmit an eBCS Request frame to request one or more of such eBCSs. Request for one or more eBCSs that doesn’t require association may also be included in the same eBCS Request frame. When requesting an eBCS using an eBCS Request frame, an eBCS STA may request the eBCS with a certain time to termination as indicated in Time To Termination field included in the eBCS Request frame.

After receiving an eBCS Request frame from an associated eBCS STA, an eBCS AP shall respond with an eBCS Response frame. If the eBCS AP indicates in the eBCS Response frame that the request for an eBCS is successful, it may include a Time of Termination field to indicate the time to termination for the eBCS. It may also include eBCS service period information and the frequency of the eBCS service periods for the eBCS in the eBCS Response frame.

Note: The eBCS transmitter of an eBCS has the authority to determine the time to termination of the eBCS.