IEEE P802.11
Wireless LANs

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| Proposed Spec Text for CR Part 5 |
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Abstract

This submission proposes the spec text for resolutions for the CID 1016, 11381, 1460, 1124 and 1482. The baseline for this comment resolution document is 802.11bc Draft 1.03.

* Rev 0: first draft
* Rev 1: incorporated live edits from Aug 8, 2021 teleconference

***TGbc Editor: Please modify the text of 6.3.126 as follows (802.11bc D1.03).***

**6.3.126.6.2 Semantics of the service primitive**

The primitive parameters are as follows:

MLME-EBCSNEGOTIATION.request(

PeerSTAAddress,

DialogToken,

EBCSRequest

 )

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** |
| PeerSTAAdress | MAC Address | Any valid individual MAC Address | Specifies the MAC address of the peer MAC entity within an associated AP to which the EBCS Requestframe is transmitted. |
| DialogToken | Integer | 1-255 | The dialog token to identify the EBCS negotiationtransaction. |
| EBCSRequest | EBCS Request field | As defined in9.4.1.68 (EBCS Request field) | Specifies the request information for one or more EBCS. |

**[#1636]**

**6.3.126.7.2 Semantics of the service primitive**

The primitive parameters are as follows:

MLME-EBCSNEGOTIATION.confirm(

DialogToken,

EBCSResponse

 )

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** |
| DialogToken | Integer | 1-255 | The dialog token to identify the EBCS negotiationtransaction. |
| EBCSResponse | EBCS Response field | As defined in9.4.1.692.298 (EBCS Response field) | The contents of the EBCS Response element in the received EBCS Response frame. |

**[#1636]**

**6.3.126.8.2 Semantics of the service primitive**

The primitive parameters are as follows:

MLME-EBCSNEGOTIATION.indication(

PeerSTAAddress,

DialogToken,

EBCSRequest

 )

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** |
| PeerSTAAdress | MAC Address | Any valid individualMAC Address | Specifies the MAC address of the peer MAC entityfrom which the EBCS Request frame is received. |
| DialogToken | Integer | 1-255 | The dialog token to identify the EBCS negotiation transaction. |
| EBCSRequest | EBCS Request field | As defined in9.4.1.68 (EBCS Request field) | Specifies the request information for one or more EBCS. |

**[#1636]**

**6.3.126.9.2 Semantics of the service primitive**

The primitive parameters are as follows:

MLME-EBCSNEGOTIATION.response(

PeerSTAAddress,

DialogToken,

EBCSResponse

 )

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** |
| PeerSTAAdress | MAC Address | Any valid individualMAC Address | Specifies the MAC address of the peer MAC entity towhich the EBCS Response frame is transmitted. |
| DialogToken | Integer | 1-255 | The dialog token to identify the EBCS negotiationtransaction. |
| EBCSResponse | EBCS Response field | As defined in9.4.1.69 (EBCS Response field) | Specifies the results and information of the EBCS negotiation procedure. |

**[#1636]**

***TGbc Editor: Please modify the Table 9-74 as follows (802.11RevMD D0.2).***

The Action Details field contains the details of the action. The details of the actions allowed in each category are described in the appropriate subclause referenced in Table 9-74 (Category values).

|  |
| --- |
| * Category values
 |
| 31(11ax) | Protected HE | 9.6.32 (Protected HE Action frame details(11ax)) | Yes | No |
| ANA | EBCS | 9.6.34 (EBCS Action frame details) | Yes | No |
| ANA+1–125 | Reserved |  |  |  |
| 126 | Vendor-specific Protected | 9.6.5 (Vendor-specific action details) | Yes | No |

***[#1381, 1124]***

***TGbc Editor: Please modify the text of 11.55.4 as follows (802.11bc D1.03).***

The Request Method subfield indicates the request method to request an extension of the EBCS identified by the content ID contained in the Content ID subfield. The encoding of the Request Method subfield is defined in Table 9-397d (Request Method subfield encoding).

**Table 9-397d—Request Method subfield encoding**

|  |  |  |
| --- | --- | --- |
| **Negotiation Method subfield value** | **Meaning** | **Notes** |
| 0 | No negotiation |  |
| 1 | Request through EBCS Request frames | EBCS request by STAs that are associated with the broadcaster |
| 2 | Request through EBCS Streams Request ANQP-element | EBCS request by STAs that are not associated with the broadcaster |
| 3 | Request through IP request | Out of band IP request |
| 4-255 | Reserved |  |

***[#1460]***

***TGbc Editor: Please modify the text of 11.55.4 as follows (802.11bc D1.03). Please note that section 11.55.4.2 shown below is currently not in TGbc D1.03, but was approved during July 2021 Meeting, and was 11.55.5 in the current form as approved in 11-21/600r6.***

**11.55.4 EBCS negotiation procedure**

An EBCS AP and a non-AP STA shall follow the procedures in 11.55.4.1 (EBCS negotiation procedure for associated STAs) or 11.55.4.2 (EBCS negotiation procedure for unassociated STAs) to request EBCS traffic streams depending on the association state of the requesting EBCS non-AP STA. One or more EBCS traffic streams may be available for an EBCS non-AP STA to consume without the EBCS STA explicitly requesting them from an EBCS AP. [#1016]

**11.55.4.1 EBCS negotiation procedure for associated STAs**

An EBCS non-AP STA may transmit an EBCS Request frame to its associated EBCS AP to request one or

more EBCS traffic streams provided by the EBCS AP. If an EBCS AP has indicated that one or more

EBCS traffic streams require association, an EBCS non-AP STA shall associate with the EBCS AP and

subsequently transmit an EBCS Request frame to request one or more of such EBCS traffic streams. A

request for one or more EBCS traffic streams that does not require association may also be included in the

same EBCS Request frame. When requesting an EBCS using an EBCS Request frame, an EBCS non-AP

STA may request an EBCS with a certain time to termination as indicated in the Requested Time To

Termination field included in the EBCS Request frame. This element optionally allows the non-AP STA to

provide the MAC address of the AP currently serving the EBCS stream, which may not be the same as the

one receiving the request.

##### 11.55.4.2 EBCS negotiation procedure for unassociated STAs

An unassociated EBCS STA may transmit an Enhanced Broadcast Services Request ANQP-element to an EBCS AP to request one or more EBCS traffic streams provided by the EBCS AP that the EBCS AP has indicated do not require association. When requesting an EBCS traffic stream using an Enhanced Broadcast Services Request ANQP-element, an EBCS STA may request a specific time to termination using the Requested Time To Termination subfield.

After receiving an Enhanced Broadcast Services Request ANQP-element from an unassociated EBCS STA, an EBCS AP shall respond with Enhanced Broadcast Services Response ANQP-element and Enhanced Broadcast Services ANQP-element. If the EBCS AP accepts a request for an EBCS traffic stream, it may include a Time To Termination subfield in the Enhanced Broadcast Services ANQP-element to indicate the time to termination for the EBCS traffic stream.

NOTE—The EBCS AP has the authority to determine the time to termination of the EBCS traffic stream. ANQP-elements received from unassociated STAs are not protected and hence the EBCS AP might exercise caution in accepting certain requested durations. An EBCS AP evaluates certain criteria before responding to the EBCS service request from an unassociated STA from which it receives an Enhanced Broadcast Services Request ANQP-element. Such criteria might include, but are not limited to, limiting the time duration and/or frequency of EBCS traffic stream requests. The evaluation of the criteria might be based on local policies installed at the EBCS AP, which is out of scope of this standard.

**11.55.5 EBCS Termination Notice Procedure**

The EBCS Termination Notice Procedure allows an EBCS AP that is a broadcaster of EBCS traffic streams to

indicate that at least one of the EBCS traffic streams that it is broadcasting is to be terminated.

An EBCS AP that is the broadcaster of one or more EBCS traffic streams shall start to transmit EBCS

Termination Notice frames if one or more EBCS traffic streams that it is transmitting will terminate within an interval that

is equal to or shorter than dot11EBCSTerminationNoticeTime, if the AP is not periodically transmitting a

schedule for the EBCS that is to be terminated. If the EBCS AP starts to transmit EBCS Termination

Notice frames, it shall transmit the EBCS Termination Notice frames with a period that is larger

than dot11EBCSTerminationNoticeMinimumInterval and smaller than

dot11EBCSTerminationNoticeMaximumInterval.

The EBCS AP transmitting an EBCS Termination Notice frame indicates in the Time To Termination

subfield in an EBCS Termination Info subfield the number of TBTTs before the EBCS identified by the

content ID contained in the Content ID subfield in the same EBCS Termination Info subfield terminates.

[#1482]

The EBCS AP transmitting an EBCS Termination Notice frame shall indicate in the Request Method

subfield in an EBCS Termination Info subfield the request method that a STA should use to negotiate for

the extension of the EBCS identified by the content ID contained in the Content ID subfield in the same

EBCS Termination Info subfield. The EBCS AP transmitting an EBCS Termination Notice frame may

indicate in the Destination Address subfield in an EBCS Termination Info subfield the address associated

with the request method indicated in the Request Method subfield in the same EBCS Termination Info

subfield that a STA should use to negotiate for the extension of the EBCS identified by the content ID

contained in the Content ID subfield in the same EBCS Termination Info subfield.

After transmitting an EBCS Termination Notice frame, an EBCS AP shall transmit an EBCS Termination

Notice frame with an updated value in the Time To Termination subfield in an EBCS Termination Info

subfield if the EBCS traffic stream identified by the content ID in the Content ID subfield in the same EBCS Termination

Info subfield has been negotiated to have a new time to termination value. If the negotiated duration for the

EBCS traffic stream is longer than the maximum time to termination value, the transmitting AP shall set the Time To Termination subfield to 65535.

An EBCS non-AP STA that receives an EBCS Termination Notice frame may negotiate for the extension of an

EBCS if the EBCS traffic stream indicated in one of the EBCS Termination Info subfields terminates earlier than desired.

The EBCS non-AP STA may negotiate the extension of the EBCS using the request method indicated in the request

method in the EBCS Termination Info subfield following the procedures defined in 11.55.4 (EBCS

Negotiation Procedure for Associated STAs) and 11.55 (Enhanced Broadcast Services Procedures).

An EBCS non-AP STA shall skip the transmission of any EBCS Request frame or a frame containing an Enhanced

Broadcast Request ANQP-element requesting an EBCS traffic stream if the STA receives an EBCS Termination Notice frame with a valid time to termination value contained in the EBCS Termination Info subfield containing

the content ID of the EBCS.

NOTE—The valid values of a received Time To Termination subfield are determined by the receiving STA

and are beyond the scope of this standard.

[#1482]