IEEE P802.11
Wireless LANs

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| Proposed Text for CR Part 5 |
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Abstract

This submission proposes the spec text for resolutions for the CID 2272, 2015, 2016, 2045, 2046, 2139, 2292, 2273, 2286, 2287, 2289, 2290, 2291. The baseline for this comment resolution document is 802.11bc Draft 2.2.

* Rev 0: first draft

***TGbc Editor: Please modify the text of 9.4.1.69 as follows (802.11bc D2.2).The paragraph has been divided into two paragraphs***

The EBCS SP Duration subfield indicates the nominal duration of each EBCS service period in TUs.

The EBCS SP Interval subfield indicates the target interval between consecutive EBCS service periods for the

EBCS traffic stream identified by the Content ID subfield in the same EBCS Response Info subfield in TUs.[#2016]

***TGbc Editor: Please modify the text of 9.6.7.53 and 11.55.5 as follows (802.11bc D2.2).***

#### EBCS Termination Notice frame format

The format of an EBCS Termination Info subfield is shown in [Figure 9-909av (EBCS Termination Info](#_bookmark162) [subfield format](#_bookmark162)).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| EBCSTermination Info Control | Content ID | Title Length | Title | Time To Termination | Request Method | Negotiation Address Type | Negotiation Address |

Octets: 1 1 0 or 1 variable 2 1 0 or 1 variable

#### Figure 9-909av—EBCS Termination Info subfield format [#2273, 2286]

The format of the EBCS Termination Info Control subfield is shown in [Figure 9-909aw (EBCS Termination](#_bookmark163) [Info Control subfield format).](#_bookmark163)

B0 B1 B2 B3 B7

|  |  |  |  |
| --- | --- | --- | --- |
| Title Presence Indicator | NegotiationAddress Presence Indicator | Association Required | Reserved |

Bits: 1 1 1 5

#### Figure 9-909aw—EBCS Termination Info Control subfield format

A value of 1 in the Title Presence Indicator subfield indicates that a Title Length subfield and a Title subfield are present in the EBCS Termination Info subfield. A value of 0 indicates that a Title Length subfield and a Title subfield are not present in the EBCS Termination Info subfield.

A value of 1 in the Negotiation Address Presence Indicator subfield indicates that a Negotiation Address Type subfield and a Negotiation Address subfield are present in the EBCS Termination Info subfield. The value of 0 indicates that a Negotiation Address Type subfield and a Negotiation Address subfield are not present in the EBCS Termination Info subfield.

The Request Method subfield indicates the request method to request an extension of the EBCS traffic stream 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).](#_bookmark164)

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

|  |  |  |
| --- | --- | --- |
| **Negotiation Method subfield value** | **Meaning** | **Notes** |
| 0 | No negotiation |  |
| 1 | Request through EBCS Content Request frames | EBCS traffic stream request by STAs that are associated with the broadcaster |
| 2 | Request through Enhanced Broadcast Services Content Request ANQP-element [#2272] | EBCS traffic stream request by STAs that are not associated with the broadcaster |
| 3 | Request through IP request | Out of band IP request |
| 4-255 | Reserved |  |

The Negotiation Address Type subfield indicates the type of the address included in the Negotiation Address subfield. The encoding of the Negotiation Address Type subfield is defined in [Table 9-397e (Negotiation](#_bookmark165) [Address Type subfield encoding](#_bookmark165)).

#### Table 9-397e—Negotiation Address Type subfield encoding

|  |  |
| --- | --- |
| **Destination Address Type value** | **Meaning** |
| 0 | MAC address |
| 1 | UDP/IPv4 address |
| 2 | UDP/IPv6 address |
| 3 | UDP/hostname |
| 4-255 | Reserved |

The Negotiation Address subfield indicates the address to be used for negotiating for the extension of the EBCS traffic stream identified by the content ID contained in the Content ID subfield. The format and the length of the Negotiation Address subfield depends on the value contained in the Negotiation Address Type subfield.

The Negotation Address subfield contains a MAC address if the Negotiation Address Type is set to 0.

The format of the Negotiation Address subfield when the Negotiation Address Type is set to 1 is shown in [Figure 9-909ax (Negotiation Address subfield format for a Negotiation Address Type of 1](#_bookmark166)).

UDP Port

IPv4 Address

Octets: 4 2

#### Figure 9-909ax—Negotiation Address subfield format for a Negotiation Address Type of 1

The IPv4 Address subfield indicates an IPv4 address used for negotiating the extension of the EBCS traffic stream.

The UDP Port subfield indicates the UDP port associated with the IPv4 address indicated in the IPv4 Address subfield in little endian format.

The format of the Negotiation Address subfield when the Negotiation Address Type is equal to 2 is shown in [Figure 9-909ay (Negotiation Address subfield format for a Negotiation Address Type of 2](#_bookmark167)).

UDP Port

IPv6 Address

Octets: 16 2

#### Figure 9-909ay—Negotiation Address subfield format for a Negotiation Address Type of 2

The IPv6 Address subfield indicates an IPv6 address used for negotiating the extension of the EBCS traffic stream.

The UDP Port subfield indicates the UDP port associated with the IPv6 address indicated in the IPv6 Address subfield in little endian format.

The format of the Negotiation Address subfield when the Negotiation Address Type is equal to 3 is shown in [Figure 9-909az (Negotiation Address subfield format for a Negotiation Address Type of 3](#_bookmark168)).

|  |  |  |
| --- | --- | --- |
| Hostname Length | Hostname | UDP Port |

Octets: 1 variable 2

#### Figure 9-909az—Negotiation Address subfield format for a Negotiation Address Type of 3

The Hostname Length subfield indicates the length of the Hostname subfield in octets.

The Hostname subfield indicates the host name for negotiating the extension of the EBCS traffic stream in a UTF-8 string.

The UDP Port subfield indicates the UDP port associated with the host name indicated in the Hostname subfield in little endian format.

***Editor’s note: 802.11az/D4.0 uses up to clause 9.6.34, table 9-535.***

#### EBCS termination notice procedure

The EBCS termination notice procedure allows a STA that is a broadcaster of EBCS traffic streams to indicate that one or more of the EBCS traffic streams that it is broadcasting is to be terminated.

An EBCS STA shall start to transmit EBCS Termination Notice frames if one or more EBCS that it is transmitting will terminate within an interval that is equal to or shorter than dot11EBCSTerminationNoticeTime, if the STA is not periodically transmitting a schedule for the EBCS traffic stream that is to be terminated. If the EBCS STA starts to transmit EBCS Termination Notice frames, the STA shall transmit the EBCS Termination Notice frames with a period that is larger than dot11EBCSTerminationNoticeMinimumInterval and smaller than dot11EBCSTerminationNoticeMaximumInterval.

The EBCS STA transmitting an EBCS Termination Notice frame shall indicate in the Time To Termination subfield in an EBCS Termination Info subfield the number of TBTTs before the EBCS traffic stream identified by the content ID contained in the Content ID subfield in the same EBCS Termination Info subfield terminates.

The EBCS STA 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 traffic stream identified by the content ID contained in the Content ID subfield in the same EBCS Termination Info subfield. The EBCS STA transmitting an EBCS Termination Notice frame may indicate in the Negotiation 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 traffic stream 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 STA 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 STA shall set the Time To Termination subfield to 65535.

An EBCS STA that receives an EBCS Termination Notice frame shall [#2287] negotiate for the extension of an EBCS traffic stream if the EBCS traffic stream indicated in one of the EBCS Termination Info subfields terminates earlier than desired. If the EBCS STA negotiates the extension of the EBCS traffic stream, it shall use the request method indicated in the Request Method subfield in the EBCS Termination Info subfield (See [11.55.4](#_bookmark217) [(EBCS negotiation procedure for associated STAs)](#_bookmark217) and [11.55.5 (EBCS negotiation procedure for unassociated](#_bookmark219) [STAs)](#_bookmark219)).

An EBCS STA shall not transmit an EBCS Content Request frame or a frame containing an EBCS Content Request ANQP- element [#2289] requesting an EBCS traffic stream if the STA receives an EBCS Termination Notice frame with an acceptable time to termination value contained in the EBCS Termination Info subfield containing the content ID of the EBCS traffic stream. [#2139, 2290]

NOTE—Whether a value of a received Time To Termination subfield is acceptable is determined by the receiving STA and is beyond the scope of this standard. [#2291]