### 11. MLME

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##### 4 11.3.3 Frame filtering based on STA state

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###### Add the following additional Data frame class as shown:

1. The frame classes are defined as follows:

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9 a) Class 1 frames

10 3) Data frames

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1. i) Data frames between IBSS STAs
2. ii) Data frames within PBSS

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15 iii) EBCS Data frames

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#### 18 11.22 .WLAN interworking with external networks procedures

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##### 20 11.22.3 Interworking procedures: generic advertisement service (GAS)

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##### 23 11.22.3.3 ANQP procedures

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##### 25 11.22.3.3.1 General

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###### 28 Add the following three new entries at the base of Table 11-14

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##### 31 Table 11-14—ANQP usage

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| --- | --- | --- | --- | --- | --- |
| **ANQP-element name** | **ANQP-ele- ment (sub- clause)** | **ANQP-**  **element type** | **BSS** | | **IBSS** |
| **AP** | **Non-AP and non- PCP STA** | **STA** |
| Enhanced Broadcast Services | [9.4.5.30](#_bookmark89)  [(Enhanced Broad- cast Services](#_bookmark89) [ANQP-element)](#_bookmark89) | S | T, R, G | ~~T,~~ [CID2162] R, G | - |
| Enhanced Broadcast Services Request | [9.4.5.31](#_bookmark126)  [(Enhanced Broad- cast Services Request ANQP-](#_bookmark126) [element)](#_bookmark126) | Q | ~~T,~~ [CID2165] R, G | T, ~~R,~~ [CID2164] G | - |
| Enhanced Broadcast Services Response | [9.4.5.32](#_bookmark132)  [(Enhanced Broad- cast Services Response ANQP-](#_bookmark132) [element)](#_bookmark132) | S | T, ~~R,~~ [CID2167] G | ~~T,~~ [CID2166]R, G | - |

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###### 60 Add the following section:

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###### 63 Editor’s Note: 802.11-2020 uses up to 11.22.3.3.16

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##### 1 11.22.3.3.17 Enhanced Broadcast Services procedures

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1. EBCS traffic streams may be advertised using the Enhanced Broadcast Services ANQP-element (see [9.4.5.30](#_bookmark89)

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1. [(Enhanced Broadcast Services ANQP-element)](#_bookmark89)). The element describes a set of ~~zero~~ one [CID2120] or more EBCS traffic streams that are available from an AP. Each broadcast service advertisement may contain the time and duration of transmission, together with an identifier of the broadcast content~~,~~ (a content ID) [CID2275], and other information relevant to the broadcast service. The information present in each broadcast service advertisement is indicated in a Control field.

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1. If the Negotiation Method subfield is set to 1 ~~For the “Request using EBCS Content Request frames” negotiation method~~ [CID 2035], the Association Required subfield
2. of the Control field indicates if association is required to receive the EBCS traffic stream. For other negotiation
3. methods, the Association Required subfield indicates if association is required to request and receive the EBCS
4. traffic stream.

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1. Each broadcast service advertisement [CID2121] ~~may~~ also contains [CID2121] the request method used to negotiate the starting time
2. of the content (Negotiation Method field), ~~the scheduled next transmission (Next Tx Schedule field), the time~~
3. ~~until the content will end its current transmission (Time To Termination field),~~ [CID2121] the authentication algorithm the content uses (Content Authentication Algorithm field), the ~~destination~~ content [CID2121] address (and port for UDP over IP transport) used by the higher layer protocol of the EBCS traffic stream and the title (Title field) of the service in a human readable form. It may also include the scheduled next transmission (Next Tx Schedule field) or the time until the content will end its current transmission (Time To Termination field). [CID2121]

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1. NOTE—An EBCS traffic stream ~~received from the content address~~ [CID2122] signaled in an Enhanced Broadcast Services ANQP-
2. element might be provided by a malicious user, since the ANQP-element might be unsecured. To mitigate this risk, the origin authentication methods described in clause 12.14 (Frame authentication for EBCS) may be used to authenticate the origin of EBCS traffic streams.[CID2122]

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1. If the content is authenticated in the MAC layer [CID2123] (nonzero values of the Content Authentication Algorithm field as defined in
2. [Table 9-340b (Content Authentication Algorithms)](#_bookmark96)) or requires negotiation (nonzero values of the Negotiation
3. Method subfield as defined in [Table 9-340a (Negotiation Method subfield encoding)](#_bookmark94)), the information
4. provided by the Enhanced Broadcast Services ANQP-element ~~is not enough to receive~~ needs to be extended with additional information to receive [CID2220] the traffic stream. The

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1. information on the authentication and negotiation method may be obtained in the next EBCS Info frame as
2. indicated by the Content Authentication Algorithm field and in the Negotiation Method field included in the
3. EBCS Broadcast Services ANQP-element.

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38 If the content follows the authentication scheme defined in [12.14.4 (No frame authentication with mandatory](#_bookmark256)

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1. [higher layer source authentication (HLSA))](#_bookmark256) as indicated by the Content Authentication Algorithm subfield
2. equal to 0 as defined in [Table 9-340b (Content Authentication Algorithms)](#_bookmark96), the information provided is enough
3. to receive the traffic stream.

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1. ~~A STA may use the Enhanced Broadcast Services ANQP-element to request registration (or unregistration)~~

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1. ~~from a peer STA transmitting an EBCS traffic stream.~~ If the ~~Enhanced Broadcast Services ANQP-element~~ Enhanced Broadcast Service Request ANQP-element [2277] is one of the permitted negotiation methods, a STA may use it to request registration (or unregistration) from a peer STA ~~transmitting an EBCS traffic stream~~[CID2278]. [CID2124]This ANQP-element optionally allows the STA to provide the MAC address of the AP currently serving the EBCS traffic stream, which might not be the same as the one receiving the ANQP request.

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50 NOTE—The requesting STA can be either an EBCS AP or an EBCS non-AP STA. 51

###### 52 Insert the following subclauses after 11.54

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###### 54 Editor’s Note: Based on 802.11ay 11.54, Figures after 11-61e

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##### 11.55.5 EBCS negotiation procedure for unassociated STAs

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1. ~~The EBCS termination notice procedure allows a STA that is a broadcaster of EBCS traffic streams to indicate~~
2. ~~that at least one of the EBCS traffic streams that it is broadcasting is to be terminated.~~ [CID2047]
3. An unassociated EBCS STA may transmit an Enhanced Broadcast Services Request ANQP-element to an EBCS
4. AP to ~~request~~ register for [CID2285] one or more EBCS traffic streams ~~provided by the EBCS AP~~, when that

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1. ~~EBCS~~ AP has indicated that it does ~~do~~ not require an association [CID2238]. When ~~requesting~~ registering for [CID2285] an EBCS traffic
2. stream using an Enhanced Broadcast Services Request ANQP-element, an EBCS STA may request a specific time
3. to termination using the Requested Time To Termination subfield.

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59 After receiving an Enhanced Broadcast Services Request ANQP-element from an unassociated EBCS STA, an

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1. EBCS AP shall respond with Enhanced Broadcast Services Response ANQP-element and Enhanced Broadcast
2. Services ANQP-element. If the EBCS AP accepts a request for an EBCS traffic stream, it may include a Time
3. To Termination subfield in the Enhanced Broadcast Services ANQP-element to indicate the time to
4. termination for the EBCS traffic stream.

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