IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 802.11bc LB257 – Resolution for CID 2163, 2165, and 2279 | | | | |
| Date: March , 2022 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Antonio de la Oliva | Interdigital Ltd, UC3M |  |  | aoliva@it.uc3m.es |

Abstract:

This contribution helps clarifying the ue of ANQP messages within 11bc

##### 11.22.3.3.1 General

26

27

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

29

30

##### 31 Table 11-14—ANQP usage

32

33

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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](#_bookmark87)  [(Enhanced Broad- cast Services](#_bookmark87) [ANQP-element)](#_bookmark87) | S | T, R, G | R, G | - |
| Enhanced Broadcast Services Request | [9.4.5.31](#_bookmark124)  [(Enhanced Broad- cast Services Request ANQP-](#_bookmark124) [element)](#_bookmark124) | Q | T, R, ~~G~~ | T, ~~G~~ | - |
| Enhanced Broadcast Services Response | [9.4.5.32](#_bookmark130)  [(Enhanced Broad- cast Services Response ANQP-](#_bookmark130) [element)](#_bookmark130) | S | T, ~~G~~ | R, ~~G~~ | - |

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

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

61

62

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

64

65

##### 11.22.3.3.17 Enhanced Broadcast Services procedures

EBCS traffic streams may be advertised using the Enhanced Broadcast Services ANQP-element (see [9.4.5.30](#_bookmark87) [(Enhanced Broadcast Services ANQP-element)](#_bookmark87)) transmitted over a GAS Query Response in a GAS Initial Response frame or Group Addressed GAS Response frame. The element describes a set of zero 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) and other information relevant to the broadcast service. The information present in each broadcast service advertisement is indicated in a Control field.

If the Negotiation Method subfield is set to 1, the Association Required subfield of the Control field indicates if

association is required to receive the EBCS traffic stream. For other negotiation methods, the Association

Required subfield indicates if association is required to request and receive the EBCS traffic stream.

NOTE—An EBCS traffic stream signaled in an Enhanced Broadcast Services ANQP-element might be provided by a

malicious user, since the ANQP-element might be unsecured. The origin authentication methods described

in[Clause 12.14 (Frame authentication for EBCS)](#_bookmark224) might be used to authenticate the origin of EBCS traffic streams.

If the content is authenticated in the MAC layer (nonzero values of the Content Authentication Algorithm field

as defined in [Table 9-340b (Content Authentication Algorithms)](#_bookmark94)) or requires negotiation (nonzero values of the

Negotiation Method subfield as defined in [Table 9-340a (Negotiation Method subfield encoding)](#_bookmark92)), the

information provided by the Enhanced Broadcast Services ANQP-element needs to be augmented with

additional information to receive the traffic stream. The information on the authentication and negotiation

method may be obtained in the next EBCS Info frame as indicated by the Content Authentication Algorithm

field and in the Negotiation Method field included in the EBCS Broadcast Services ANQP-element.

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

[higher layer source authentication (HLSA))](#_bookmark256) as indicated by the Content Authentication Algorithm subfield

equal to 0 as defined in [Table 9-340b (Content Authentication Algorithms)](#_bookmark94), the information provided is enough

to receive the traffic stream.

The Enhanced Broadcast Services ANQP-element may be transmitted using a Group Addressed GAS Response frame. In this case, all non-AP STAs and APs may receive the information on the services available at the transmitting AP.

If the Enhanced Broadcast Service Request ANQP-element is one of the permitted negotiation methods, a STA

may use it to request registration (or unregistration) from a peer STA. 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.

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

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

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

***Editor: Modify IW2.8 from B.4.20***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item** | **Protocol capability** | **References** | **Status** | **Support** |
| IW2.8 | Group Addressed GAS Response frame | 9.6.7.15 (GAS Comeback Response frame format) | O  EBCS1:M | Yes  No   N/A  |