IEEE P802.11  
Wireless LANs

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| Clause 10.25.3.2.1 changes | | | | |
| Date: 2015-07-14 | | | | |
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Abstract

This document provides updated text for the following CIDs:

1096, 1097, 1098, 1099, 1432, 1593, 1594, 1682, 1685

This uses Draft P802.11aq\_D1.2 as a baseline.

#### 10.25.3.2 ANQP procedures

***Change the following text***

##### 10.25.3.2.1 General

A STA may use ANQP to retrieve information as defined in Table 8-257 (ANQP-element definitions) from a peer STA. A non-AP STA shall not transmit an ANQP Query to an AP for any ANQP-element unless the Advertisement Protocol ID is included in the Advertisement Protocol element in a Beacon or Probe Response frame from that AP.

Insert, in Table 10-16, a new column heading “Advertisement Protocol ID” and new elements, as shown

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Table 10-16 - ANQP usage (11u) | | | | | |  |
|  | |  | BSS | | IBSS | Advertisement Protocol ID |
| ANQP-element Name | ANQP-element (subclause)(Ed) | ANQP-element Type | AP | STA | STA |  |
| Query List | 8.4.5.2 (Query List ANQP-element) | Q | T, R | T, R | T, R | 0 |
| Capability List | 8.4.5.3 (Capability List ANQP-element) | S | T, R | T, R | T, R | 0 |
| Venue Name | 8.4.5.4 (Venue Name ANQP-element ) | S | T | R | — | 0 |
| Emergency Call Number | 8.4.5.5 (Emergency Call Number ANQP-element ) | S | T | R | — | 0 |
| Network Authentication Type | 8.4.5.6 (Network Authentication Type ANQP-element) | S | T | R | — | 0 |
| Roaming Consortium | 8.4.5.7 (Roaming Consortium ANQP- element) | S | T | R | — | 0 |
| Vendor Specific | 8.4.5.8 (Vendor Specific ANQP-element) | Q, S | T, R | T, R | T, R | 0 |
| IP Address Type Availability | 8.4.5.9 (IP Address Type Availability ANQP-element ) | S | T, R | T, R | T, R | 0 |
| NAI Realm | 8.4.5.10 (NAI Realm ANQP-element) | S | T | R | T, R | 0 |
| 3GPP Cellular Network | 8.4.5.11 (3GPP Cellular Network ANQP-element) | S | T | R | — | 0 |
| AP Geospatial Location | 8.4.5.12 (AP Geospatial Location ANQP-element) | S | T | R | T, R | 0 |
| AP Civic Location | 8.4.5.13 (AP Civic Location ANQP-element) | S | T | R | T, R | 0 |
| (#13006)AP Location Public Identifier URI | 8.4.5.14 (AP Location Public Identifier URI ANQP-element) | S | T | R | T, R | 0 |
| Domain Name | 8.4.5.15 (Domain Name ANQP-element) | S | T | R | — | 0 |
| Emergency Alert Identifier URI | 8.4.5.16 (Emergency Alert URI ANQP-element) | S | T | R | T, R | 0 |
| TDLS Capability (#13018) | 8.4.5.18 (TDLS Capability ANQP-element) | Q, S | T,R | T,R | T, R | 0 |
| Emergency NAI | 8.4.5.17 (Emergency NAI ANQP-element) | S | T | R | — | 0 |
| Neighbor Report | 8.4.5.19 (Neighbor Report ANQP-element) | S | T | R | - | 0 |
| Service Information Request | 8.4.5.24 (Service Information Request ANQP-element) | Q | R | T | - | 5 |
| Service Information Response | 8.4.5.25 (Service Information Response ANQP-element) | S | T | R | - | 5 |
| ~~ULP Encapsulation~~ | ~~8.4.5.26 (ULP Encapsulation ANQP-element~~ | ~~Q, S~~ | ~~T,R~~ | ~~T,R~~ | ~~T, R~~ | ~~5~~ |
| **Symbols**  Q element is an ANQP query  S element is an ANQP response  T ANQP-element may be transmitted by MAC entity  R ANQP-element may be received by MAC entity  — ANQP-element is neither transmitted nor received by MAC entity | | | | | |  |

Insert the following new clause and three subclauses after 10.25.3.2.10

##### 10.25.3.2.11 ANQP-SD procedures

ANQP-SD uses an Advertisement Protocol ID (ID=5) as opposed to ANQP (Advertisement Protocol ID=0). This is to allow the receiving STA to proxy ANQP-SD queries to an Advertisement Server in a BSS, which may be an alternative Advertisement Server to a one used for ANQP, if so required. The use of two different Advertisement Protocol IDs allows the differentation of the routing of traffic to occur. The receiving STA may also directly respond to ANQP-SD queries.

Since a GAS query carries a single Advertisement Protocol ID, a requesting STA is not able to send a mixture of ANQP and ANQP-SD queries simultaneously. If the receiving STA or server in a BSS receives an ANQP-element that is not supported, it is discarded.

###### 10.25.3.2.11.1 Service Information Request procedure

The Service Information Request ANQP-element (see [8.4.5.24](#section_8_4_4_20_Service_info_request)) is used by a requesting STA to perform an ANQP-SD request using the procedures defined in [10.25.3.2.1](#section_10_25_3_2_1_General).

The Service Information Request ANQP-element is used to discover available services within the BSS. A Service Name may be placed within the request. The Service Name is used within the BSS to assist with discovering services, as described in Annex ZA.

If no Service Name value is present, the BSS will return all known services within the response.

The Service Discovery Information Request ANQP-element is routed to an Advertisement Server through a proxy in the BSS, as shown in Figure 4.5aq.

###### 10.25.3.2.11.2 Service Information Response procedure

The Service Information Response ANQP-element is returned in response to a Service Information Request ANQP-element. It contains a list of service information descriptors from the Advertisment Server.

###### ~~10.25.3.2.11.3 ULP Encapsulation procedure~~

~~The ULP Encapsulation element (see [8.4.5.26](#section_8_4_4_22_ULP_Encapsulation_ANQP_)) is used by STAs to allow the transmission of upper layer protocol frames using ANQP-SD requests and responses using the procedures defined in [10.25.3.2.13](#section_10_25_3_2_11_ANQP_SD_procedures).~~

~~The ULP Encapsulation ANQP-element is re-directed to the proxy as described in Annex ZA, as this query is directed to the Service Information Server, as opposed to an ANQP Advertisement Server.~~

~~The ULP Encapsulation ANQP-element provides a means to exchange service discovery information between STAs. The elements support multiple service discovery protocols.~~