IEEE P802.11
Wireless LANs

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|  Modification to the Multiple APs GAS Query |
| Date: 2013-01-13 |
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Abstract

The submission provides modifications to the normative text for white list of multiple APs GAS query as identified in subclause 6.2.8 of the SFD ([11-12-0151-12-00ai-proposed-specification-framework-for-tgai](https://mentor.ieee.org/802.11/dcn/12/11-12-0151-12-00ai-proposed-specification-framework-for-tgai.docx)) as:

*6.2.8 White List Element in GAS (11-12/0158r3)*

*STA may include an inclusion selection filter or ‘white’ list element to GAS Request to indicate selection for a set of APs to be included as part of Neighbor Report ANQP element in GAS Response*

*Instructions to Editor: Append the Clause 8.4.4 with the following text:*

**8.4.4 Access Network Query Protocol (ANQP) elements**

**Table 8-184ai01—ANQP-element definitions**

|  |  |  |
| --- | --- | --- |
| **ANQP- element name** | **InfoID**  | **ANQP element (subclause)** |
| Neighbor Report  | 272  | 8.4.4.18 |
| Query AP List | ANA | 8.4.4.19 Query AP List ANQP-element |
| AP List Response  | ANA | 8.4.4.20 AP List Response ANQP-element |
| Reserved  | 273– 56796  | n/a |
| Vendor Specific  | 56797  | 8.4.4.7 |

***Insert the following new text to the new Clause* 8.4.4.19**

**8.4.4.19 Query AP List ANQP-element**

The Query List ANQP-element provides a list of identifiers of ANQP-elements for which the requesting STA is querying. Each ANQP-element may be returned in response to Query AP List ANQP-element using the procedures in 10.24.3.2.11).

The format of the Query AP List ANQP-element is provided in Figure 8-ai01.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Info ID | Length | AP List  | ANQP QueryID #1 | … | ANQP QueryID #N(optional) |

Octets 2 2 variable 2 2

Figure 8-ai01—Query AP List field format

The Info ID is a 2-octet field whose value is drawn from Table 8-184ai01 corresponding to the Query AP List ANQP-element.

The Length is a 2-octet field whose value is set to of the length of ANQP AP List.

The AP List is a variable length field defined in Figure 8-ai02that contains the list of AP IDs for requested information.

The AP List Length subfield is a 1-octet field whose value is set to 6 times the number of AP identifier subfields and it is equal to the number of APs in the AP List.

 Each AP identifier subfield takes 6 octets to indicate the BSSID of an AP that the requesting STA want to query.

|  |  |  |  |
| --- | --- | --- | --- |
| AP List Length | AP1 identifier | ...... | AP N identifier  |

Octets 1 6 6

Figure 8-ai02—AP List field format

Each ANQP Query ID field value is an Info ID drawn from Table 8-184ai01. Including an Info ID in the Query

List ANQP-element declares that the STA performing the ANQP query is requesting the ANQP-element corresponding to that Info ID be returned in the ANQP query response. The Info IDs included in the Query List ANQP-element are ordered by increasing Info ID value. The ANQP query response is defined in 10.24.3.2.1.

***Insert the following new text to the new Clause* 8.4.4.20**

**8.4.4.20 AP List Response ANQP-element**

The AP List Response element provides the response to the Query AP list request. The frame format of the response frame is defined in Figure 8-aixx03.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Info ID | Length  | AP1 Identifier | AP1 Response Length | AP1 Query Response | … … | AP N Identifier | AP N Response Length | AP N Query Response |

2 2 6 2 variable … 6 2 variable Figure 8-ai03

The Info ID is a 2-octet field whose value is drawn from Table 8-184ai01 corresponding to the AP List Response ANQP-element.

The Length field is a 2-octet field whose value is set to the number of octets in the following AP Query Response field.

 The AP Identifier subfield takes 6 octets to indicate the BSSID of an AP that the requesting STA wants to query.

The AP Response Length field is a 2-octet field whose value is set to the number of octets in the following AP Query Response subfield.

The AP Query Response subfield is a generic container whose value is the BSSID dependent response to a GAS Query. This field is also formatted in accordance with the protocol specified in the Advertisement Protocol element.

***Insert the following new text to the Clause* 10.24.3.2.1**

10.24.3.2 ANQP Procedures

10.24.3.2.1 General

**Table 10-10—ANQP usage**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ANQP-element name  | ANQP-element(subclause) | ANQP elementtype | AP | Non-APSTA | STA |
| … |  |  |  |  |  |
| Neighbor Report | 8.4.4.18 | S |  T | R | - |
| Query AP List | 8.4.4.19 | Q  | T,R | T,R | T,R |
| AP List Response | 8.4.4.20 | S |  T | R | - |
| **Symbols**Q element is an ANQP queryS element is an ANQP responseT ANQP-element may be transmitted by MAC entityR ANQP-element may be received by MAC entity— ANQP-element is neither transmitted nor received by MAC entity |  |  |  |  |  |
|  |

***Insert the following new text to the new Clause* 10.24.3.2.11**

10.24.3.2.11 Query AP List procedure

The Query AP List ANQP-element is used by a requesting STA to perform an ANQP Query requesting the ANQP information on each AP indicated in the AP list using the procedures defined in 10.24.3.2.1. The requesting STA shall only include Info IDs in the Query List ANQP element that have the sole ANQP-element type of S as shown in Table 10-10. Info IDs that have an ANQPelement type of Q shall not be included in the Query AP List ANQP-element (e.g., the Info ID for Vendor Specific ANQP-element shall not be included).

A responding STA that encounters an unknown or reserved ANQP Info ID value in an Query AP List ANQP element shall ignore that ANQP Info ID and shall parse any remaining ANQP Info IDs.

In the response to a Query AP List, the Query Response field should contain an AP List Response ANQP-element. The AP List Response contains query response report for the APs indicated in the Query AP List.

**Motion-1:** To authorize the Editor to incorporate the text changes proposed in contribution *11-13-0037-02-00ai –Multiple APs GAS Query* to the draft TGai Specification Document.

Yes: \_\_\_\_\_\_\_\_\_\_\_\_;  No: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_;  Abstain:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[Result of Motion]