IEEE P802.11
Wireless LANs

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| Normative text for white list of multiple APs GAS query |
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Abstract

The submission provides 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*

**8.4.2.95 Advertisement Protocol element**

*Instructions to Editor: Append the Clause 8.4.2.95 with the following text:*

Table 8-175— **Advertisement protocol ID definitions**

|  |  |
| --- | --- |
| **Name**  | **Value** |
| Access Network Query Protocol (ANQP)  | 0 |
| MIH Information Service  | 1 |
| MIH Command and Event Services Capability Discovery  | 2 |
| Emergency Alert System (EAS) | 3 |
| *Extended ANQP*  | *4* |
| *Reserved*  | *5 – 220* |
| Vendor Specific  | 221 |
| Reserved | 222-255 |

* *Extended ANQP is a protocol used by requesting STA to include extensible information in GAS request and response frames; for example,STA can include an inclusion selection filter or ‘white’ list elemen, to GAS Request to indicate selection for a set of APs to be included as part of Neighbor Report ANQP element in GAS Response.*

**8.5.8.12 GAS Initial Request frame format**

*Instructions to Editor: Append the Clause 8.5.8.12 with the following text:*

The GAS Initial Request frame is a Public Action frame. It is transmitted by a requesting STA to request information from another STA. *If the value of the advertisement protocol ID is 0, the format of the GAS Initial Request frame body is shown in Table 8-216. If the value of advertisement protocol ID is 4, the the format of the GAS Initial Request frame body is shown in Table 8-216-B.*

*Table 8-216-B —GAS Initial Request frame body format for extended ANQP*

|  |  |
| --- | --- |
| Order | Information |
| 0 | Category |
| 1 | Action |
| 2 | Dialog |
| 3 | Advertisement |
| 4 | Query Request length |
| 5 | Query Request |
| *6* | *AP List*  |
| *7* | *Other extensible information (TBD)* |

The Category field is set to the value indicating a Public Action frame, as specified in Table 8-38.

The Action field is set to the value specified in Table 8-210 for a GAS Initial Request frame.

The Dialog Token field is defined in 8.4.1.12 and set by the requesting STA.

The Advertisement Protocol element is defined in 8.4.2.95. The Advertisement Protocol element includes exactly one Advertisement Protocol ID.

The Query Request length field is defined in Figure 8-455. The value of the Query Request length field is set to the total number of octets in the Query Request field.

 B0 B15

|  |
| --- |
| Query Request length |

Octets: 2

Figure 8-455—Query Request length field

The Query Request field is defined in Figure 8-456. The Query Request field is a generic container whose value is a GAS Query that is formatted in accordance with the protocol specified in the Advertisement Protocol element.

|  |
| --- |
| Query Request |

Octets: variable

Figure 8-456—Query Request field

The format of AP List is defined in Figure 8-aixx. The AP List field contains a 1-octet Length subfield and one or more AP identifier subfields. N refers to the total number of AP identifier subfields included in the AP list field. Each AP identifier subfield takes 6 octets to indicate the BSSID of an AP that the requesting STA want to query.

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

Octets: 1 6 ....... 6

Figure 8-aixx—AP list field format

8.5.8.13 GAS Initial Response frame format

*Instructions to Editor: Append the Clause 8.5.8.13 with the following text:*

The GAS Initial Response frame is a Public Action frame. It is transmitted by a STA responding to a GAS Initial Request frame. The format of the GAS Initial Response frame body is shown in Table 8-217.

Table 8-217—GAS Initial Response frame body format

|  |  |
| --- | --- |
| Order | Information |
| 0 | Category |
| 1 | Action |
| 2 | Dialog |
| 3 | Status Code |
| 4 | GAS Comeback Delay |
| 5 | Advertisement Protocol element |
| 6 | Query Response Length |
| 7 | Query Response (optional) |
| 8 | Query AP report Length (present if Query AP report is included)  |
| 9 | Query AP report (optional) |

……

The Query Response field is defined in Figure 8-459. The Query Response field is a generic container whose value is the response to a GAS Query and is formatted in accordance with the protocol specified in the Advertisement Protocol element.

|  |
| --- |
| Query Response |

 Octets: variable

Figure 8-459: Query Response field

The Query AP report Length field is defined in Figure 8-aixx. The Query AP report Length field is a 2-octet field and is present when an AP list was included in the GAS Initial Request. The value of the Query AP report Length field is set to the total number of octets in the Query AP report field. The value of Query AP report Length field is set to 1 or higher.

 B0 B15

|  |
| --- |
| Query AP report Length |

 Octets: 2

Figure 8-aixx: Query AP report Length field

The Query AP report field includes one or more Query AP GAS info subfields which are defined in Figure 8-aiyy.

|  |  |  |
| --- | --- | --- |
| Sequence number | Length | Query AP response |

Octets: 1 2 variable

Figure 8-aiyy: Query AP GAS info subfield format

The Sequence number is a 1-octet field whose value is set to the sequence number corresponding to the AP identifier in order of presentation in the AP list in GAS Initial Request.

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

The Query AP Response field is a generic container whose value is the response to a GAS Query with a AP list field and is formatted in accordance with the protocol specified in the Advertisement Protocol element.

8.5.8.15 GAS Comeback Response frame format

*Instructions to Editor: Append the Clause 8.5.8.15 with the following text:*

The GAS Comeback Response frame is a Public Action frame. It is transmitted by a responding STA to a

requesting STA. The format of the GAS Comeback Response frame body is shown in Table 8-219.

The Category field is set to the value indicating a Public Action frame, as specified in Table 8-38.

Table 8-219—GAS Comeback Response frame body format

|  |  |
| --- | --- |
| Order | Information |
| 0 | Category |
| 1 | Action |
| 2 | Dialog Token |
| 3 | Status Code |
| 4 | GAS Query Response Fragment ID |
| 5 | GAS Comeback Delay |
| 6 | Advertisement Protocol element |
| 7 | Query Response Length |
| 8 | Query Response (optional) |
| 9 | Query AP report Length (present if Query AP report is included)  |
| 10 | Query AP report (optional) |

......

The Query Response field is defined in Figure 8-459. The value of the Query Response field is a generic

container dependent on the advertisement protocol specified in the Advertisement Protocol element and the query itself.

The Query AP report Length field is defined in Figure 8-aixx. The Query AP report Length field is a 2-octet field and is present when an AP list was included in the GAS Initial Request. The value of the Query AP report Length field is set to the total number of octets in the Query AP report field..

The Query AP report field includes one or more Query AP GAS info subfields which are defined in Figure 8-aiyy.

The Sequence number is the sequence number corresponding to the AP identifier in order of presentation in the AP list in GAS Initial Request.

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

The Query AP Response field is a generic container whose value is the response to a GAS Query with a AP list field and is formatted in accordance with the protocol specified in the Advertisement Protocol element.

In a multi-fragment query response, the response to the query posted on behalf of a requesting STA is fragmented such that each fragment to be transmitted fits within the MMPDU size limitation.

**Motion-1:** To authorize the Editor to incorporate the text changes proposed in contribution *11-12-1047-05-00ai-White-list-for-GAS-query-of-multiple-APs* to the draft TGai Specification Document.

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

[Result of Motion]