IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Modification to the Amendment Text of white list of multiple APs GAS Query | | | | |
| Date: 2012-11-1 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | Email |
|  |  |  |  |  |
| Lin Cai | Huawei  Technologies Co. Ltd. |  |  | Lin.Cai@huawei.com |
| George Calcev | Huawei  Technologies Co. Ltd. |  |  | George.Calcev@huawei.com |
| Eric Zhang | Huawei  Technologies Co. Ltd. |  |  |  |
| Phillip Barber | Huawei  Technologies Co. Ltd. |  |  |  |
| Steve Grau | Juniper |  |  | sgrau@junipe.net |

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*

**8.3.3.2 Beacon frame format**

*Instructions to Editor: Add new element to Table 8-20 as shown with track changes*

The frame body of a management frame of subtype Beacon contains the information shown in Table 8-20.

**Table 8-20—Beacon frame body**

|  |  |  |
| --- | --- | --- |
| Order | Information | Notes |
| 55 | Mesh Channel  Switch Parameters | The Mesh Channel Switch Parameters element is present when  dot11MeshActivated is true and either Channel Switch Announcement element or Extended Channel Switch Announcement element is present. |
| 56 | Extended GAS | The Extended GAS is present if dot11ExtendGASSupportActiveated is true |
| Last | Vendor Specific | One or more vendor-specific (#1684)elements are optionally present(#29). These (#1684)elements follow all other (#1684)elements(#1221). |

* + - 1. **Probe Response frame format**

*Instructions to Editor: Add new element to Table 8-27 as shown with track changes.*

The frame body of a management frame of subtype Probe Response contains the information shown in Table 8-27. See additional details and procedures in 8.5.8.12 and 8.5.8.15, respectively.

**Table 8-27—Probe Response frame body**

|  |  |  |
| --- | --- | --- |
| Order | **Information** | **Notes** |
| 54 | Mesh Channel Switch  Parameters | The Mesh Channel Switch Parameters element is present if  dot11MeshActivated is true and either Channel Switch  Announcement element or Extended Channel Switch  Announcement element is present. |
| 55 | Extended GAS | The Extended GAS is present if dot11ExtendGASSupportActiveated is true. |
| Last*–1* | Vendor Specific | One or more vendor-specific (#1684)elements are optionally present(#29). These (#1684)elements follow all other (#1684)elements(#1221), except the Requested (#1684)elements. |
| Last–*n* | Requested (#1684)elements | Elements requested by the Request (#1684)element of the Probe Request frame are present(#29) if dot11MultiDomainCapabilityActivated(#1005) is true. See 10.1.4.3.2.  (11k) |

**8.5.8.1 Public Action frames**

*Instructions to Editor: Append the clause in 8.5.8.1 in Table 8-210**with the following text:*

A Public Action field, in the octet immediately after the Category field, differentiates the Public Action frame formats. The defined Public Action frames are listed in Table 8-210.

**Table 8-210—Public Action field values**

|  |  |
| --- | --- |
| **Public Action field value** | **Description** |
| 0 | 20/40 BSS Coexistence Management (see 8.5.8.2) |
| 1 | DSE enablement |
| 2 | DSE deenablement |
| 3 | DSE Registered Location Announcement |
| 4 | Extended Channel Switch Announcement |
| 5 | DSE measurement request |
| 6 | DSE measurement report |
| 7 | Measurement Pilot |
| 8 | DSE power constraint |
| 9 | Vendor Specific |
| 10 | GAS Initial Request (see 8.5.8.12) |
| 11 | GAS Initial Response (see 8.5.8.13) |
| 12 | GAS Comeback Request (see 8.5.8.14) |
| 13 | GAS Comeback Response (see 8.5.8.15) |
| 14 | TDLS Discovery Response |
| 15 | Location Track Notification |
| 16 | Extended GAS Initial Request (see 8.5.8.18) |
| 17–255 | Reserved |

**8.5.8.18 Extended GAS Initial Request Frame Format**

*Instructions to Editor: add a new clause 8.5.8.18 with the following text:*

The Extended GAS Initial Request frame is a Public Action frame. It is transmitted by a requesting STA to request information from another STA. The format of the Extended GAS Initial Request frame body is shown in Table 8-TGai-\*\*01.

Table 8-TGai-\*\*01—Extended GAS Initial Request frame body format

|  |  |
| --- | --- |
| Order | Information |
| 0 | Category |
| 1 | Action |
| 2 | Dialog |
| 3 | Advertisement |
| 4 | Query Request length |
| 5 | Query Request |
| 6 | Optional Information |

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. The value of 0 indicates the query request field is no included.

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 Optional Information field is defined in Figure 8-aixx01. The the Optional Information field contains a 7-bit Type subfield, one bit Indicator Bit subfield, one octet Length subfield, and the variable length Payload Corresponding to Type field.

|  |  |  |  |
| --- | --- | --- | --- |
| Type | Indicator Bit | Length | Payload Corresponding to Type |

Bits 7 1 8 variable length

Figure 8-aixx01—Optional information field

The Type subfied is defined in Table 8-aiXX02.

|  |  |
| --- | --- |
| Type | Description |
| 0 | AP List |
| 1-127 | Reserved |

Table 8-aixx02—Type of Optional Information Field

Type field 0 indicates that an AP List is included in the optional information field.

The Indicator Bit field in Figure 8-aixx01indicates the presence of the following next optional information field. An Indicator Bit value of one indicates one optional information field follows the current Optional Information field; and that of zero indicates that the current Optional Information field is the last field of the information message.

The value of the one octet Length field in Figure 8-aixx0 is set to the total number of octets in the following data field.

The Payload Corresponding to Type field includes information corresponding to the Type field. The Payload Corresponding to Type field format with Type field 0 is defined in Figure 8-aixx03. The field contains one or more AP identifiers, as defined in Figure 8-aixx03. Each AP identifier subfield takes 6 octets to indicate the BSSID of an AP that the requesting STA wants to query. N refers to the total number of AP identifier subfields included.

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

Octets: 6 ....... 6

Figure 8-aixx03—Data field format when the value of Type field is 0

**8.5.8.14 GAS Comeback Request frame format**

*Instructions to Editor: Modify the Clause 8.5.8.14 with the following text:*

The GAS Comeback Request frame is a Public Action frame. It is transmitted by a requesting STA to a responding STA. The format of the GAS Comeback Request frame body is shown in Table 8-218.



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 Comeback Request frame.

The Dialog Token field is copied from the corresponding GAS Initial Request frame or Extended GAS Initial Request frame.

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-B—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) |

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

In the response to an AP List query , the Query Response field should contain one or more query responses, each of which corresponds to each AP in the query AP list. The response message contains one query response report of the requested AP if the response reports of other APs are not available at the requested AP. The frame format of the response frame is defined in Figure 8-aixx04.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Length | Default AP Query Response | AP1 Identifier | Length | AP 1 Query Response | … … | AP N Identifier | Length | AP N Query Response |

Octets: 2 variable 6 2 variable … 6 2 variable

length length length

Figure 8-aixx04 (Option 1)

The Length subfield is a 2-octet field whose value is set to the number of octets in the following AP Query Response field. Default AP Response subfield is the generic container whose value is the BSSID-indepedent response to a GAS Query. This field is formatted in accordance with the protocol specified in the Advertisement Protocol element. The AP Identifier subfield takes 6 octets to indicate the BSSID of an AP that the requesting STA wants to query. The following AP Query Response field 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.

**Motion-1:** To authorize the Editor to incorporate the text changes proposed in contribution *11-12-1291-01-00ai-Extended-GAS-Query* to the draft TGai Specification Document.

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

[Result of Motion]