IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| LB 204 Comment resolutions related to Differential Association | | | | |
| Date: 2014-11-4 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| George Calcev | Huawei  Technologies Co. Ltd. |  |  | George.Calcev@huawei.com |
| Ping FANG | Huawei Device Co., Ltd |  |  |  |

Abstract

This contribution proposes resolutions to the CIDs: 6966, 6967, 6241, 6263, 6929, 6910, 6927, 6928, 6253.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Clause Number(C)** | **Page(C)** | **Line(C)** | | **Comment** | **Proposed Change** | **Resolution** |
| 6966 | 10.45.5.1 | 103 | 11 | Vendor portion of the MAC address shall not be used for filtering out addresses | | See proposed text in TBD | Rejected  The Vendor portion is the first 3 octets from the MSB of MAC address, while the bits used for MAC filtering are the 5 LSB bits. The vendor portion of the MAC address is not part of the filtering mask. |
| 6967 | 8.4.2.172 | 43 | 60 | Vendor specific info should not be used to prioritize access | | Remove lines 18,19 | Reject. There is no priority user access reference in the specified section and page. |
| 6241 | 8.4.2.183 | 61 | 18 | The sentence "The Bit Pattern Length subfield is 3 bits in length, and the Bit Pattern subfield is 5 bits in length." adds no useful information. | | Remove it. | Reject. This sentence helps to explain the length of each subfield. In Revmc, fields like Protocol Version field is 2 bits as shown in Figure 8-2, but in 8.2.4.1.2, there is still text "The Protocol Version field is 2 bits in length". So the sentence should be kept there. |
| 6263 | 8.4.2.183 | 60 | 43 | "A bit value of 1" sounds a bit strange. Yes, it is a bit and the value referred to here is 1. But just saying "a value of 1" should be sufficient. There is no reason to emphasize that the value of 1 is expressed using one bit. | | Delete "bit" | Accept |
| 6929 | 10.45.5.2 | 103 | 45 | "When the FILS User Priority subfield is present, the FILS User Priority condition is satisfied if the non-AP STA has frames with user priority 4-7 in the transmission queue(s) and the FILS User Priority B0 is 1, or if the non-AP STA has frames with user priority 0-3 in their transmission queue(s) and the FILS User Priority B1 is 1, or if the non-AP STA has no frame in their transmission queue(s) and the FILS User Priority B2 is 1." What happens if a STA has pending frame transmissions of mixed priorities? | | Please clarify the behavior when a STA has pending frame transmissions of mixed priorities, some of them having a User Priority 4-7, and some others having a User Priority 0-3. | Revised. Add clarification text as in doc.: IEEE 802.11-14-1503-00-01ai |
| 6910 | 8.4.2.183 | 61 | 1 | A format of the FILS User Priority subfield is specified in Figure 8-574y, but no meaning of bits is specified. | | Insert a following text after Figure 8-574y. "An AP sets the FILS User Priority B0 to 1 when the AP allows a STA that has frames with user priority 4-7 in the transmission queue(s). An AP sets the FILS User Priority B1 to 1 when the AP allows a STA that has frames with user priority 0-3 in the transmission queue(s). An AP sets the FILS User Priority B2 to 1 when the AP allows a STA that has no frame in their transmission queue(s)." | Accept. |
| 6927 | 8.4.2.183 | 61 | 5 | The setting and the meaning of B0, B1 and B2 of FILS User Priority subfield are not specified. | | Please specify how to set B0, B1 and B2 of FILS User Priority subfield and the corresponding meaning of each setting. | Revised. Add clarification text as in doc.: IEEE 802.11-14-1503-00-01ai |
| 6928 | 10.45.5.1 | 103 | 1 | "An AP may set the FILS User Priority B0, B1, and B2 to 1 to indicate high priority link setup without additional delays for the STAs that have frames with User Priority 4-7 in their transmission queues, STAs that have frames with User Priority 0-3 in their transmission queues, and STAs that have no frame in their transmission queues respectively and to 0 otherwise. An AP should always allow a STA that has frames with User Priority 4-7 in its transmission queue(s) to attempt fast initial link setup before STAs that have frames with User Priority 0-3 and the STAs that have no frame in their transmission queues" Does this mean that the AP should always set B0 to 1? Is there any restriction on how many bits (of B0, B1 and B2) can set to 1 simultaneously? | | Please clarify the behavior and modify the spec accordingly. | Revised. Add clarification text as in doc.: IEEE 802.11-14-1503-00-01ai |
| 6253 | 10.45.5.1 | 103 | 1 | I assume FILS User Priority B0 matches "high priority link setup without additional delays for the STAs that have frames with User Priority 4-7 in their transmission queues", FILS User Priority B1 matches "STAs that have frames with User Priority 0-3 in their transmission queues"... But it is not clear to me. | | make it clear | Revised. Add clarification text as in doc.: IEEE 802.11-14-1503-00-01ai |

1. **Conventions**

Red color is used to show the additions to the revision D3.0.

1. **Proposed Changes to 802.11ai/D3.0 Specification Text**

**CID 6927, 6910, 6263**

*Instruct the editor to make the following changes:*

**8.4.2.183 Differentiated Initial Link Setup element**

The FILSC Type subfield is 1 octet in length and it is used to indicate the presence of the optional subfields in the FILSC Information field, as defined in Figure 8-574x (FILSC Type subfield format). A ~~bit~~ value of 1 in the FILS User Priority Present, MAC Address Filter Present and Vendor Specific Present subfields indicates that the corresponding FILSC subfield is present. At least one of the bits in FILSC Type subfield is set to 1.

An AP sets the FILS User Priority B0 to 1 when the AP allows a STA that has frames with user priority 4-7 in the transmission queue(s). An AP sets the FILS User Priority B1 to 1 when the AP allows a STA that has frames with user priority 0-3 in the transmission queue(s). An AP sets the FILS User Priority B2 to 1 when the AP allows a STA that has no frame in their transmission queue(s). If a STA has frames in multiple queues with different priorities, the STA will access the AP based on its highest priority queue. Any combination of bit values for B0, B1and B2 is allowed. For instance, 0112 indicates that only stations with high and low user priority traffic are allowed for high priority link setup and stations with no data frames in their queues are not allowed. A value of 0002 indicates that no FILS station is allowed to join the AP in the next specified time interval.

**CID 6928, 6966, 6253**

**10.45.5.1 AP procedures for differentiated initial link setup**

An AP may set the FILS User Priority B0~~, B1, and B2~~ to 1 to indicate high priority link setup without additional

delays for the STAs that have frames with User Priority 4-7 in their transmission queues, an AP may set the FILS User Priority B1 to 1 to indicate high priority for those STAs that have frames with User Priority 0-3 in their transmission queues, and sets the FILS User Priority B2 to 1 to indicate high priority for STAs that have no frame in their transmission queues respectively and to 0 otherwise. ~~An AP should always allow a STA that has frames with~~

~~User Priority 4-7 in its transmission queue(s) to attempt fast initial link setup before STAs that have frames~~

~~with User Priority 0-3 and the STAs that have no frame in their transmission queues.~~

An AP may set the Bit Pattern Length subfield in the MAC Address Filter subfield to decide the number of

bits used for MAC address filtering; and specify the bit pattern in the Bit Pattern subfield to allow STAs with

specific MAC addresses to transmit initial link setup request frames immediately. The more bits used for

MAC address filtering, the fewer number of STAs are allowed to transmit an initial link setup request frame

immediately. How an AP sets the bit pattern in the Bit Pattern subfield is beyond the scope of this specification.

An AP may set one or more vendor specific criteria in Vendor Specific subfield to allow a set of STAs that

satisfy the specified criteria to transmit initial link setup request frames to the AP without additional delays.

**CID 6929**

**I***nstruct the editor to make the following changes:*

**10.45.5.2 Non-AP STA procedures for differentiated initial link setup**

**…**

When the FILS User Priority subfield is present, the FILS User Priority condition is satisfied if the non-AP STA has frames with user priority 4-7 in the transmission queue(s) and the FILS User Priority B0 is 1, or if the non-AP STA has frames with user priority 0-3 in their transmission queue(s) and the FILS User Priority B1 is 1, or if the non-AP STA has no frame in their transmission queue(s) and the FILS User Priority B2 is 1.

If a STA has frames in multiple queues with different priorities, the STA will attempt to associate with the AP based on its highest priority queue.

If MAC Address Filter subfield is present, the non-AP STA shall exclusive-OR (XOR) the last 5 LSBs of its MAC address with B3 to B7 of the Bit Pattern subfield in MAC Address Filter subfield.