IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CR for 20252, 20253, 20255, 20264 and 20265. | | | | |
| Date: 2019-07-16 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Jarkko Kneckt | Apple Inc. | Cupertino, CA |  | [jkneckt@apple.com](mailto:jkneckt@apple.com) |
|  |  |  |  |  |

Abstract

This submission provides comment resolutions to five CIDs: 20252, 20253, 20255, 20264 and 20265.

R0 - R2 Editorial changes to the 11.1.4.3.4 clause

R3 – Added resolution to CID 20252.

1. **Introduction**

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGax Draft. The introduction and the explanation of the proposed changes are not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGax Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGax Editor: Editing instructions preceded by “TGax Editor” are instructions to the TGax editor to modify existing material in the TGax draft. As a result of adopting the changes, the TGax editor will execute the instructions rather than copy them to the TGax Draft.***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Clause Number** | **Page** | **Comment** | **Proposed Change** | **Resolution** |
| 20252 | 9.4.2.170.2 | 152 | The scanning STA should get information whether all bands that have a co-located AP are listed in the Reduced Neighbor Report. This ensures that STA does not need to further request co-located BSSs and the STA knows all candidate APs easily. | Two alternative resolutions are proposed:  1. Either write that all bands in which the reporting AP has a co-located AP are included to the Reduced Neighbor Reports,  2. or add a bit to the Reduced Neighbor Report element that indicates whether all bands in which a colocated AP operates are included to the reduced neighbor report. | Rejected. 802.11ax is defining out-of-the-band discovery for 6 GHz BSSs. Other bands are not discussed in 802.11ax. 6 GHz out-of-the-band rules define the BSSs and the fields that are present in RNR element, so no indication is needed for 6 GHz. |
| 20253 | 9.4.2.170.2 | 152 | Enable in active scanning the scanning non-AP STA to request information that is included to the Reduced Neighbor Report. For example, a non-AP STA should be capable to indicate the bands in which it is interested to operate and request AP information on these bands to be added to the Reduced Neighbor Report elements. | Please create a new Reduced Neighbor Report Criteria element that may be included to the Probe Request frames. This element can request the bands from which the AP information should be added to the Reduced Neighbor Report element. | Revised.  The CRC considered that band specific request for RNR content as relevant new feature.  The CRC considered that current workding in clause 11.1.4.3.4 could be reworded to be more clearly.  The dot11ColocatedRNRImplemented MIB variable is used only in clause 11.1.4.3.4. With new clarifications of thje Ptobe Response content this MIB parameter is not needed.  TGax editor to make changes as shown in 11-19/1222r0 that are marked with CID 202 |
| 20255 | 9.4.2.170.2 | 152 | Allow a non-AP STA to request whether only the co-located APs are included in the Reduced Neighbor Report or whether to include neighbor AP information to the Reduced Neighbor Report. | Please create a new Reduced Neighbor Report Criteria element that may be included to the Probe Request frames. This element can request to include only co-located AP information or to include neighbor AP information to the Reduced Neighbor Report included to the Probe Response frames. | Rejected. The responding AP may have reasons to include non co-located BSS in the Reduced Neighbor Report. For instance, the Co-located BSS may be congested, and the other BSS may have more resources available. However, the STAs benefit, if they get knowledge that AP has provided all co-located APs. |
| 20264 | 9.4.2.170.2 | 152 | A STA should be capable to request that Reduced Neighbor Report contains AP information only on the SSIDs that are included in the Probe Request frame. The guidance helps to reduce the size of the Neighbor Report element and to provide essential information for the scanning STA. | Please create a new Reduced Neighbor Report Criteria element that may be included to the Probe Request frames. This element can request to include information of APs that match with the SSIDs included to the Probe Request frame to the Reduced Neighbor Report in the Probe Response frames that are transmitted as a response to the Probe Request. | Rejected. The responding AP may have reasons to include BSS with different SSIDs to RNR in broadcast Probe Response. For instance, AP may have free networks that are avaialbe for all STAs and the AP may desire to advertise them to the STAs. |
| 20265 | 9.4.2.170.2 | 152 | A STA should be capable to request that Reduced Neighbor Report contains information of All APs in the ESS from which the STA may receive a Beacon. Information of all APs ensures that the STA knows all available APs and can select the best AP. | Please create a new Reduced Neighbor Report Criteria element that may be included to the Probe Request frames. This element can request to include information of all APs in the ESS that are within a coverage that the requesting STA could receive a beacon from them to the Reduced Neighbor Report in the Probe Response frames that are transmitted as a response to the Probe Request. | Rejected. The responding AP may have reasons not to include all APs in its response. For instance, the medium may be congested and AP may need to save medium time, or the AP may not know all neighboring APs. |

**11.1.4.3.4 Criteria for sending a response**

***Instructions to AX Editor: Modify the clause as shown below.***

g) The STA is not a mesh STA and none of the following criteria are met:

1)  The SSID in the Probe Request frame is the wildcard SSID.

2)  The SSID in the Probe Request frame matches the SSID of the STA’s.

~~2a~~ 3) ~~dot11ColocatedRNRImplemented is true,~~ The STA is an AP that is co-located with a 6 GHz AP,

the SSID in the Probe Request frame matches the SSID of the colocated 6 GHz AP, and the STA reports the co-located 6 GHz AP in Beacon and Probe Response frames, see 26.17.2.4 (Out of band discovery of a 6 GHz BSS).

~~the AP is reported by the STA in a Reduced Neighbor Report element in Beacons and Probe Responses according to the rules defined in 26.17.2.4 (Out of band discovery of a 6 GHz BSS)~~(#20253).

~~3~~ 4) The dot11SSIDListImplemented is true, the SSID List element is present in the Probe Request frame and includes the SSID of the STA’s BSS.

~~4~~ 5)  ~~dot11ColocatedRNRImplemented is true~~ dot11SSIDListImplemented is true, the STA is an AP that is co-located with a 6 GHz AP, the SSID List element is present in the Probe Request frame and includes the SSID corresponding to the colocated 6 GHz AP,and the AP reports the co-located 6 GHz AP in Beacon and Probe Response frames, see 26.17.2.4 (Out of band discovery of a 6 GHz BSS).

~~the AP is reported by the STA in a Reduced Neighbor Report element in Beacons and Probe Responses according to the rules defined in 26.17.2.4 (Out of band discovery of a 6 GHz BSS)~~(#20253).

~~5~~ 6) dot11ShortSSIDListImplemented is true, the Short SSID List element is present in the Probe Request frame and includes the Short SSID field corresponding to the SSID of the STA's BSS.

~~6~~ 7) ~~dot11ColocatedRNRImplemented is true,~~ dot11ShortSSIDListImplemented is true, the STA is an AP that is co-located with a 6 GHz AP, the Short SSID List element is present in the Probe Request frame and includes the Short SSID field(#20492) corresponding to the SSID of the 6 GHz AP and the AP reports the co-located 6 GHz AP in Beacon and Probe Response frames, see 26.17.2.4 (Out of band discovery of a 6 GHz BSS).

~~the AP is reported by the STA in a Reduced Neighbor Report element in Beacons and Probe Responses according to the rules defined in 26.17.2.4 (Out of band discovery of a 6 GHz BSS)~~(#20253).

**26.17.2.3.1 General**

***Instructions to AX Editor: Modify the first paragraph as shown below.***

 An AP operating in the 6 GHz band shall set ~~dot11ColocatedRNRImplemented to true and~~ dot11ShortSSIDListImplemented to true. An AP that is co-located with an AP operating in the 6 GHz band shall set ~~dot11ColocatedRNRImplemented to true and~~ dot11ShortSSIDListImplemented to true.

**C.3 MIB Detail**

***Instructions to AX Editor: delete the dot11ColocatedRNRImplemented as shoewn below***

Dot11HEStationConfigEntry ::=

SEQUENCE {

…

~~dot11ColocatedRNRImplemented TruthValue,~~

...

~~dot11ColocatedRNRImplemented OBJECT-TYPE~~

~~SYNTAX TruthValue~~

~~MAX-ACCESS read-only~~

~~STATUS current~~

~~DESCRIPTION  
"This is a capability variable. Its value is determined by device capabil- ities.~~

~~This attribute, when true, indicates that the STA implementation is capa- ble of transmitting and receiving Reduced Neighbor List element including co-located BSSs information in 6 GHz band in Probe Response, Beacon and FILS Discovery frames. The capability is disabled otherwise."~~

~~DEFVAL { false }~~

~~::= { dot11HEStationConfigEntry 28}~~