IEEE
Wireless LANs

|  |
| --- |
| Draft Text D.1 CC9 Resolution for CIDs 835, 836, 687,686, 779,781,131 |
| Date: 2013-09-16 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| George Calcev | Huawei |  |  | George.calcev@huawei.com |
| James Wang | MediaTek |  | +1 408 526 1899-88109 | james.wang@mediatek.com |

Abstract

This document provides resolution for CIDs 835, 836, 687,686, 779,781, 131

|  |  |  |  |
| --- | --- | --- | --- |
| 836 | 9.32m1.1 | Clearly state that STAs that do not support the protocol are allowed to transmit at any time. The text need be normative and clearly define a behavior for both the STAs that support the protocol and for the ones that don't support it | As in comment |
| 835 | 9.32m1.1 | "In a Sectorized BSS, the AP may alternate the sectorized beacons and the nonsectorized(omni) beacons"; How is the beacon interval set for STAs that do not support the sectorized operation? Will it include the sectorized beacons? How will a STA that does not support the protocol behave at a sectorized beacon? | Clearly define the behavior and make sure it works with STAs that do not support the sectorized operation |
| 687 | 9.32m.2 | Figure 9-44e seems providing a nice illustration about Type 0 sectorization operation. However, there is no description or reference in the text. | Either add description to Figure 9-44e or delete it. |
| 687 | 9.32m.2 | grammar | In line 37 page 151, change "it" to a comma or rewrite the sentence to make it readable. |
| 779 | 9.32m.2 | Fundamental purpose of Type 0 sectorization has to be described. | Describe, e.g. the purpose of Type 0 sectorization is to group STAs in BSS to avoid simultaneous access to AP and operations hidden each other. For this end, beacon using sectorized beam is not necessarily transmitted in sector (Group) beacon period. |
| 781 | 9.32m.2 | Type 0 secterization cannot simply avoid wasting spatial resource using antenna beams by time division multiplexing or in other word generating spatio-temporal resource vacancy for OBSS. Rather this Type 0 scheme is considered as a STA grouping by introducing sectorized beam and reduced coverage. But grouping with location based Group ID doesn’t necessarily require the sectorized beam which induce hidden nodes over OBSSs as well, hence any remedy is preferable. | Make Type 0 secterization combinable with SST to reinforce time division multiplexing with frequency domain orthogonality, in order to mitigate the impediment by simultaneous OBSSs operation. Or otherwise, allow Type 0 (sector) location based grouping with omni beam beacons even in sectorized beacon period (Sector n beacon by omni beacon). This can intentionally avoid generation of spatio-temporal vacancy for OBSS. |
| 131 | 9.32m.2 | It is mentioned that the group ID is related to the sectorization operation but it is not clear how. | Please clarify. |

**CID836**

***Discussion:***

Commenter was correct in pointing out that the text needs to clarify that the stations that do not support the group sectorization feature should be allowed to transmit.

***Proposed Resolution:***

Accept: Add the following clarifying text.

***Proposed changes:***

P151L27

*Instruct the editor to insert the following text:*

*“The STAs that do not support the group sectorization operation are not subject to the rules defined in this clause.”*

**CID836**

***Discussion:***

As commenter pointed out,

***Proposed Resolution:***

Counter.

***Proposed changes:***

*Instruct editor to make the following changes:*

*“The STAs that do not support the group sectorization operation may ignore the sectorized beacons (beacons that carry the Sector Operation element with sectorization type 0) and use only the omni beacons as periodic beacons. If the AP operates in the group sectorization mode, the TBTTS and TSBTT scheduled beacons shall be transmitted only in the omni format.”*

**CID687**

***Discussion:***

As commenter pointed out there is no reference to Figure 9-44e.

***Proposed Resolution:***

Accept. Add reference to the figure.

***Proposed changes:***

*Instruct editor to make the following change in page 151 line 15:*

*“*In a Sectorized BSS, the AP may alternate the sectorized beacons and the non-sectorized (omni) beacons, as illustrated in Figure 9-44e*.”*

**CID687**

***Discussion:***

As commenter pointed out a comma is needed for clear text.

***Proposed Resolution:***

Accept. Add a comma.

***Proposed changes:***

*Instruct editor to make the following change in page 151 line 37: add a comma after word beacon.*

**CID779**

***Discussion:***

As commenter pointed out the main purpose of this scheme is not well underlined.

***Proposed Resolution:***

Counter. Add text to clarify the main purpose of this method.

***Proposed changes:***

*Instruct editor to add the following text in page 151 line 37:*

*“The purpose of group sectorization operation is to allow the channel access of one or multiple groups of STAs at the time, where the STA group allocation is based on STA sector location and other grouping criteria (for instance the device type, or traffic type, or the received SNR, etc.) in order to reduce the number of hidden nodes that simultaneously access the AP.”*

**CID781**

***Discussion:***

The commenter made the comment that the Type 0 Sectorization ( a.k.a. Grouping Sectorization) leads to spatial waste. However this scheme of sectorization does not necessarily creates the spatial waste for the following reasons:

* Omni sector may alternate with sector only operation with any periodicity (as for instance is presented in Figure 9-44e)
* Stations with Group ID zero can transmit at any time no matter their sector location because the AP receives from all directions all the time
* Stations that do not support this feature can transmit at any time no matter their sector location because the AP receives from all directions all the time
* In this sectorization scheme Several Sectors may be active at the same time, which leads to a spatial reuse

***Proposed Resolution:***

Reject.

***Proposed changes:***

*No change.*

**CID131**

***Discussion:***

The commenter pointed out the role of grouping is now well defined. In the proposed method the grouping is a means to allow some stations to access the channel no matter their sector location (stations of group zero), or to allow only a subset of a stations from a sector to access the channel (those groups contained in the beamformed beacon).

***Proposed Resolution:***

Counter. Change the text to make sure that the groping is well explained as proposed in the resolution of CID 201 and 202

***Proposed changes:***

*Please refer to the text of comment resolution CID 201 and 202.*