IEEE P802.11  
Wireless LANs

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| Resolutions to Layer Management Related Comments | | | | |
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Abstract

This document provides resolutions to Layer Management (Clause 6) related comments. The following CIDs are covered in this document.

* **Sub-Clause 6.3.3.3 (in 11mb):** 2559
* **Sub-Clause 6.3.7.2.2:** 2151, 2152, 2560
* **Sub-Clause 6.3.11.2.2:** 2153, 2323, 2324, 3038

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| **CID** | **Page** | **Line** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 2559 | 6.06 | 6 | 6.3.3.3 | MLME-SCAN.confirm (6.3.3.3 in 11mb) contains information about HT capabilities. Surely it also needs to include information about VHT capabilities. | Add VHT information to the MLME-SCAN.confirm primitive. Likewise MLME-JOIN.request. | **Agree in Principle**  VHT Capabilities and VHT Operation should be added to the MLME-SCAN.confirm primitives.  See the resolution in 11-11/1213. |

**Discussion:**

Since the SelectedBSS parameter of the MLME-JOIN.request primitive is a member of the set of descriptions that was returned as a result of a MLME-SCAN.confirm primitive, we only need to add to the MLME-SCAN.confirm primitive (the BSSDescriptionSet) the necessary information as below.

**TGac editor: modify D1.0 P6, L6, as follows**

***Insert the following text***

**6.3.3 Scan**

**6.3.3.3 MLME-SCAN.confirm**

**6.3.3.3.2 Semantics of the service primitive**

***Amend the following two rows at the bottom of the table on Page 104 of REVmb D8.0.***

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| **Name** | **Type** | **Valid Range** | **Description** | **IBSS adoption** |
| VHT Capabilities | As defined in frame format | As defined in 8.4.2.100 (VHT Capabilities element) | The values from the VHT Capabilities element if such an element was present in the Probe Response or Beacon frame, else null.  The parameter is optionally present only if  dot11VHTOptionImplemented is true. | Do not adopt |
| VHT Operation | As defined in frame format | As defined in 8.4.2.101 (VHT  Operation element) | The values from the VHT Operation element if such an element was present in the Probe  Response or Beacon frame, else null.  The parameter is optionally present only if  dot11VHTOptionImplemented is true. | Adopt |

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| **CID** | **Page** | **Line** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 2151 | 6.50 | 50 | 6.3.7.2.2 | Why does MLME-ASSOCIATION.request include "The VHT capabilities to be advertised for the BSS"?  A VHT may not transmit VHT capabilities in its Association Request frame, e.g. when a VHT wants to associate with a HT AP. | Change to "Specifies the parameters within the HT Capabilities element that are supported by the MAC entity. The parameter is optionally present if dot11VHTOptionImplemented is true; otherwise, this parameter is not present." | **Agree in Principle**  Change the “Description” of the “VHT Capabilities” parameter to the one suggested in 11-11/1213. |
| 2560 | 6.50 | 50 | 6.3.7.2.2 | "to be advertised" -- isn't this request for capababilities that ARE avertised? | Delete "to be" in each of the definitions through page 12. None of these primitives are dictating to the AP what to advertise, but instead are telling the STA or AP either what the situation already is or what situation to look for. (But note that "to be" in the definition on line 14 is correct.) | **Agree in Principle**  Change the “Description” of the “VHT Capabilities” parameter to the one suggested in 11-11/1213.  Note “line 14” could be “Page 14” since line 14 on page 6 is irrelavent. |
| 2152 | 9.62 | 62 | 6.3.7.2.2 | Why does MLME-REASSOCIATION.request include "The VHT capabilities to be advertised for the BSS"?  A VHT may not transmit VHT capabilities in its Association Request frame, e.g. when a VHT wants to associate with a HT AP. | Change to "Specifies the parameters within the HT Capabilities element that are supported by the MAC entity. The parameter is optionally present if dot11VHTOptionImplemented is true; otherwise, this parameter is not present." | **Agree in Principle**  Change the “Description” of the “VHT Capabilities” parameter to the one suggested in 11-11/1213. |

**Discussion:**

The description of the “VHT Capabilities” can be similar to the one of the “HT Capabilities”. And this change can be applied to all primitives that contain the VHT Capabilities parameter.

**TGac editor: modify D1.0 P6 – P12, as follows**

***Please change the description of the “VHT Capabilities” of the primitives MLME-ASSOCIATE.request, MLME-ASSOCIATE.confirm, MLME-ASSOCIATE.indication, MLME-ASSOCIATE.response, MLME-REASSOCIATE.request, MLME-REASSOCIATE.confirm, MLME-REASSOCIATE.indication, and MLME-REASSOCIATE.response to the following.***

Specifies the parameters in the VHT Capabilities element that are supported by the MAC entity.

The parameter is present if dot11VHTOptionImplemented is true and is absent otherwise.

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| 2153 | 14.19 | 19 | 6.3.11.2.2 | VHT Operation does not define the additional VHT capabilities, but define the VHT operation of the VHT BSS. | Change the description accordingly. | **Agree in Principle**  Note the HT Operation parameter has the similar description. This can be left to 11mb if we also want to change the HT case.  See the resolution in 11-11/1213. |
| 2323 | 14.19 | 19 | 6.3.11.2.2 | VHTOperation needs to be present for BSSType = IBSS, too, according to the definition of VHT BSS (in 3.2). Is it also supported/optional in a Mesh BSS?  (Hamilton, Mark) | Add INDEPENDENT BSSType support, and if mesh is supposed to be supported, MESH BSSType to the Descption box, for "when present". | **Agree in Principle**  According to the definition of VHT BSS, IBSS should be covered but MBSS should not be covered.  See the resolution in 11-11/1213. |

**TGac editor: modify D1.0 P14, L19-L23, as follows**

***Change the Description of the VHT Operation parameter as below.***

Provides additional information necessary for operating the BSS in VHT mode.

The parameter is present if BSSType = INFRASTRUCTURE or INDEPENDENT, and dot11VHTOptionImplemented is true;

otherwise, this parameter is not present.

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| **CID** | **Page** | **Line** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 2324 | 14.26 | 26 | 6.3.11.2.2 | Start.request, the VHT Tranmit Power Envelope is only present if dot11VHTOptionImplemented is true, in addition to the other requirements. Same thing in 8.3.3.2, and 8.3.3.10. | Add that dot11VHTOptionImplemented must be true (in addition to the others that are listed) in the Description box, for "when present". Same thing in 8.3.3.2 and 8.3.3.10. | **Agree in Principle**  See the resolution in 11-11/1213. |
| 3038 | 14.27 | 27 | 6.3.11.2.2 | VHT Transmit Power Envelope is not described to be depending on dot11VHTOptionImplemented, but it looks like it should. | Replace “if dot11SpectrumManagementRequired is true” with “if dot11VHTOptionImplemented is true and dot11SpectrumManagementRequired is true” | **Agree in Principle**  See the resolution in 11-11/1213. |

**TGac editor: modify D1.0 P4, L24-L29, as follows**

***Change the Description of the VHT Transmit Power Envelope parameter as below.***

Specifies the parameters within the VHT Transmit Power Envelope element that are indicated by the MAC entity. The VHT Transmit Power Envelope element is present if both of the following conditions are met.

1. The dot11VHTOptionImplemented is true;
2. Either the dot11SpectrumManagementRequired is true or the dot11RadioMeasurementActivated is true.

Otherwise, this parameter is not present.

**TGac editor: modify D1.0 P29, L21-L26, as follows**

***Change the Description of the VHT Transmit Power Envelope parameter as below.***

Specifies the parameters within the VHT Transmit Power Envelope element that are indicated by the MAC entity. The VHT Transmit Power Envelope element is present if both of the following conditions are met.

1. The dot11VHTOptionImplemented is true;
2. Either the dot11SpectrumManagementRequired is true or the dot11RadioMeasurementActivated is true.

Otherwise, this parameter is not present.

**TGac editor: modify D1.0 P31, L17-L20, as follows**

***Change the Description of the VHT Transmit Power Envelope parameter as below.***

Specifies the parameters within the VHT Transmit Power Envelope element that are indicated by the MAC entity. The VHT Transmit Power Envelope element is present if both of the following conditions are met.

1. The dot11VHTOptionImplemented is true;
2. Either the dot11SpectrumManagementRequired is true or the dot11RadioMeasurementActivated is true.

Otherwise, this parameter is not present.