IEEE P802.11  
Wireless LANs

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| LB 190 Annex B Comment Resolution | | | | |
| Date: 2012-12-12 | | | | |
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|  |  |  |  |  |

Abstract

This submission provides proposed resolutions to CIDs 7362 and 7332 related to Annex B of draft D4.0. Both CIDs belong to the MAC ad hoc

R0: Initial draft

R1: Resolution of CID 7362 approved

R2: proposed resolution to CID 7332 with significant help from Brian Hart.

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| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Line** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 7362 | 336.00 |  | B.4.3 | VHT should only be allowed if HT in 5G is supported | Put CF29 into the correct feature dependency hierarchy (see 11ad for inspiration) | Revised: see changes in doc 11-12/1295r1 |

**Context:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | IUT configuration | References | Status | Support |
| \*CF16 | High-throughput (HT) features | 8.4.2.58 (HT Capabilities element) | O  CF29:M | Yes  No  |
| \*CF29 | Very High Throughput (VHT) Features | 8.4.2.160 (VHT Capabilities element) | O | Yes  No  |

**Discussion:**

The current PICS table specifies that mandatory support of HT features by a VHT device without specifying the the operating band. With IEEE 802.11ad, two additional enteries are added to the PICS table to indicate HT operation in the 2.4 and the 5 GHz bands. The changes introduced by IEEE 802.11ad are shown below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | IUT configuration | References | Status | Support |
| \*CF16 | High-throughput (HT) features | 8.4.2.58 (HT Capabilities element) | O | Yes  No  |
| \*CF16.1 | HT operation in 2.4 GHz band | Clause 20 | CF16:O.6 | Yes  No  |
| \*CF16.2 | HT operation in 5 GHz band | Clause 20 | CF16:O.6 | Yes  No  |

It makes sense to make use of the changes in the PICS table introduced by IEEE 802.11ad

**Proposed Changes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | IUT configuration | References | Status | Support |
| \*CF16 | High-throughput (HT) features | 8.4.2.58 (HT Capabilities element) | O  CF29:M | Yes  No  |
| \*CF16.1 | HT operation in 2.4 GHz band | Clause 20 | CF16:O.6 | Yes  No  |
| \*CF16.2 | HT operation in 5 GHz band | Clause 20 | CF16:O.6 | Yes  No  |
| \*CF29 | Very High Throughput (VHT) Features | 8.4.2.160 (VHT Capabilities element) | O | Yes  No  |

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| **CID** | **Page** | **Line** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 7332 | 338.00 |  | B.4.12 | Why is the new channel switch stuff (SM20.4/5) required radio measurement is supported? | Remove the "OR CF13" and associated parentheses | Revised. See proposed changes in doc 11-12/1295r2. |

**Context:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| SM20 | Channel switch procedure |  |  |  |
| SM20.4 | Transmission of channel wrapper element and procedures in conjunction with channel switch announcement or extended channel switch announcement | 10.39.1 (Basic VHT BSS functionality) | (CF1 OR CF2.2 OR CF21) AND (CF10 OR CF13) AND CF29:M(#6164) | Yes  No  N/A  |
| SM20.5 | Reception of channel wrapper element and procedures, in conjunction with channel switch announcement or extended channel switch announcement | 10.39.1 (Basic VHT BSS functionality) | CF21 AND (CF10 OR CF13) AND CF29:M(#6164) | Yes  No  N/A  |

Discussion:

The commenter is correct in requesting to remove CF13 from the table entries given above. Additionally it was felt that there is the need to separate the PICS entries for Channel Switch Procedure and Extended Channel Switch procedure by creating separate PICS entries for the latter. The following table contains the proposed changes.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| SM20  SM20.1  SM 20.2  SM 20.3  SM 20.4  SM20.5  SM20.6  SM20.7  SM20.8  SM20.9 | Channel Switch Procedure  Transmission of channel switch  announcement and channel  switch procedure by an AP  Transmission of channel switch  announcement and channel  switch procedure by a STA  Reception of channel switch  announcement and channel  switch procedure by a STA  Transmission of Wide Bandwidth Channel Switch element in Channel Announcement frame and transmission of Wide Bandwidth Channel Switch subelement in Channel Switch Wrapper element in Beacon/Probe Response frames, and associated channel switching procedure by an AP  Transmission of Wide Bandwidth Channel Switch element in Channel Announcement frame and transmission of Wide Bandwidth Channel Switch subelement in Channel Switch Wrapper element in Beacon/Probe Response frames, and associated channel switching procedure by a STA.  Reception of Wide Bandwidth Channel Switch element in Channel Announcement frame and reception of Wide Bandwidth Channel Switch subelement in Channel Switch Wrapper element in Beacon/Probe Response frames, and associated channel switching procedure by a STA.  Transmission of VHT Transmit Power Envelope element in Channel Announcement frame and transmission of VHT Transmit Power Envelope subelement in Channel Switch Wrapper element in Beacon/Probe Response frames, and associated channel switching procedure by an AP  Transmission of VHT Transmit Power Envelope element in Channel Announcement frame and transmission of VHT Transmit Power Envelope subelement in Channel Switch Wrapper element in Beacon/Probe Response frames, and associated channel switching procedure by a STA  Reception of VHT Transmit Power Envelope element in Channel Announcement frame and reception of VHT Transmit Power Envelope subelement in Channel Switch Wrapper element in Beacon/Probe Response frames, and associated channel switching procedure by a STA | 10.9.8  10.9.8  10.9.8  10.39.4  10.39.4  10.39.4  10.39.4  10.39.4 | (CF1 and  CF10):M  (CF2.1 and  CF10):M  CF10:M  (CF1 and  CF10):M  CF29:M  (CF2.1 and  CF10):M  CF29:M  CF10:M  CF29:M  (CF1 and  CF10):M  CF29:M  (CF2.1 and  CF10):M  CF29:M  CF10:M  CF29:M | Yes  No  N/A   Yes  No  N/A   Yes  No  N/A   Yes  No  N/A   Yes  No  N/A   Yes  No  N/A   Yes  No  N/A   Yes  No  N/A   Yes  No  N/A  |
| SM21  SM21.1  SM 21.2  SM 21.3  SM21.4  SM21.5  SM21.6  SM21.7  SM21.8  SM 21.9  SM21.10  SM21.11  SM 21.12 | Extended Channel Switch Procedure  Transmission of extended channel switch announcement frame/element and extended channel switch procedure by an AP  Transmission of extended channel switch announcement frame/element and extended channel switch procedure by a STA  Reception of extended channel switch announcement frame/element and extended channel switch procedure by a STA  Transmission of Wide Bandwidth Channel Switch element in Extended Channel Announcement frame and transmission of Wide Bandwidth Channel Switch subelement in Channel Switch Wrapper element in Beacon/Probe Response frames, and associated extended channel switching procedure by an AP  Transmission of Wide Bandwidth Channel Switch element in Extended Channel Announcement frame and transmission of Wide Bandwidth Channel Switch subelement in Channel Switch Wrapper element in Beacon/Probe Response frames, and associated extended channel switching procedure by a STA  Reception of Wide Bandwidth Channel Switch element in Extended Channel Announcement frame and reception of Wide Bandwidth Channel Switch subelement in Channel Switch Wrapper element in Beacon/Probe Response frames, and associated extended channel switching procedure by a STA  Transmission of New VHT Transmit Power Envelope element in Extended Channel Announcement frame and transmission of New VHT Transmit Power Envelope subelement in Channel Switch Wrapper element in Beacon/Probe Response frames, and associated extended channel switching procedure by an AP  Transmission of New VHT Transmit Power Envelope element in Extended Channel Announcement frame and transmission of New VHT Transmit Power Envelope subelement in Channel Switch Wrapper element in Beacon/Probe Response frames, and associated extended channel switching procedure by a STA  Reception of New VHT Transmit Power Envelope element in Extended Channel Announcement frame and reception of New VHT Transmit Power Envelope subelement in Channel Switch Wrapper element in Beacon/Probe Response frames, and associated extended channel switching procedure by a STA  Transmission of New Country element in Extended Channel Announcement frame and transmission of New Country subelement in Channel Switch Wrapper element in Beacon/Probe Response frames, and associated extended channel switching procedure by an AP  Transmission of New Country element in Extended Channel Announcement frame and transmission of New Country subelement in Channel Switch Wrapper element in Beacon/Probe Response frames, and associated extended channel switching procedure by a STA  Reception of New Country element in Extended Channel Announcement frame and reception of New Country subelement in Channel Switch Wrapper element in Beacon/Probe Response frames, and associated extended channel switching procedure by a STA | 10.10  10.10  10.10  10.39.4  10.39.4  10.39.4  10.39.4  10.39.4  10.39.4  10.39.4  10.39.4  10.39.4 | (CF1 and  CF10):M  (CF2.1 and  CF10):M  CF10:M  (CF1 and  CF10):M  CF29:M  (CF2.1 and  CF10):M  CF29:M  CF10:M  CF29:M  (CF1 and  CF10):M  CF29:M  (CF2.1 and  CF10):M  CF29:M  CF10:M  CF29:M  (CF1 and  CF10):M  CF29:M  (CF2.1 and  CF10):M  CF29:M  CF10:M  CF29:M | Yes  No  N/A   Yes  No  N/A   Yes  No  N/A   Yes  No  N/A   Yes  No  N/A   Yes  No  N/A   Yes  No  N/A   Yes  No  N/A   Yes  No  N/A   Yes  No  N/A   Yes  No  N/A   Yes  No  N/A  |

**References:**