IEEE P802.11
Wireless LANs

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| Editor questions #1 |
| Date: 2013-09-18 |
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Abstract

In resolving Ballot 198 comments identified with Editor responsibility, there were some resolutions that the editor felt needed TG approval, either to determine that they are indeed editorial and not technical or to select one from multiple optional resolutions. Some have proposals that are not sufficiently defined to enable them to be implemented.

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| **CID** | **Clause/Page/Line** | **Comment** | **Proposed Resolution** | **Issue** |
| 2498 | 3/2/3 | FILSC defined twice | Line 28,51: we only need one of them. | Need to decide which should be deleted and wording of the one retained. |

Essentially repeated by CIDs 2060, 2498, 2631, 2794, 2633, 2717, 2391, 2795, 2761, 2584. Also includes/impacts FILS definition.

Current D1.1 contents:

**3.1 Definitions**

***. . .***

**fast initial link setup category (FILSC)**: A label used by an associating station (STA) to associate with an access point (AP) with high priority. [CID 2223, 2059, 2225, 2227, 3248, 3092]

**3.2 Definitions specific to IEEE Std 802.11**

***. . .***

**fast initial link setup category (FILSC)**: A binary value label to indicate the category of the station (STA) for fast initial link setup.

Argument for keeping in 3.2 only is that definitions in 3.1 become applicable to all IEEE standards/documents, not just 802.11. FILSC seems to be applicable only to 802.11 and nowhere else.

RECOMMENDATION: Delete the 3.1 definition of FILSC, keeping the 3.2 text but with the word "station" added before "STA". Move the 3.1 definition of FILS to 3.2, keeping the wording changes for it.

**Motion (can be agreement by unanimous consent): Agree to delete FILSC definition in clause 3.1 with minor change shown above and move the FILS definition from 3.1 to 3.2.**

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| **CID** | **Clause/Page/Line** | **Comment** | **Proposed Resolution** | **Issue** |
| 2916 | 4.5/5/34 | The list of fils categories is not worded as a list of methods having certain characteristics but as conditions when they are used. | Replace "is performed without PFS" in line 35 with "without providing PFS"; and replace in line 36 "TTP is performed with PFS" with "TTP providing PFS". | This has been implemented as requested, but need to verify that it does not change the technical meaning/content of the paragraph. |

RECOMMENDATION: Verify that this is editorial and not technical.

**Motion (can be agreement by unanimous consent): Agree that the proposed resolution constitutes an editorial change and is not technical.**

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| **CID** | **Clause/Page/Line** | **Comment** | **Proposed Resolution** | **Issue** |
| 2789, 3310, 2615, 2063 |  | 11ad and other amendments no fully incorporated | Update to include all appropriate base and amendment docs | There are two parts to this, the purely editorial and the technical. The editorial is being done, but there are instances where it is not clear if there is a technical impact. |

From 11ad, clause 10.1.4.3.2:

For each channel to be scanned:

a) Wait until the ProbeDelay time has expired or a PHYRxStart.indication primitive has been received.

b) Perform the Basic Access procedure as defined in 9.3.4.2 if the STA is a non-DMG STA.

c) If the STA is a DMG STA:

1) Start generation of DMG Beacon frames according to the rules described in 10.1.3.2b if the STA intends to transmit DMG Beacon frames with the Discovery Mode field set to 1.

2) Otherwise, proceed to step (e).

d) If a DMG Beacon frame is received, perform the beamforming training defined in 9.35.5.

e) If the STA is a DMG STA, perform the basic access procedure defined in 9.3.4.2

f) Send a probe request to the broadcast destination address or, in the case of a DMG STA only, (i following the transmission of an SSW-Feedback frame, send a probe request to the MAC address of the DMG STA addressed by the SSW-Feedback frame or (ii) optionally, following the reception of an SSW-Feedback frame, send a probe request to the MAC address of the DMG STA that transmitted the SSW-Feedback frame. In all these cases, the probe request is sent with the SSID and BSSID from the MLME-SCAN.request primitive. When transmitted by a DMG STA, the probe request includes the DMG Capabilities element. When the SSID List is present in the MLMESCAN. request primitive, send one or more probe request frames, each with an SSID indicated in the SSID List and the BSSID from the MLME-SCAN.request primitive.

g) Set to 0 and start a ProbeTimer.

h) If PHY-CCA.indication (busy) has not been detected before the ProbeTimer reaches MinChannelTime, then

1) If the STA is a non-DMG STA, set the NAV to 0 and scan the next channel,.

2) Otherwise, when ProbeTimer reaches MaxChannelTime, process all received probe responses.

i) Set the NAV to 0 and scan the next channel.

From 11ai D1.0 clause 10.1.4.3.2 (with uncontested 11ad changes shown underlined and questioned 11ad list items in red):

For each channel to be scanned:

a) Wait until the ProbeDelay time has expired or a PHYRxStart.indication primitive has been received.

b) Perform the Basic Access procedure as defined in 9.3.4.2 if the STA is a non-DMG STA.

c) When the criteria defined in 10.1.4.3.5 are met, send a probe request to the broadcast or individual destination address. When the SSID List is present in the MLME-SCAN.request primitive, send one or more Probe Request frames, each with an SSID indicated in the SSID List and the BSSID from the MLME-SCAN.request primitive.

(Assume 11ad items "c", "d","e". and "f" should go here with corresponding change to letters. Right? Unchanged from 11ad?)

g) Set a ProbeTimer to 0 and start the ProbeTimer. (11ad has " Set to 0 and start a ProbeTimer.")

h) If PHY-CCA.indication (busy) has not been detected before the ProbeTimer reaches MinChannelTime, then: go to step f, else while the Probe Timer is less than the MaxChannelTime: (differences with 11ad need to be verified, significantly different here and in numbered list)

1) Process any received probe responses;

2) Process any received Beacons, measurement pilots and FILS Discovery frames if dot11FILSActivated is true in the STA;

3) If dot11FILSActivated is true in the STA, ReportingOption is IMMEDIATE, and new AP or new information of the AP is detected, issue MLME-SCAN.confirm primitive with the Result- Code equal to INTERMEDIATE\_SCAN\_RESULT and the BSSDescriptionSet containing information of the detected AP;

4) If dot11FILSActivated is true and the ReportingOption is CHANNEL\_SPECIFIC, issue at the time when the Probe Timer reaches the MaxChannelTime an MLME-SCAN.confirm primitive, with the ResultCode equal to INTERMEDIATE\_SCAN\_RESULT and the BSSDescriptionSet containing information of all APs that have been discovered from the scanned channel.

f) Set the NAV to 0 and scan the next channel

RECOMMENDATION:
1. Accept insertion of 11ad items "c", "d", "e", and "f" where shown without changes to them.

1. Accept the 11ai version of item "g" (represents a change to the 11ad version).

3. Obtain group input and acceptance of proper resolution to item "h".

**Motion 1 (can be agreement by unanimous consent): Agree that inserting the 11ad items "c", "d", "e", and "f" can be inserted where shown above and are an editorial change and not technical.**

**Motion 2 (can be agreement by unanimous consent): Agree that the 11ai version of "g" is what is desired (represents a change to 11ad).**

**Motion 3 (can be agreement by unanimous consent): Agree that the 11ad version of "h" is what is desired (represents a change to 11ai).**

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| **CID** | **Clause/Page/Line** | **Comment** | **Proposed Resolution** | **Issue** |
| 2789, 3310, 2615, 2063 |  | 11ad and other amendments no fully incorporated | Update to include all appropriate base and amendment docs | There are two parts to this, the purely editorial and the technical. The editorial is being done, but there are instances where it is not clear if there is a technical impact. |

From 11ai, D1.1 (our next draft) Clause 10.3.1:

For non-mesh STAs, this state variable expresses the relationship between the local STA and the remote STA. It takes on the following values:

* State 1: Initial start state, for non-DMG STAs. U~~u~~nauthenticated, unassociated. State 1 is not used by DMG STAs.
* State 2: Initial start state for DMG STAs. ,Authenticated (non-DMG STAs only), not associated.
* State 3: Authenticated (non-DMG STAs only) and associated (Pending RSN Authentication).
* State 4: For Infrastructure BSS and PBSS only, RSNA Established or Not Required. ~~Authenticated and associated.~~
* State 5: FILS authenticated and unassociated. State 5 is designed for the FILS authentication and FILS association protocol

State 1 is not used by DMG STAs, and the state machine starts in State 2.

ISSUE: 11ad deletion in State 4 (highlighted in red) may be an issue for 11ai. Is this OK to implement per 11ad?

**Motion (can be agreement by unanimous consent): Agree that adapting the 11ad text as shown above and is an editorial change (can be implemented as shown) and not technical.**

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| **CID** | **Clause/Page/Line** | **Comment** | **Proposed Resolution** | **Issue** |
| 2809 | 3.1/3/26 | The term "FILS STA" are used multiple times in the 11ai draft spec. However, it is not defined in the definition section, 3.1. | Add the following text of the "FILS STA" definition in line 26 page 3: Fast Initial Link Setup Station (FILS STA): A station (STA) that supports fast initial link setup (FILS). | The terms "FILS" and "STA" are both defined already. It would seem to be self evident that a "FILS STA" is a STA that supports FILS and thus does not require a unique definition. |

Recommendation: Reject this comment as such a definition is not necessary.

**Motion (can be agreement by unanimous consent): Agree that the independent definitions for FILS and STA are sufficient and a unique definition for the two used together is not necessary.**

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| **CID** | **Clause/Page/Line** | **Comment** | **Proposed Resolution** | **Issue** |
| 2619 | 3.1/3/34 | the definition of 'link setup' is too broad and should be limited to along the lines of 'a protocol frame exchange sequence between ...'. | As suggested. | The suggestion is incomplete, especially considering that the draft has 3 sentences for this definition and the suggestion does not indicate even one complete sentence. |
| 2788 | 3.1/3/34 | The time/event referance points for the Link Setup definition are not not well defined - it is not clear whether link setup includes AP discovery or not, Is Link setup includes discovery?Is user intervened only or is it also cyclic? | Clarify it is from the discovery till the upper layer address assignment and for both cyclic and user intervened. | No specific proposal given. |
| 2392 | 3.1/3/34 | Improve definition of link set-up | Changr clarify "this"; suggest deleting the last sentence, and ading the clause "including AP/network discovery and (secure) association and authentication" to the first sentence. | Proposed change needs some work. |

Recommendation: The submitters need to provide a complete proposal, perhaps they can work together to create something.

No motion required, but we need to identify a person responsible for providing new text.

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| **CID** | **Clause/Page/Line** | **Comment** | **Proposed Resolution** | **Issue** |
| 2621 | 3.1/3/43 | Definition of TTP is too vague and lacks context. Does the security associaion with the two need to be maintained at the same time? | Please clarify. | No specific proposal given. |

Recommendation: The submitter needs to provide a proposed change.

No motion required, but we need to identify a person responsible for providing new text.