IEEE P802.11
Wireless LANs

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| Proposed Resolution to DSE Link Identifier Element  |
| Date: 2011-11-01 |
| Author(s): |
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Abstract

This document provides proposed resolutions for technical comments CIDs in MAC DSE:

Some are related to DSE Link Identifier element (38, 275, 386, 683, 707, 959, 1068, 1069, 1218, 172, 183, 706, 485, 1157 and 318) and rest of them are related to general DSE comments (924, 348, 349, 321, 502 and 641).

Editing instructions are based on modifying P802.11af\_D1.04.

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 TGaf Draft. This introduction is not part of the adopted material.

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

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

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** |
| 38 | 30.25 | 8.4.2.af2 | The length can be 6 or 12 | As in comment |
| 275 | 30.25 | 8.4.2.af2 | Length cannot be fixed if some fields are optional. | Allow for flexible lengths to accommodate optionally present fields. Also fix the corresponding table entry in 8.4.2.1 |
| 386 | 30.00 | 8.4.2.af2 | The text "The Length field is set to 12." doesn't coincident with the picture. The picture states that the second element may or may not be present. | Change "The Length field is set to 12." to "The Length field is set to 8 or 14." |
| 683 | 30.25 | 8.4.2.af2 | Figure 8-42af4 and line 32 below describe the BSSID field as an optional field that may not be present in the DSE Link Identifier element. However, this statement about the Length field having value 12 does not take into account that. | Replace “The Length field is set to 12” with “The Length field is set to 6 to 12”. |
| 707 | 30.24 | 8.4.2.af2 | The length field can be 6 or 12, depending on the presence of the BSSID field | Change to "The Length field is set to either 6 or 12" |
| 959 | 30.25 | 8.4.2.af2 | The length field does not capture the optional BSSID, e.g., when BSSID field is not present it should be 6. | Replace "The Length field is set to 12" with "The Length field is set to 12, or 6 depending on whether BSSID field is present or not. |
| 1068 | 30.25 | 8.4.2.af2 | "The Length field is set to 12." - how does this agree with the optionality of the BSSID field | Chang to "... 6 or 12". |
| 1069 | 30.28 | 8.4.2.af2 | "The length of the ResponderSTAAddress field is 6 octets." - this is doubly unnecessary. The figure above shows it as 6, and a MAC address is by definition 6 octets. | Remove cited text. |
| 1218 | 30.25 | 8.4.2.af2 | The Length field is not always set to 12 if the BSSID field is optional. | Clarify. |
| 172 | 32.34 | 8.4.2.1 | The length of the DSE Link identifier element is incorrect. 8.4.2.af2 requires the BSSID to be present when transmitted over the air (6 octetts in additoin to the 8 octetts for the element id, length, and responder STA address field) | Change length from 12 to 14 |
| 183 | 30.31 | 8.4.2.af2 | If the enablement responder is the AP, what would be put in the BSSID field? Is such an AP associated to itself? What if the enablement responder is not associated to an AP? Example: Mode II device (e.g. mobile phone with WiFi Interface) accessing the database via the cellular network and enabling oder Mode I devices (WiFi) via ad-hoc communication / iBSS set-up? | Please clarify. |
| 706 | 30.10 | 8.4.2.af2 | What are "enablement requester" and "enablement responder". These are the first time these terms are used in the document. | Please provide a definition for these terms or reference another clause in IEEE 802.11REVmb (perhaps from a previous 802.11y clause??) |
| 485 | 25.45 | 8.3.3.2 | The usage of DSE Link Identifier is not clear, and it is not necessary for meeting regulatory requirements.  | Remove the DSE Link Identifier from the beacon frame. |
| 1157 | 132.30 | E.2.4.1 | "shall provide the enabling STA's MAC address to its associated dependent STA" - presumably by writing it on a piece of paper and posting it to the STA.Ditto line 33 | Indicate how this is provided - i.e. which element/frame, and as part of what protocol exchange. |
| 318 | 25.45 | 8.3.3.2 | The usage of DSE Link Identifier is not clear (not required by regulator) | Remove the DSE Link Identifier from the beacon frame. |

**Discussion:**

CIDs 38, 275, 386, 683, 707, 959, 1068, 1069, 1218 and 172request to correct the value of length field in the DSE Link Identifier. CID 183 comments on the BSSID filed in the DSE Link Identifier frame. CID 706 asks for definitions of the enablement requester and enablement responder. Similarly, CID 1157 comments on the enabling STA’s MAC address and CID 318 and 485 ask to remove DSE Link identifier from the beacon frames and we agree.

**Propose** Revised for CIDs 38, 275, 386, 683, 707, 959, 1068, 1069, 1218, 172, 183, 706 and 1157per discussion and editing instructions in 11-11/1150r3.

**Propose** Accepted for CIDs 318 and 485 per discussion and editing instructions in 11-11/1150r3.

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| 924 | 10.af2.2 55.65 | Definitions of each terminologies, registered/unregistered STA, enabling STA, dependent STA, fixed STA and dependent AP are confusing and missing. Description on the operation of registered STA, dependent STA and enabling STA is confusing and is not sufficient. Some of operations are missing. | Clarify and specify. |

**Discussion:**

CID 924 is identical to CID 553, which was resolved in the July session with the approval of 11-11/414r6, and the resolution was included in approved Draft D1.03.

**Propose** Revised for CID 924, per discussion and editing instructions in 11-11/414r6 for CID 553 and discussion in 11-11/1150r3.

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| 348 | 10.12.5 58.44 | Is a power save STA that sleeps longer than dot11DSERenewalTime required to passively scan when it wakes? | Please clarify scanning requirements for power save dependent STAs. |

**Discussion:**CID 348 asks about the requirement “An enabled dependent STA shall cease transmission within dot11DSERenewalTime (in seconds) if it has not received an enabling signal” , but the next sentence in 10.12.5 base text answers the question – “It shall then change its enablement state with the enabling STA to unenabled and set all fields of its DSE Registered Location element body (see 8.4.2.54) to 0.” The requirement to maintain contact with the enabling STA is absolute, and a STA’s power save choices should reflect that. The corresponding sentences in D1.04 are equivalent to 10.12.5 “A GDC dependent STA shall cease all transmissions when the dot11GDCEnablementValidityTimer has expired. It then changes its GDC enablement state to *Unenabled*.” We disagree that the requirement needs clarification.

**Propose** Rejected for CID 348 - We disagree that the dot11DSERenewalTime requirement needs clarification, per discussion in 11-11/1150r3.

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| 349 | 10.12.5 58.44 | Is the value of dot11DSERenewalTime static and the same for all bands? If not then how will a STA know if the value of dot11DSERenewalTime is different or has changed? | If dot11DSERenewalTime may change depending on band or for other reasons please provide a means for dependent STAs to know its value. |

**Discussion:**

CID 349 asks if dot11DSERenewalTime applies to other bands in general and TVWS in particular. In Draft D1.04, dot11GDCEnablementValidityTimer is used in TVWS. Both are single band timers and each is set by the SME when the device is initialized. We disagree that dot11GDCEnablementValidityTimer will be used with other values than the value in TVWS in a regulatory domain.

**Propose** Rejected for CID 349 - We disagree that dot11GDCEnablementValidityTimer will be used with other values than the value in TVWS in a regulatory domain, per discussion in 11-11/1150r3

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| 321 | 10.12.357.00 | "An Enabling STA is a registered STA …", the notion of "registered" is applicable for .11y band, but in TVWS, all Enabling STAs do not need to be registered. | Suggest to remove reference to "registered" in general |
| 502 | 10.12.357.00 | "An Enabling STA is a registered STA …", the notion of "registered" is applicable for .11y band, but in TVWS, all Enabling STAs do not need to be registered. | Suggest to remove reference to "registered" in definition of Enabling STA (in the baseline), and here. |

**Discussion:**

CIDs 321 and 502 comment on DSE text in Draft 1.0. Note that approved comment resolutions in 11-11/1188r2 have removed all use of clause 10.12.1 from the TGaf draft.

**Propose** Revised for CIDs 321 and 502 with explaination that approved comment resolution document 11-11/1188r2 has removed all use of DSE procedures, per discussion in 11-11/1150r3.

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| 641 | 10.12.5 58.25 | There is no mention of "state machine" in the text. This is a document full of frames no reference in a appropriate manner to the 802.11 state machine or adiquate extensions to the 802.11 state manchine | Are the states in 10.12.5 useful? If so the should be referenced. If not states representing the ability of a WS device to transmit in a channel should be indicated. Geolocation is also a state variable - perhaps not a full state by it's self. There is not adiquate mechanisms showing the knowledge/availability of geolocation information. |

**Discussion:**

CID 641 says that the dependent STA procedures use states that are different than the 802.11 clause 10.3 authentication and association states. The states with respect to DSE are defined in 10.12.1. The Draft 1.04 GDC enablement state variable has three values: unenabled, attemptingGDCenablement and GDCEnabled. The proposed change says perhaps there should be channel-specific states or Geolocation-specific states. We observe there is no presumption in the amendment that dependent STAs know or need to know their location, nor is their master-client relationship channel-specific.

**Propose** Rejected for CID 641 with explaination that dependent STA procedures are independent of clause 10.3 authentication and association states, of WSM channel lists, and of knowing their location, per discussion in 11-11/1150r3.

## Editing instructions:

***TGaf editor: Delete DSE Link Identifier text from Table 8-20 Beacon frame body, Table 8-27 Probe Response frame body and Table 8-54 Element IDs.***

***TGaf editor: Delete 8.4.2.161 DSE Link Identifier element text***

***TGaf Editor: Change text in section 6.3.3.3.2 as follows:***

### 6.3.3 Scan

### 6.3.3.3 MLME-SCAN.confirm

### 6.3.3.3.2 Semantics of the service primitive

***Editor: Insert three~~four~~ new entries at the end of BSSDescription table as follows:***

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| **Name** | **Type** | **Valid range** | **Description** | **IBSS adoption** |
| White Space Map | White Space Map element | As defined in 8.4.2.160 (White Space Map element) | The values from the White Space Map element if such an element was present in the probe response or Beacon frame, else null. | Adopt |
| ~~DSE Link Identifier~~ | ~~DSE Link Identifier element~~ | ~~As defined in 8.4.2.161 (DSE Link Identifier element)~~ | ~~The values from the DSE Link Identifier element if such an element was present in the probe response or Beacon frame, else null.~~ | ~~Adopt~~ |
| Channel Power Management Announcement | Channel Power Management Announcement element | As defined in 8.4.2.162 (Channel Power Management Announcement element) | The values from the Channel Power Management Announcement element if such an element was present in the probe response or Beacon frame, else null. | Adopt |
| Geodatabase Inband Enabling Signal | Geodatabase Inband Enabling Signal element | As defined in 8.4.2.164 (Geodatabase Inband Enabling Signal element) | The values from the Geodatabase Inband Enabling Signal element if such an element was present in the Probe Response or Beacon frame, else null. | Adopt |