IEEE P802.11  
Wireless LANs

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| IETF OPSAWG capwap-extension Liaison Response | | | | |
| Date: 2014-07-15 | | | | |
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Abstract

This submission contains a liaison response from the 802.11 WG related to a review request from the IETF OPSAWG chairs and Dan Romascanu on an updated version of <http://datatracker.ietf.org/doc/draft-ietf-opsawg-capwap-extension/> .

# Liaison Request

At the July 2013 IETF meeting, a request for IEEE 802.11 review of a future (WGLC) version of the capwap-hybridmac document was made by the OPSAWG chairs and Dan Romascanu. The WGLC version of the document recently became available (<http://datatracker.ietf.org/doc/draft-ietf-opsawg-capwap-extension/> ). This proposed liaison response will be discussed 2014-07-16 in the ARC SC. Liaison Response:

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Subject: IEEE 802.11 review of draft-ietf-opsawg-capwap-extension-04

Thank you for the opportunity to review the "CAPWAP extension for 802.11n and Power/channel Autoconfiguration” document,

<http://datatracker.ietf.org/doc/draft-ietf-opsawg-capwap-extension/> .

The IEEE 802.11 Working Group has reviewed this document and the comments are attached.

We welcome requests from the OPSAWG for information on or clarification of the IEEE 802.11 standard and its amendments.

Thank you,

Adrian P Stephens, Chair, IEEE 802.11 WG

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| **Comment Number** | **Section** | **Comment** | **Proposed resolution** |
| 1 | Introduction and Section 9 | Reference is incomplete | Change from”802.11-2009” to IEE Std 802.11n™-2009” and in Section 9, add “Enhancements for Higher Throughput (Amendment 5)” to the end of the reference text. Also delete “The” and “standard” in the first sentence of the Introduction. |
| 2 | 3 | Suggested wording clarification | Change from “one ACK frame to acknowledge several….receiving events” to “one ACK frame to acknowledge receipt of several MAC Protocol Data Units (MPDUs) |
| 3 | 3.1.2 | The Figure 2 encoding of 8 values in 8 bits is inefficient. | Consider a more efficient encoding. Also, for future extensibility, consider that some implementation may have more than 8 antennas. |
| 4 | 4.3 and throughout | Section numbers not correct | Repace instances of “Section 5.2” with “Section 4.3.2” and similar throughout |
| 5 | 4.3 | The text states “With the active scan type, the WTP will send a probe message and receive probe response message”. Implicit in this behavior is that the WTP is sending a Probe Request frame and thus is changing from an “AP” mode of operation” to a “station/client” mode of operation. A “station mode” is not included in the current WTP definition, “Wireless Termination Point (WTP): Wireless Termination Point (WTP): The physical or network entity that contains an IEEE 802.11 RF antenna and wireless PHY to transmit and receive station traffic for wireless access networks.“ | Add text to highlight the change and added requirements on the WTP device, to support transmission of Probe Request frames, and operate in a “station” mode. The ability of a WTP to support this new mode now might also need to be conveyed to the AC.  Also, in Figure 4, change the CAPWAP message names to “Configuration Status Request/Response” |
| 6 | 4.3, 3rd paragraph | Incosistent naming of modes | Change from “In the normal scan mode” to “In normal mode” or otherwise align the naming with the prior paragraph “normal mode” and “scan only mode” |
| 7 | 4.3, 3rd paragraph | Benefit of scanning the working/current operating channel in unclear | Add text to justify why the WTP must scan the current operating channel, compared to just servicing client devices. |
| 8 | 4.3.1 | M-bit description introduces new terms | Change “monitor only mode” to “scan only mode” or otherwise align terms throughout |
| 9 | 4.3.1 | The use of L and D bits are not described or defined. | Define or delete both bits. |
| 10 | 4.3.1 | In the definition of the “On Channel ScanTime”, the text states: “WTP oper mode is set to 2”. However “WTP oper mode” is not defined. | Might intend to refer to the M bit (work mode), but those values are only 0 or 1. Change to a defined term. Same issue in Prime and off channel definitions. |
| 11 | 4.3.1 | The limits on channel scan time parameters (60-120ms) seem too long for active probing. | Consider defining separate parameters for normal scan mode with active scan type. |
| 12 | 4.3.2 | Radio ID is missing from Figure 6 | Add field to figure. |
| 13 | 4.3.3 | The name of the message element “channel bind: message element doesn’t seem to match the contents, which are related to scanning | Rename the element to be related to channel scanning |
| 14 | 4.3.2 | Figure 6, Length value is specified as “4”. Can’t be correct if the field includes one or more Scan Channel Set fields, each of which is 4 bytes | Change to accurate value |
| 15 | 4.3.2 | Delete “bitmap” from “Flag” definition, as “reserved” is sufficient | As in comment |
| 16 | 4.3.3 | “Neighbor STA Report” is not defined in the document | Is “WTP Neighbor Report” intended? |
| 17 | 4.3.3 | Figure 8 does not show a length long enough for the Channel Scan Report | Update to show longer field length |
| 18 | 4.3.3 | Definition of “Radar Statistics” uses a 16 bit field to signal 0/1. Seems excessive. | Change to a single bit field. |
| 19 | 4.3.3 | Mean RSSI definition units incompletely specified. | Change “dbm” to “dBm” and indicate encoding: e.g.2’s complement? |
| 20 | 4.3.3 | Mean Noise and Interference fields: units are unspecified | Specify the units |
| 21 | 4.3.3 | In WTP TX Occp definition, change from “sending duration” to “transmission” | As in comment |
| 22 | 4.3.3 | Interference definition refers to “STA interference” and “WTP interference”. How is each identified? | Describe how each is identified or delete. Define “interference” more specifically: how is it determined? |
| 23 | 4.3.3 | In “unknown Occp” definition, what else is included, as TX or RX are included in above fields? | Clarify |
| 24 | 4.3.3 | Count fields don’t seem to be useful on non-operational channels | Consider deleting or add a note that the values of these fields for a non-operational channel can be ignored. |
| 25 | 4.3.4 | Radio ID and length definitions are missing. Also, element ID and length fields are not typically shown in the figures (Figure 10) | Add definitions, make figures consistent in their display of element ID and length |
| 26 | 4.3.4 | In Figure 11 and definitions, change field names from “Intf” to “Occp” to be consistent with prior element definitions. Also change from “AP” to “WTP” in last field name | As in comment |
| 27 | 6 | IANA request for 4.3.4 is missing | Add TBD6 entry for WTP Neighbor Report |