IEEE P802.11 Wireless LANs

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| Normative text for Broadcast Probe Response triggering | | | | |
| Date:2012-09-16 | | | | |
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Abstract

The submission proposes 802.11ai specification text for Active Scanning enhancement,

The numbering of the clauses is taken from 2012 revision of IEEE802.11 standard [Ref-2].

# Background

To facilitate a fast initial link setup, a method for triggering the Probe Response during active scanning has been provided IEEE 802.11-12/0550r8.

As a response to the TGai Call-for-Contributions, this document proposes detailed text for TGaiSpecifiction Document, for the proposed enhancement to active scanning.

# Conventions

In this contribution, the proposed 802.11ai specification Document text will be presented as an amendment text based on the baseline 802.11 standard, 802.11-2012 [Ref-2]. The following format conventions are used:

1. The new added text is marked as blue underline text;
2. The deleted text is marked as~~red strikethrough text~~;
3. The unchanged baseline standard text stays in black text in the context of proposed TGai specification text;
4. The editorial instruction is marked as ***[parenthesis italic bold text highlighted by Yellow]***;
5. Values that are under control of ANA (Assigned Numbers Athurety) are marked <ANA>.
6. The quoted TGai SFD text is marked as *green italic text*; and
7. Any other text, e.g., discussions, proposed motions, etc., is in black text, but not in the context of proposed TGai specification text.

# Proposed 802.11ai Specification Text

*Instructions to Editor: Modify Table 8-26 in section 8.3.3.9 as follows:*

|  |  |  |
| --- | --- | --- |
| **Order** | **Information** | **Notes** |
| … | … | … |
| 13 | Mesh ID | The Mesh ID element is present if dot11MeshActivated is true. |
| 14 | Broadcast Probe Response Triggering | The Broadcasting Probe Response Triggering element is optionally present if dot11FILSActivated equals to true. |
| Last | Vendor Specific | One or more vendor-specific elements are optionally present.  These elements follow all other elements. |

*Instructions to Editor: Insert a new subclause in section 8.4.2 as follows:*

# 8.4.2.122 Broadcast Probe Response Triggering element

The Broadcast Probe Response Triggering element provides the triggering information of broadcast Probe Response in the Probe Request frames. The format of the Broadcast Probe Response Triggering element is shown in Figure 8-[xxx].

|  |  |  |  |
| --- | --- | --- | --- |
|  | Element ID | Length | Source Address |
| Octets: | 1 | 1 | 6 |

Figure 8-[xxx]. Broadcast Probe Response Triggering element

The Element ID field is set to the value given in Table 8-54 for this element.

The Length field is set to 6.

The Source Address field contains the value of the Address 2 (Source Address) field in the MAC Header of the received Probe Request frame from other STA.

*Instructions to Editor: add new subclauses in section 10 as follows:*

10.25 Fast Initial Link Setup (FILS) Procedures

….

10.25.[x] Broadcast Probe Response

A non-AP STA with dot11FILSActivated equals to true, before transmitting its Probe Request frame to an AP, may receive other non-AP STAs’ Probe Request frame(s). After receiving other non-AP STA’s Probe Request frame(s) which is not including Broadcast Probe Response Triggering element, the non-AP STA may trigger the broadcast Probe Response of an AP by including the Broadcast Probe Response Triggering element in Probe Request frame. If an AP receives the Probe Request frame including the Broadcast Probe Response Triggering element from the STA, the AP may broadcast the Probe Response frame to the STAs.

10.25.[y] Omission of Probe Request

A non-AP STA with dot11FILSActivated equals to true, before transmitting its Probe Request frame to an AP, may receive other non-AP STAs’ Probe Request frame(s). After receiving other non-AP STA’s Probe Request frame(s) which is including Broadcast Probe Response Triggering element, the non-AP STA may omit the Probe Request transmission.

# References:

1. 11-12-151-12-00ai-Proposed-Specification-Framework-Document.docx
2. IEEE Std 802.11 – 2012
3. 11-12-0992-00-00ai-call-for-specification-text-contributions-for-the-tgai-detailed-draft-text.