IEEE P802.11 Wireless LANs

|  |
| --- |
| Proposed 802.11ai Specification Text for the Neighbour AP Information in FILS Discovery Frame  |
| Date:2013-01-07 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Lei Wang | InterDigital Communications | 781 Third Ave., King of Prussia, PA 19406 | 1 858 205 7286 | leiw@billeigean.com |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Abstract

This submission proposes the 802.11ai specification text for the Neighbour AP Information in FILS Discovery Frame, based on the accepted features and functionalities in the 802.11ai Specification Framework Document (SFD), i.e., Section 6.3.1, in 12/0151r14[Ref-1].

# Introduction

To facilitate a fast initial link setup, high-level descriptions about passive scanning enhancement related features/functionalities have been accepted in 802.11ai Specification Framework Document (SFD), 12/0151r14 .

The 802.11Task Group (TGai) has issued a new call for contributions for Specification Tex for the TGai detailed Draft Text, 12/0992r2 .

As a response to the TGai Call-for-Contributions, this contribution proposes further detailed text for TGai Specification Document, to define the Neighbour AP Information in the FILS Discovery (FD) frame.

# Conventions

In this contribution, the proposed 802.11ai Specification Document text will be presented as modifications to the TGai draft specification 802.11ai/D0.2 [Ref-3]. 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 *italic text highlighted by Yellow*;
5. The quoted TGai SFD text is marked as *green italic text*; and
6. Any other text, e.g., discussions, proposed motions, etc., is in black text, but not in the context of proposed TGai specification text.

# Background

Based on Section 6.3 in TGai Specification Framework Document (SFD) [Ref-1], the FILS Discovery frame is introduced as part of the passive scanning enhancements. Regarding the FD frame contents design, the following text is in the TGai SFD (12/0151r14 [Ref-1]):

*The following information items shall be included in the FILS Discovery Frame body:*

* *SSID*

 *The FILS Discovery frame may include the information item of Access Network Options, encoded as 1-byte information as defined in Figure 8-352 in 802.11-2012 specification*

*The FILS Discovery frame may include the following information items:*

* *Capability*
* *Access network options*
* *Security*
* *AP Configuration change count*
* *AP’s next TBTT*
* *Neighbor AP’s next TBTT*

In previous TGai meetings, some text for the FD frame design and usage has been accepted to the 802.11ai draft specification document, 802.11ai/D0.2 [Ref-3]. However, the detailed description of the FD Frame content item, Neighbor AP’s next TBTT, has not been included yet. Based on the Scanning ad hoc discussion in TGai 2012-November meeting as reported in the ad hoc report, 12/1387r1 [Ref-4], a general consensus is to use Reduced Neighbour AP Report IE for the Neighbour AP’s Next TBTT information item in the FD frame.

This contribution proposes detailed text for using Reduced Neighbour AP Report IE as an optional IE in the FD frame.

# Proposed 802.11ai Specification Text

The following proposed 802.11ai Specification Document text will be presented as modifications to the TGai draft specification 802.11ai/D0.2 [Ref-3].

*Instructions to Editor: In Section 8.5.8.34 of the TGai draft specification 802.11ai/D0.2 , in line 9 on page 33, insert the follow row in* ***Table 8-221g*** *after the row for FD Security**:*

**Table 8-221g — FILS Discovery frame action field format**

|  |  |  |
| --- | --- | --- |
| **Order** | **Information** | **Notes** |
| ...... |  |  |
| 10 | Reduced Neighbour Report | The Reduced Neighbor Report element, as specified in 8.4.2.175, is optionally present. |
| ...... |  |  |

# Straw-Polls and Motions

The following lists the draft straw-polls and motions that are intended to present to the TGai Group in next Face-to-Face meeting.

**Motion-1:** Include the text proposed in Section 4 of this contribution (13/0029), i.e., defining the Neighbor AP’s next TBTT information for the FD frame, into the TGai Draft Specification Document (D0.2).

Yes: \_\_\_\_\_\_\_\_\_\_\_\_; No: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; Abstain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Move:

Second:

# References:

1. 11-12-0151-14-00ai-Proposed-Specification-Framework-Document.docx
2. IEEE Std 802.11 – 2012
3. IEEE Std 802.11ai/D0.2
4. 11-12-1387-01-00ai-2012-November-scanning-ad-hoc-report
5. 11-12-0992-02-00ai-call-for-specification-text-contributions-for-the-tgai-detailed-draft-text