IEEE P802.11 Wireless LANs

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| Proposed 802.11ai/D0.5 Specification Text for FILS Wrapped Data Element  |
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Abstract

This submission proposes the 802.11ai specification text for FILS Wrapped Data Element, as a suggested resolution to a comment submitted for IEEE 802.11 Comment Collection 8 for 802.11ai Draft 0.5[Ref-2].

# Introduction

The following comment has been submitted to IEEE 802.11 Comment Collection 8 for 802.11ai Draft 0.5[Ref-2]:

**Comment: page 26 line 14, Section 8.3.3.11**

*There are some serious encoding design problems with the FILS Authentication frame format design for both authentication transaction sequence No. 1 and 2 as shown in Table 8-29 on page 26, i.e.,*

1. *there are possibly two variable length fields in the same message, FILS wrapped Data and Element;*
2. *even with one variable length field, the variable length field cannot be in the middle of the frame, e.g., Element is in the order "14", which is in the middle of other information fields or elements. Well, this problem is not introduced by 11ai, and a comment on TGmc should be considered.*

**Proposed Change:**

*Change the" FILS Wrapped Data" from information field format to information element format.*

This contribution proposes detailed changes in 802.11ai/D0.5 [Ref-2], to change the encoding of the FILS Wrapped Data from an information field to an Information Element (IE).

# Conventions

In this contribution, the proposed 802.11ai Specification Document text will be presented as changes to the current TGai draft specification, 11ai/D0.5 [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 *italic text highlighted by Yellow*; and
5. 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: delete line 25 to line 45 on page 27, i.e., delete Subsection 8.4.1.53:*

**~~8.4.1.53 FILS wrapped data field~~**

~~The FILS wrapped data field is used for the STA and AP to communicate data used by the FILS authentication~~

~~algorithm. See Figure 8.80h — FILS wrapped data.~~

|  |  |
| --- | --- |
|  | ~~FILS wrapped data~~ |
| ~~Octets:~~ | ~~variable~~ |
| * ~~Figure 8.80h — FILS wrapped data (11s)~~
 |

*Instructions to Editor: insert a row of the FILS Wrapped Data ELement in Table 8-54 in Subsection 8.4.2.1, on page 29:*

**Table 8-54—Element IDs**

|  |  |  |  |
| --- | --- | --- | --- |
| **Element** | **Element ID** | **Length of indicated element (in octets)** | **Extensible** |
| ...... |  |  |  |
| FILS Wrapped Data (see 8.4.2.ai1) | <ANA> | Variable |  |
| ...... |  |  |  |

*Instructions to Editor: insert the following new subsection under Subsection 8.4.2:*

**8.4.2.ai1 FILS Wrapped Data Element**

The FILS Wrapped Data element is used for the STA and AP to communicate data used by the FILS authentication algorithm. The format of the FILS Wrapped Data element is defined in Figure 8-ai-2.



**Figure 8-ai-2 FILS Wrapped Data Element Format**

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

The Length field is the number of bytes of the FILS Wrapped Data field, in the range of 0 to 255.

The FILS wrapped data field is the data used by the FILS authentication algorithm.

*Instructions to Editor: throughout the 802.11ai/D0.5 draft spec, make the following change:*

Replace the references to Subsection “8.4.1.53” by “8.4.2.ai1”, where “ai1” is the subsection number assigned to the FILS Wrapped Data element.

# References:

1. IEEE Std 802.11 – 2012
2. IEEE Std 802.11ai/D0.5