IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TGbi Document Brainstorming | | | | |
| Date: 2023-01-15 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Carol Ansley | Cox Communications |  | +1-404-229-1672 | carol@ansley.com |

### Overview

This document provides a potential organization for the topics within TGbi requirements.

The requirements are taken from 21/1848r16.

# Topics

A potential organization for TGbi topics:

1. Prevent exposure of information during (re)association exchanges:
   1. Authentication exchanges
      1. obfuscated SAE credentials, [1]
      2. obfuscated PMKs, [2]
      3. used to establish keys for (re)association) [4]
      4. carry 802.1X EAPOL PDUs in Authentication frames [48]
   2. ‘Protect’ (re)association request/response [5], frame body specifically [21] [22], DS MAC address [24]
2. Limited elements to probe request [3] [20]
3. Changing ‘OTA MAC Address’
   1. between associations to APs in same ESS [6]
   2. while associated
      1. Single non-AP STA initiated [7]
      2. All non-AP STAs currently associated with a specific AP [8]
      3. Simultaneous changes to scrambler seed [9], transmitted SN [9], transmitted PN[10], transmitted AID [11], transmitted TID [30] for any of above
   3. During BSS transition [25]
4. Prevent exposure of non-AP STA’s clients’ DS MAC [12] and SA/DA [13]
5. Management frames protection
   1. Allow encryption or obfuscation of a portion of some mgmt frames, MAC Header fields [31]
   2. Protect unicast mgmt frames with specific list [26]
6. Request AP/AP MLD parameters in a protected unicast exchange [49] [52]
7. Mechanism to allow an AP to be identified without the STA exposing its identity [53]
8. BPE – prevent exposure of BPE AP ESS [15] , OTA MAC address
9. BPE beacon related
   1. Reduced Beacon element set [16] [50]
   2. Change Beacon TBTT with changes to AP ID info [35]
   3. Change OTA TSF [40a]
   4. Allow power optimization related to beacon [50]
   5. Provide mechanism to identify BPE AP in (new) Beacon [50]
   6. Provide mechanism to solicit a Beacon from an AP [51]
10. BPE – Changing BPE AP’s OTA MAC address [18], communicating a unique ID for BPE AP [19], also change SN and PN [39], scrambler seed [41], transmitted TID [42]
11. BPE – obfuscate information so non-AP STAs can’t tell if they belong to the same AP MLD [38]
12. BPE – obfuscate the RA, SN and PN of the group frames to avoid BPE AP tracking [40]
13. BPE – Allow encryption or obfuscation of a portion of some mgmt frames, MAC Header fields [45]
    1. BPE – allow encryption or obfuscation of HTC and +HTC fields