IEEE P802.11  
Wireless LANs

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| LB272 CRs for Clause 3 and CID 1461 | | | | |
| Date: 2023-04-11 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Rui Yang | InterDigital |  |  | [rui.yang@interdigital.com](mailto:rui.yang@interdigital.com) |
| Zinan Lin |  |  |  |
| Mahmoud Kamel |  |  |  |
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Abstract

##### This submission present proposed resolutions for the following 15 CIDs:

##### 1337, 1338, 1340, 1462, 1463, 1464, 1465, 1817, 1818, 1819, 1820, 2016, 2293, 2294, 1461

##### The proposed changes are based on 802.11bf D1.0.

##### Revision history:

##### r0 – initial version

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| **CID** | **Clause** | **Page** | **Comment** | **Proposed Change** | **Resolution** |
| 1337 | 3.2 | 22.34 | What is the sensing transmitter and sensing receiver. I am sure the terms transmitter and receivers are used in may places of the baseline. What is the relationship between sensing TX/RX and TX/RX. Is sensing TX/RX are auxiliary TX/RX or same as the baseline TX/RX? | As in comment. Clarify | Rejected  In the current 802.11 spec (e.g., REVme D3.0) there is no specific definitions for “baseline transmitter” or “baseline receiver”. The “sensing transmitter” in 11bf is specified as the transmitter that transmits PPDUs for measurements in WLAN sensing procedures. The current definition is sufficient to be used for the purpose. The same argument can be applied to “sensing receiver”. |
| 1338 | 3.2 | 22.28 | In many 802.11 amendments the terms Initiator and Responder are used and are sufficient to descrive processes like RDG, sounding, etc. Why is the need to introduce redundant terms like sensor RX/TX which I don't think it adds anything but confusion | As in comment. Delete Sensing TX/RX | Rejected  Sensing initiator/responder and sensing transmitter/receiver are conceptually different entities in 11bf WLAN sensing procedures. For example, a STA that initiates sensing procedure may be a sensing transmitter or a sensing receiver, depending on the configuration of the WLAN sensing procedure. |
| 1340 | 3.2 | 22.53 | The term "perform sensing" is very vague. It is better to make the definition related t certain events like trasnmitting or receiving of a frame. | As in comment. Update the definition accordingly | Revised  Agree in principle and accounted for the suggested changes.  TGbf editor: please incorporate changes shown in 11-23/0795r0 under the tag 1340. |
| 1462 | 3.4 | 22.60 | The acronym "NDPA" is used but not defined | Define NDPA in the list of acronyms. | Revised  Agree in principle with specific wording.  TGbf editor: please incorporate changes shown in 11-23/0795r0 under the tag 1462. |
| 1463 | 3.2 | 22.18 | The term "NDPA sounding" is used but not defined | Add "NDPA sounding" to definitions. | Revised  Agree in principle with specific wording.  TGbf editor: please incorporate changes shown in 11-23/0795r0 under the tag 1463. |
| 1464 | 3.2 | 22.18 | The term "TF sounding" is used but not defined. | Add "TF sounding" to definitions. | Revised  Agree in principle with specific wording.  TGbf editor: please incorporate changes shown in 11-23/0795r0 under the tag 1464. |
| 1465 | 3.2 | 22.18 | The term "TB sensing" is used by not defined. | Add "TB sensing" to definitions. | Revised  Agree in principle with specific wording.  TGbf editor: please incorporate changes shown in 11-23/0795r0 under the tag 1465. |
| 1817 | 3.2 | 22.11 | This definition contains a behaviour statement using the word "may". | Replace the term "may" with "might" | Accepted |
| 1818 | 3.2 | 22.19 | The list of terms structure is not correct. | Change "or a non-AP and non-personal basic service set..." to "a non-AP, or a non-personal basic service set..." | Accepted |
| 1819 | 3.2 | 22.24 | The list of terms structure is not correct. | Change "or a DMG AP or DMG personal basic service set" to "a DMG AP or a DMG personal basic service set" | Accepted |
| 1820 | 3.2 | 22.34 | The definition can be shortened. | Replace the definition of sensing receiver as follows: "sensing receiver: A station (STA) that obtains measurements in either a sensing procedure or a directional multi-gigabit (DMG) sensing procedure." | Rejected  The current definition clearly captures the role of a STA as a sensing receiver in a sensing procedure defined in the 11bf spec. The proposed statement is too loose to represent such a role. |
| 2016 | 3.4 | 22.56 | Add acronym "OP: Operating Point" | See comment | Accepted  Note: operation point is used in 9.4.1.75.3 (Sensing Measurement Report Control field) (P93L61) |
| 2293 | 3 | 22.12 | "... to estimate features such as range, velocity, and motion of objects in an area of interest." seems to be confusing. | Suggest to modify "... to estimate features such as range, velocity, and motion of objects in an area of interest." as "... to estimate features such as range, velocity, and motion of objects in an area of interest which is in the reachable range." | Rejected  “reachable range” is very vague phrase. Adding “which is in the reachable range” makes the sentence more confusing. |
| 2294 | 3 | 22.35 | "A station (STA) that is the intended recipient of PPDUs sent by a sensing transmitter and obtains measurements.." seems to be confusing. | Suggest to modify "A station (STA) that is the intended recipient of PPDUs sent by a sensing transmitter and obtains measurements.." as "A station (STA) that is the intended recipient of PPDUs sent by a sensing transmitter and obtains sensing measurements." | Revised  Agree in principle with additional changes.  TGbf editor: please incorporate changes shown in 11-23/0795r0 under the tag 2294. |
| 1461 | 4.11 | 24.07 | Sensing service overview should be included in clause 4.5 | Move this entire clause into 4.5 as a subclause | Accepted  Note: 4.5 is “Overview of the services”. |

***TGbf editor: please make the following change in subclause 3.2, P22L52:***

**Sensing procedure:** A procedure that allows one or more HE or EHT stations (STAs) to follow a protocol which may include initiating, responding, sounding, measuring, reporting and terminating steps, when participating in a WLAN sensing task in 1 - 7.125 GHz bands. (#1340)

**NDPA Sounding:** A sounding phase to obtain the CSI by sending an NDP after a transmission of an NDP Announcement frame. (#1463)

**TF Sounding:** A sounding phase to obtain the CSI by soliciting an NDP after a transmission of a trigger frame. (#1464)

**TB Sensing:** A sensing procedure that contains a transmission of a trigger frame. (#1465)

**sensing receiver:** A station (STA) that is the intended recipient of PPDUs sent by a sensing transmitter to obtain sensing (#2294) measurements in either a wireless local area network (WLAN) sensing procedure or a directional multi-gigabit (DMG) sensing procedure.

***TGbf editor: please make the following change in subclause 3.2, P22L18:***

**sensing by proxy (SBP) initiator**: A non-access point (non-AP) non-directional multi-gigabit (non-DMG) station (STA) that transmits an SBP Request frame, or a non-AP, or a (# 1818) non-personal basic service set (PBSS) control point (non-PCP) DMG STA that transmits a DMG SBP Request frame.

***TGbf editor: please make the following change in subclause 3.2, P22L23:***

**sensing by proxy (SBP) responder**: A non-directional multi-gigabit (non-DMG) access point (AP) that is the intended recipient of an SBP Request frame, or a DMG AP or a (#1819) DMG personal basic service set (PBSS) control point (PCP) that is the intended recipient of a DMG SBP Request frame.

***TGbf editor: please make the following change in subclause 3.4, P22L61***

NDPA NDP Announcement (#1462)

OP Operating Point (#2016)

***TGbf editor: please make the following change in subclause 3.4, P22L61***

**directional multi-gigabit (DMG) sensing:** The use of physical layer (PHY) and medium access control

(MAC) features of DMG stations (STAs) to obtain measurements that might (#1817) be useful to estimate features, such as range, velocity, and motion of objects in an area of interest.

***TGbf editor: please make the following change for subclause 4.11, P24L6***

**4.5.12 Sensing**