IEEE P802.11
Wireless LANs

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| LB272 - LB272 Comment resolutions on monostatic sensing |
| Date: 2023-07-06 |
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This submission includes the resolutions for the following four comments:

1990, 1763, , 1766

on Subclauses 28.9.4 and 11.55.3.6.2.3 in P802.11bf D1.0.

The baseline document is 802.11bf D1.2.

##### Revision history:

##### R0 – initial version

R1 – Revision based on offline discussion.

R2 – revised after AM1 session of 11bf ad hoc by removing the resolution for CID1764.

R3 – revised with correction of CID# to be removed

**CID: 1990**

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| CID | Clause | Page | Line | Comment | Proposed Change | Proposed resolution |
| 1990 | 28.9.4 | 229 | 40 | Subclause 28.9.4 heading reads "DMG monostatic sensing PPDU" inside the EDMG clause. Please change DMG to EDMG | As in the comment. | REVISED. TGbf editor: Please revise the text in P229L43 in subclause 28.9.4 in 802.11bf D1.0 (P192L43 in 802.11bf D1.2)as in 11-23/1081r1. |

*Discussion:*

*Monostatic sensing was specified in Annex AB for radar implementation using DMG PHY and EDMG PHY. The terminology of DMG monostatic sensing was agreed in TGbf.*

*The resolution proposes to keep the subclause tile “DMG monostatic sensing PPDU” unchanged.*

*Instead, the first sentence in Sec. 28.9.4 is proposed to be revised to indicate that any EDMG PPDU may also be used for monostatic sensing.*

TGbf editor: Please revise the first sentence in subclause 28.9.4 (P195L40) in 802.11bf D1.2 as below.

As described in Annex AB, any DMG or EDMG PPDU may be used for monostatic sensing.

**CID: 1766**

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| CID | Clause | Page | Line | Comment | Proposed Change | Proposed resolution |
| 1766 | 28.9.4 | 229 | 40 | This subclause includes general descriptions on monostatic DMG sensing PPDU. However, the constrain on the waveform used specificlly in coordinated monostatic DMG sensing PPDU is not addressed, in which sensing signals may interfer each other in some cases. | Specify the potential additional constraint(s) for coordinated monostatic sensing. | REVISEDTGbf editor: Please add the text proposed in 11-23/1081r0 to the end of subclause 28.9.4 in 802.11bf D1.2. |

*Discussion:*

*In the parallel mode of coordinated DMG monostatic sensing, the waveforms of the TRN fields of DMG monostatic sensing PPDUs transmitted by more than one responder in the sounding phase should be orthogonal to minimize cross-interference among those TRN fields in the respective DMG monostatic sensing PPDUs.*

*The TRN subfield for EDMG SC PPDU is defined in subclause 28.9.2.6 TRN subfield definition for EDMG SC PPDUs and EDMG control mode PPDUs, which consists of N\_TX orthogonal waveforms, where N\_TX is the total number of transmit chains used in the transmission of the EDMG PPDU. Therefore, each responder in the parallel mode of coordinated DMG monostatic sensing can be assigned with a unique TRN subfield waveform for EDMG SC PPDU.*

TGbf editor: Please add the following text to the end of subclause 28.9.4 in 802.11bf D1.2.

EDMG PPDUs may be used in the parallel mode of coordinated DMG monostatic sensing. TRN subfield for EDMG SC PPDUs (28.9.2.2.6 TRN subfield definition for EDMG SC PPDUs and EDMG control mode PPDUs) may be used as the waveforms of the TRN field of a coordinated DMG monostatic sensing PPDU. Each responder in the parallel mode of coordinated DMG monostatic sensing may be assigned with a unique TRN subfield waveform for EDMG SC PPDUs.

**CID: 1763**

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| CID | Clause | Page | Line | Comment | Proposed Change | Proposed resolution |
| 1763 | 11.55.3.6.2.3 | 209 | 43 | Figure 11-74o shows the parallel mode of coodinated monostatic sounding, in which the initiator and STA B transmit DMG monostatic sensing PPDUs. However, the text in P210L5-6 says "In the following sounding phase, STA A and STA B transmit DMG monostatic sensing PPDUs and receive the reflected signal in parallel", which disagree with what Figure 11-74o. | If the text in P210L5-6 is correct, modify Figure 11-74o accordingly. | REVISEDBased on the description in details in subclause 11.55.3.6.2.3 including P210L5-6, Figure 11-74o is expected to show the case that the AP is the initiator and STA A and STA B are two responders. STA A and STA B are expected to transmit DMG monostatic sensing PPDUs simultaneously.TGbf editor: Please revise Figure 11-74o in subclause 11.55.3.6.2.3 in 802.11bf D1.0 (Figure 11-74n in 802.11bf D1.2) by moving the “Monostatic Sounding” box from Initiator STA to Responder STA A for both Instance 1 and 2. |