APPARATUS AND METHODS FOR MILLIMETER WAVE COORDINATED MONOSTATIC SENSING

ABSTRACT

Methods and apparatus for coordinated monostatic sensing are provided, for example in associated with IEEE 802.11 EDMG stations which simultaneously transmit monostatic sensing PPDUs. DMG sensing request frames from a sensing initiator coordinate the sensing responders, and each frame includes a STA ID field, a Num of STAs in Exchange field and a BW field which are used to direct timing and channelization of the sensing PPDUs. In some embodiments, IEEE 802.11 service periods are allocated for transmission operations such as simultaneous monostatic sensing PPDUs on different channels, and related operations such as sensing request frames, sensing response frames, polls, reports, acknowledgments, etc. In some embodiments, IEEE 802.11 contention based access periods are used for the monostatic sensing. Responders determine whether or not they are recipient of a last sensing request frame and operate accordingly to transmit their monostatic sensing PPDU. Determination can be based on the STA ID field.

Figure 7