IEEE P802.11
Wireless LANs

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| --- |
| Resolution of DMG CID 369 |
| Date: 2022-11-30 |
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|  |  |  |  |  |

Abstract

Resolution of the DMG CIDs 369

D0.5 is used for the reference

Revisions History:

r0 – initial version

r1 – a few modifications for more accurate alignment of the terminology with the definition of the sub7 SBP and a few editorial changes

r2 – a few modifications to align the termination with DCN 11-22-1954

r3 – typo fixes

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CID | Clause | Page | Comment | Proposed Change | Priority | Resolution |
| 369 | 11.21.20.9 | 89.25 | 11.21.20.9 DMG SBP procedure. Lack of detailed rules | Provide detailed rules of the configuration and the normative behavior of the DMG SBP initiator and the DMG SBP responder to allow the DMG SBP initiator to achieve results specific for each type of DMG sensing. | High |  ***Revised******See 11-22-2079-03-00bf cc40 Resolution of DMG CID 369 DMG SBP*** |

**6.3.1.139 DMG SBP procedure #369**

**6.3.1.139.1 MLME-DMG-SBP.request**

**6.3.1.139.1.1 Function**

This primitive requests the transmission of an DMG SBP Request frame to a peer STA.

**6.3.1.139.1.2 Semantics of the service primitive**

The primitive parameters are as follows:

MLME-DMG-SBP.request (

PeerSTAAddress,

Category,

Action,

Dialog Token,

DMG Sensing Measurement Setup element, w/o subelements

DMG SBP Parameters element

)

|  |  |
| --- | --- |
| **Name** | **Description** |
| PeerSTAAddress | The address of the peer MAC entity |
| Category | 9.6.21.12 DMG SBP Request frame format9.6.19.26 Protected DMG SBP Request frame format |
| Action |
| Dialog Token | As defined in 9.6.21.12 DMG SBP Request frame format |
| DMG Sensing Measurement Setup element | As defined in 9.6.21.12 DMG SBP Request frame format w/o subelements  |
| DMG SBP Parameters element | As defined in 9.6.21.12 DMG SBP Request frame format |

**6.3.1.139.1.3 When generated**

This primitive is generated by the SME to request that an DMG SBP Request frame be sent to the DMG-SBP responder to establish an DMG SBP procedure.

**6.3.1.139.1.4 Effect of receipt**

On the receipt of this primitive, the MLME constructs an DMG SBP Request frame and causes it to be transmitted to the DMG SBP responder.

**6.3.1.139.2 MLME-DMG-SBP.indication**

**6.3.1.139.2.1 Function**

This primitive indicates that an DMG SBP Request frame has been received requesting the establishment of an DMG SBP procedure.

**6.3.1.139.2.2 Semantics of the service primitive**

The primitive parameters are as follows:

MLME-DMG-SBP.indication (

PeerSTAAddress,

Category,

Action,

Dialog Token,

DMG Sensing Measurement Setup element, w/o subelements

DMG SBP Parameters element

)

|  |  |
| --- | --- |
| **Name** | **Description** |
| PeerSTAAddress | The address of the peer MAC entity |
| Category | 9.6.21.12 DMG SBP Request frame format9.6.19.26 Protected DMG SBP Request frame format |
| Action |
| Dialog Token | As defined in 9.6.21.12 DMG SBP Request frame format  |
| DMG Sensing Measurement Setup element | As defined in 9.6.21.12 DMG SBP Request frame format w/o subelements  |
| DMG SBP Parameters element | As defined in 9.6.21.12 DMG SBP Request frame format |

**6.3.1.139.2.3 When generated**

This primitive is generated by the MLME when an DMG SBP Request frame is received.

**6.3.1.139.2.4 Effect of receipt**

On the receipt of this primitive, the SME should operate according to the procedure in 11.55.4 (DMG SBP procedure) and either accept or reject the DMG SBP request.

**6.3.1.139.3 MLME-DMG-SBP.response**

**6.3.1.139.3.1 Function**

This primitive is generated in response to a MLME-DMG-SBP.indication and requests the transmission of an DMG SBP Response frame.

**6.3.1.139.3.2 Semantics of the service primitive**

The primitive parameters are as follows:

MLME-DMG-SBP.response (

PeerSTAAddress,

Category,

Action,

Dialog Token,

DMG Measurement Setup ID,

Status code,

DMG SBP Parameters element,

DMG Sensing Measurement Setup element, with DMG Sensing Scheduling subelement present,

DMG Sensing Image Range Axis LUT,

DMG Sensing Image Doppler Axis LUT

)

|  |  |
| --- | --- |
| **Name** | **Description** |
| PeerSTAAddress | The address of the peer MAC entity |
| Category | 9.6.21.13 DMG SBP Response frame format 9.6.19.27 Protected DMG SBP Response frame format |
| Action |
| Dialog Token | As defined in 9.6.21.13 DMG SBP Response frame format  |
| DMG Measurement Setup ID | As defined in 9.6.21.13 DMG SBP Response frame format |
| Status code | As defined in 9.6.21.13 DMG SBP Response frame format |
| DMG SBP Parameters element  | As defined in 9.6.21.13 DMG SBP Response frame format |
| DMG Sensing Measurement Setup element | As defined in 9.6.21.13 DMG SBP Response frame format with DMG Sensing Scheduling subelement present |
| DMG Sensing Image Range Axis LUT | As defined in 9.6.21.13 DMG SBP Response frame format. Multiple elements present, identified with the Sensing Responder ID |
| DMG Sensing Image Doppler Axis LUT  | As defined in 9.6.21.13 DMG SBP Response frame format. As defined in 9.6.21.13 DMG SBP Response frame format. Multiple elements present, identified with the Sensing Responder ID |

**6.3.1.139.3.3 When generated**

This primitive is generated by the SME to request that an DMG SBP Response frame be sent to the DMG SBP initiator to either accept or reject an DMG SBP request.

**6.3.1.139.3.4 Effect of receipt**

On the receipt of this primitive, the MLME constructs an DMG SBP Response frame and causes it to be transmitted to the peer STA.

**6.3.1.139.4 MLME-DMG-SBP.confirm**

**6.3.1.139.4.1 Function**

This primitive reports the results of a DMG SBP request.

**6.3.1.139.4.2 Semantics of the service primitive**

The primitive parameters are as follows:

MLME-DMG-SBP.confirm (

PeerSTAAddress,

Category,

Action Status code,

DMG SBP Parameters element,

DMG Sensing Measurement Setup element, with DMG Sensing Scheduling subelement present,

DMG Sensing Image Range Axis LUT,

DMG Sensing Image Doppler Axis LUT

)

|  |  |
| --- | --- |
| **Name** | **Description** |
| PeerSTAAddress | The address of the peer MAC entity |
| Category | 9.6.21.13 DMG SBP Response frame format 9.6.19.27 Protected DMG SBP Response frame format |
| Action |
| Dialog Token | As defined in 9.6.21.13 DMG SBP Response frame format  |
| DMG Measurement Setup ID | As defined in 9.6.21.13 DMG SBP Response frame format |
| Status code | As defined in 9.6.21.13 DMG SBP Response frame format |
| DMG SBP Parameters element  | As defined in 9.6.21.13 DMG SBP Response frame format |
| DMG Sensing Measurement Setup element | As defined in 9.6.21.13 DMG SBP Response frame format with DMG Sensing Scheduling subelement present |
| DMG Sensing Image Range Axis LUT | As defined in 9.6.21.13 DMG SBP Response frame format. Multiple elements present, identified with the Sensing Responder ID |
| DMG Sensing Image Doppler Axis LUT  | As defined in 9.6.21.13 DMG SBP Response frame format. As defined in 9.6.21.13 DMG SBP Response frame format. Multiple elements present, identified with the Sensing Responder ID |

**6.3.1.139.4.3 When generated**

This primitive is generated by the MLME when the STA receives an DMG SBP Response frame.

**6.3.1.139.4.4 Effect of receipt**

On the receipt of this primitive, the SME should operate according to the procedure in 11.55.4 (DMG SBP procedure).

**6.3.1.139.5 MLME-DMG-SBPREPORT.request**

**6.3.1.139.5.1 Function**

This primitive requests the transmission of an DMG SBP Report frame to a peer STA.

**6.3.1.139.5.2 Semantics of the service primitive**

The primitive parameters are as follows:

MLME-DMG-SBPREPORT.request (

PeerSTAAddress,

Category,

Action,

Dialog Token,

DMG sensing report control element,

DMG Sensing Report element(s) per each DMG Sensing Responder used in the SBP of the DMG Measurement Setup ID

)

|  |  |
| --- | --- |
| **Name** | **Description** |
| PeerSTAAddress | The address of the peer MAC entity |
| Category | 9.6.21.14 DMG SBP Report frame format 9.6.19.28 Protected DMG SBP Report frame format |
| Action |
| Dialog Token | As defined in 9.6.21.14 DMG SBP Report frame format |
| DMG sensing report control element |
| DMG Sensing Report element(s) per each DMG Sensing Responder used in the SBP of the DMG Measurement Setup ID |

**6.3.1.139.5.3 When generated**

This primitive is generated by the SME to request that an DMG SBP Report frame be sent to the DMG SBP initiator to deliver an DMG SBP report.

**6.3.1.139.5.4 Effect of receipt**

On the receipt of this primitive, the MLME constructs an DMG SBP Report frame and causes it to be transmitted to the DMG SBP initiator.

**6.3.1.139.6 MLME-DMG-SBPREPORT.indication**

**6.3.1.139.6.1 Function**

This primitive indicates that an DMG SBP Report frame has been received.

**6.3.1.139.6.2 Semantics of the service primitive**

The primitive parameters are as follows:

MLME-DMG-SBPREPORT.indication (

PeerSTAAddress,

Category,

Action,

Dialog Token,

DMG sensing report control element,

DMG Sensing Report element(s) per each DMG Sensing Responder used in the SBP of the DMG Measurement Setup ID

)

|  |  |
| --- | --- |
| **Name** | **Description** |
| PeerSTAAddress | The address of the peer MAC entity |
| Category | 9.6.21.14 DMG SBP Report frame format 9.6.19.28 Protected DMG SBP Report frame format |
| Action |
| Dialog Token | As defined in 9.6.21.14 DMG SBP Report frame format |
| DMG sensing report control element |
| DMG Sensing Report element(s) per each DMG Sensing Responder used in the SBP of the DMG Measurement Setup ID |

**6.3.1.139.6.3 When generated**

This primitive is generated by the MLME when an DMG SBP Report frame is received.

**6.3.1.139.6.4 Effect of receipt**

On the receipt of this primitive, the SME should operate according to the procedure in 11.55.4 (DMG SBP procedure).

**6.3.1.139.7 MLME-DMG-SBPREPORT.confirm**

**6.3.1.139.7.1 Function**

This primitive reports the results of a request to transmit an DMG SBP Report frame.

**6.3.1.139.7.2 Semantics of the service primitive**

The primitive parameters are as follows:

MLME-DMG-SBPREPORT.confirm (

PeerSTAAddress,

Category,

Action,

Dialog Token,

DMG sensing report control element,

DMG Sensing Report element(s) per each DMG Sensing Responder used in the SBP of the DMG Measurement Setup ID

)

|  |  |
| --- | --- |
| **Name** | **Description** |
| PeerSTAAddress | The address of the peer MAC entity |
| Category | 9.6.21.14 DMG SBP Report frame format 9.6.19.28 Protected DMG SBP Report frame format |
| Action |
| Dialog Token | As defined in 9.6.21.14 DMG SBP Report frame format |
| DMG sensing report control element |
| DMG Sensing Report element(s) per each DMG Sensing Responder used in the SBP of the DMG Measurement Setup ID |

**6.3.1.139.7.3 When generated**

This primitive is generated by the MLME when the AP successfully transmits an DMG SBP Report frame.

**6.3.1.139.7.4 Effect of receipt**

On the receipt of this primitive, the SME may release the resources associated with the DMG SBP report.

**6.3.1.139.8 MLME-DMG-SBPTERMINATION.request**

**6.3.1.139.8.1 Function**

This primitive requests the transmission of an DMG SBP Termination frame to a peer STA (either the DMG SBP responder or the DMG SBP initiator).

**6.3.1.139.8.2 Semantics of the service primitive**

The primitive parameters are as follows:

MLME-DMG-SBPTERMINATION.request (

PeerSTAAddress,

Category,

Action,

DMG Measurement Setup ID,

DMG SBP Termination control,

DMG SBP Parameters element

)

|  |  |
| --- | --- |
| **Name** | **Description** |
| PeerSTAAddress | The address of the peer MAC entity |
| Category | 9.6.21.15 DMG SBP Termination frame format 9.6.36.5 Protected DMG SBP Termination frame format  |
| Action |
| DMG Measurement Setup ID | As defined in 9.6.21.15 DMG SBP Termination frame format  |
| DMG SBP Termination control |
| DMG SBP Parameters element |

**6.3.1.139.8.3 When generated**

This primitive is generated by the SME to request that an DMG SBP Termination frame be sent to a peer STA (either the DMG SBP responder or the DMG SBP initiator) to terminate an DMG SBP procedure.

**6.3.1.139.8.4 Effect of receipt**

On the receipt of this primitive, the MLME constructs an DMG SBP Termination frame and causes it to be transmitted to the peer STA (either the DMG SBP responder or the DMG SBP initiator).

**6.3.1.139.9 MLME-DMG-SBPTERMINATION.indication**

**6.3.1.139.9.1 Function**

This primitive indicates that an DMG SBP Termination frame has been received requesting the termination of an DMG SBP procedure.

**6.3.1.139.9.2 Semantics of the service primitive**

The primitive parameters are as follows:

MLME-DMG-SBPTERMINATION.indication(

PeerSTAAddress,

Category,

Action,

DMG Measurement Setup ID,

DMG SBP Termination control,

DMG SBP Parameters element

)

|  |  |
| --- | --- |
| **Name** | **Description** |
| PeerSTAAddress | The address of the peer MAC entity |
| Category | 9.6.21.15 DMG SBP Termination frame format 9.6.36.5 Protected DMG SBP Termination frame format |
| Action |
| DMG Measurement Setup ID | As defined in 9.6.21.15 DMG SBP Termination frame format  |
| DMG SBP Termination control |
| DMG SBP Parameters element |
|  |  |

**6.3.1.139.9.3 When generated**

This primitive is generated by the MLME when an DMG SBP Termination frame is received.

**6.3.1.139.9.4 Effect of receipt**

On the receipt of this primitive, the SME should operate according to the procedure in 11.55.4 (DMG SBP procedure).

**6.3.1.139.10 MLME-DMG-SBPTERMINATION.confirm**

**6.3.1.139.10.1 Function**

This primitive confirms that an DMG SBP Termination frame has been received by the peer STA (either the DMG SBP responder or the DMG SBP initiator) to which it was sent.

**6.3.1.139.10.2 Semantics of the service primitive**

The primitive parameters are as follows:

MLME-DMG-SBPTERMINATION.confirm(

PeerSTAAddress,

Category,

Action,

DMG Measurement Setup ID,

DMG SBP Termination control,

DMG SBP Parameters element

)

|  |  |
| --- | --- |
| **Name** | **Description** |
| PeerSTAAddress | The address of the peer MAC entity |
| Category | 9.6.21.15 DMG SBP Termination frame format 9.6.36.5 Protected DMG SBP Termination frame format |
| Action |
| DMG Measurement Setup ID | As defined in 9.6.21.15 DMG SBP Termination frame format  |
| DMG SBP Termination control |
| DMG SBP Parameters element |

**6.3.1.139.10.3 When generated**

This primitive is generated by the MLME when the DMG SBP Termination frame is successfully transmitted.

**6.3.1.139.10.4 Effect of receipt**

On the receipt of this primitive, the SME may release the resources associated with the DMG SBP procedure.

**9.4.2.322 DMG Sensing Capabilities element**

***TGbf Editor, change Figure 9-1002bg as follows***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | B29 B36 | B37 B44 | B45 | B46 | B47 |
|  | Maximum Doppler | Best Doppler Resolution | Golay Seq Len Supported | DMG SBP | Reserved |
| Bits: | 8 | 8 | 1 | 1 | 1 |

***TGbf Editor, append at the end of the subclause***

A DMG STA sets the DMG SBP field to 1 if dot11DMGSBPImplemented is true and sets it to 0 otherwise. See 11.55.4 (DMG SBP procedure).

**9.4.2.326 DMG Sensing Image Range Axis LUT element**

***TGbf Editor, change Figure 9-1002br as follows***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Element ID | Length | Element ID Extension | AID/USID | Total Numberof LUT Entries | LUT Entries |
| Octets | 1 | 1 | 1 | 1 | 2 | Variable |

**Figure 9-1002br—DMG Sensing Image Range Axis LUT element format(#695, #396 #369)**

***TGbf Editor, insert a new paragraph after the paragraph that begins with “Element ID, …”***

The AID/USID subfield uniquely identifies the DMG sensing responder to whom the DMG Sensing Image Range Axis LUT element belongs. **#369**

**9.4.2.327 DMG Sensing Image Doppler Axis LUT element**

***TGbf Editor, change Figure 9-1002bs as follows***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Element ID | Length | Element ID Extension | AID/USID | Total Numberof LUT Entries | LUT Entries |
| Octets | 1 | 1 | 1 | 1 | 2 | Variable |

**Figure 9-1002bs—DMG Sensing Image Doppler Axis LUT element format(#696, #396, #369)**

***TGbf Editor, insert a new paragraph after the paragraph that begins with “Element ID, …”***

The AID/USID subfield uniquely identifies the DMG sensing responder to whom the DMG Sensing Image Doppler Axis LUT element belongs. **#369**

**Annex C**

(normative)

**ASN.1 encoding of the MAC and PHY MIB**

**C.3 MIB Detail**

***TGbf Editor, append to the list***

dot11DMGSBPSetupExpiry Unsigned32 (TBD value)

dot11DMGSBPProcedureExpiry Unsigned32 (TBD value)

***Insert the following entry at the end the following object as shown below:(#747, #800)***

Dot11WirelessMgmtOptionsEntry ::= SEQUENCE

{

…,

dot11WLANSensingImplemented TruthValue,

dot11SBPImplemented TruthValue,

dot11DMGSensingMsmtImplemented TruthValue

dot11DMGSBPImplemented TruthValue

**11.55.4 DMG SBP procedure**

***TGbf Editor, append the following text to 11.55.4 DMG SBP procedure***

**11. 55.4.1 General #369**

DMG SBP is the DMG variant of the SBP procedure.

DMG SBP is a procedure that allows a non-AP and non-PCP STA to request an AP and PCP to perform DMG sensing (see 11.55.3 (DMG sensing procedure) on its behalf.

Implementation of DMG SBP is optional for a DMG STA. A STA in which dot11DMGSBPImplemented is true is defined as a DMG STA that supports DMG SBP procedure.

A STA in which dot11DMGSBPImplemented is true shall set the DMG SBP field of the DMG Sensing Capabilities element to 1.

A STA in which dot11DMGSBPImplemented is false shall set the DMG SBP field of the DMG Sensing Capabilities element to 0.

A non-AP and non-PCP DMG STA may act as DMG SBP initiator when dot11DMGSBPImplemented is true.

An PCP/AP may act as DMG SBP responder when dot11DMGSensingMsmtImplemented and dot11DMGSBPImplemented are true.

A DMG SBP Initiator shall not insert values other than 2, 3, 4, 5, 6, or 7 in the Report Type subfield of the DMG Sensing Measurement Setup element (9.4.2.325 DMG Sensing Measurement Setup element).

A DMG SBP procedure expiry timer shall be present per each established DMG SBP setup.

In the DMG SBP Initiator, the DMG SBP procedure expiry timer shall be set to the dot11DMGSBPProcedureExpiry value at the issue of the MLME-DMG-SBP.confirm primitive with the StatusCode set to Success and the generation of the MLME-DMG-SBPREPORT.indication primitive.

In the DMG SBP Responder, the DMG SBP procedure expiry timer shall be set to the dot11DMGSBPProcedureExpiry value at the receipt of the MLME-DMG-SBP.response primitive with the StatusCode set to Success and the receipt of the MLME-DMG-SBPREPORT.request primitive.

***TGbf Editor, append the subclause and the following text to 11.55.4 DMG SBP procedure***

**11.55.4.2 DMG SBP Setup #369**

If dot11DMGSBPImplemented is true, to establish an DMG SBP procedure, the SME of a non-AP and non-PCP DMG STA (DMG SBP initiator) shall issue an MLME-DMG-SBP.request primitive with PeerSTAAddress parameter equal to the intended DMG SBP responder’s MAC address. The MLME-DMG-SBP.request primitive shall include valid parameters as defined in DMG Sensing Measurement Setup and DMG SBP Parameters elements. The subfields RX Initiator, LCI Present, and Orientation Present in the Measurement Setup Control field of the DMG Sensing Measurement Setup element are not in use and shall be set to the reserved values.

The DMG SBP Parameters element of the MLME-DMG-SBP.request primitive may include a DMG Sensing Responder Addresses field to indicate a set of preferred sensing responders.

On receiving an DMG SBP Request frame, if dot11DMGSBPImplemented is true, the DMG SBP responder shall validate the frame and issue an MLME-DMG-SBP.indication primitive. If the SME of an DMG SBP responder receives an MLME-DMG-SBP.indication primitive, it shall issue an MLME-DMG-SBP.response primitive with PeerSTAAddress parameter equal to the DMG SBP initiator’s MAC address within dot11DMGSBPSetupExpiry. The StatusCode parameter within the MLME-DMG-SBP.response primitive should be set to SUCCESS to indicate that the SBP procedure request is accepted if the DMG SBP responder is able to satisfy the SBP request with parameters indicated in the MLME-DMG-SBP.indication primitive. The StatusCode parameter within the MLME-DMG-SBP.response primitive shall be set to REQUEST\_DECLINED or to PREFERRED\_MEASUREMENT\_SETUP\_PARAMETERS\_SUGGESTED to indicate that the DMG SBP procedure request is rejected if the DMG SBP responder is not able to satisfy the DMG SBP request with parameters indicated in the MLME-DMG-SBP.indication primitive.

If the StatusCode parameter within the MLME-DMG-SBP.response primitive is set to PREFERRED\_MEASUREMENT\_SETUP\_PARAMETERS\_SUGGESTED, the MLME-DMG-SBP.response primitive shall include DMG SBP Parameters element and DMG Sensing Measurement setup element that specify preferred SBP and measurement setup parameters, respectively.

If the StatusCode parameter within the MLME-DMG-SBP.response primitive is set to SUCCESS, the MLME-DMG-SBP.response primitive shall include a DMG Measurement Setup ID parameter that specifies the DMG Measurement Setup ID assigned for the DMG SBP setup. In this case, the MLME-DMG-SBP.response primitive may also include an DMG SBP Parameters.

On receiving an DMG SBP Response frame, the DMG SBP initiator shall validate the DMG SBP Response frame by ensuring its fields are valid. If the SME of an DMG SBP initiator receives an MLME-DMG-SBP.confirm primitive with StatusCode parameter equal to REQUEST\_DECLINED or PREFERRED\_MEASUREMENT\_SETUP\_PARAMETERS\_SUGGESTED, or if it does not receive a MLME-DMG-SBP.confirm primitive with StatusCode parameter equal to SUCCESS within dot11DMGSBPSetupExpiry of issuing the corresponding MLME-DMG-SBP.request primitive, the DMG SBP procedure setup is defined to be unsuccessful.

The DMG Sensing Measurement setup element within the MLME-DMG-SENSMSMTSETUP.request primitive issued to initiate a WLAN sensing procedure used to satisfy a DMG SBP request shall be identical to the DMG Sensing Measurement setup elelement within the corresponding MLME-DMG-SBP.request primitive. The DMG Measurement Setup ID parameter within the MLME-DMG-SENSMSMTSETUP.request primitive issued to initiate a DMG WLAN sensing procedure used to satisfy a DMG SBP request shall be identical to the DMG Measurement Setup ID parameter within the corresponding MLME-DMG-SBP.response primitive.

The DMG SBP Request subfield within the DMG SBP Parameters within a MLME-DMG-SBP.request primitive shall be set to 1. The DMG SBP Request subfield within the DMG SBP Parameters within a MLME-DMG-SBP.response primitive shall be set to 0.

The DMG SBP responder shall issue an MLME-DMG-SBP.response primitive with StatusCode parameter set to REQUEST\_DECLINED if the DMG Mandatory Number of Responders subfield within the DMG SBP Parameters of the corresponding MLME-DMG-SBP.indication primitive is set to 1 and the DMG SBP responder is not able to satisfy the requested number of sensing responders indicated in the DMG Number of Sensing Responders subfield within the DMG SBP Parameters. If the DMG Mandatory Number of Responders subfield within the DMG SBP Parameters is set to 0, the DMG SBP responder should issue an MLME-DMG-SBP.response primitive with StatusCode parameter set to SUCCESS even if the requested number of sensing responders indicated in the DMG Number of DMG Sensing Responders within the DMG SBP Parameters cannot be satisfied.

If the DMG Sensing Responder subfield within the DMG SBP Parameters of the corresponding MLME-DMG-SBP.indication primitive is set to 0, the DMG SBP responder shall not use a DMG WLAN sensing procedure initiated with the issue of an MLME-DMG-SENSMSMTSETUP.request primitive with PeerSTAAddress parameter equal to the DMG SBP initiator’s MAC address to satisfy the DMG SBP request. Otherwise, if the DMG Sensing Responder subfield is set to 1, the DMG SBP responder shall use a DMG WLAN sensing procedure initiated with the issue of an DMG-MLME-SENSMSMTSETUP.request primitive with PeerSTAAddress parameter equal to the DMG SBP initiator’s MAC address to satisfy the DMG SBP request.

If the DMG Preferred Responder List subfield within the DMG SBP Parameters of the corresponding MLME-DMG-SBP.indication primitive is set to 0, the DMG-SBP responder may include any DMG STA in the DMG WLAN sensing procedure used to satisfy the DMG SBP request that allows for measurements to be obtained with the operational parameters specified in the MLME-DMG-SBP.request primitive.

If the DMG Preferred Responder List subfield and the DMG Mandatory Preferred Responder subfield within the DMG SBP Parameters of the DMG MLME-SBP.indication primitive are both set to 1, the PeerSTAAddress parameter within the MLME-DMG-SENSMSMTSETUP.request primitive of a WLAN sensing procedure used by the DMG SBP responder shall be equal to one of the MAC addresses listed in the DMG Sensing Responder Addresses field within the corresponding MLME-DMG-SBP.request primitive.

If the DMG Preferred Responder List subfield and the DMG Mandatory Preferred Responder subfield within the DMG SBP Parameters of the MLME-DMG-SBP.indication primitive are set to 1 and 0, respectively, the DMG SBP responder may use a DMG WLAN sensing procedure initiated with the issue of an MLME-DMG-SENSMSMTSETUP.request primitive with PeerSTAAddress parameter not equal to any of the MAC addresses listed in the DMG Sensing Responder Addresses field within the corresponding MLME-DMG-SBP.request primitive if a DMG WLAN sensing procedure cannot be established with one or more STAs with MAC addresses listed in the DMG Sensing Responder Addresses field.

If the DMG Preferred Responder List subfield within the DMG SBP Parameters of the MLME-DMG-SBP.request primitive is set to 1, the DMG Number of Preferred Responders subfield shall be equal to the number of MAC addresses included in the DMG Sensing Responder Addresses field.

The DMG Preferred Responder List subfield within the DMG SBP Parameters of an MLME-DMG-SBP.response primitive shall be set to 1 only if:

* The StatusCode parameter within the MLME-DMG-SBP.response primitive is set to SUCCESS; and
* The DMG Preferred Responder List subfield within the DMG SBP Parameters of the corresponding MLME-DMG-SBP.indication primitive is equal to 1.

Otherwise, the DMG Preferred Responder List subfield within the DMG SBP Parameters of an MLME-DMG-SBP.response primitive shall be set to 0.

If the DMG Preferred Responder List subfield within the DMG SBP Parameters of the MLME-DMG-SBP.response primitive is set to 0, neither the DMG Sensing Responder Addresses nor the DMG Sensing Responder IDs parameters shall be included in the primitive. If the DMG Preferred Responder List subfield within the DMG SBP Parameters of the MLME-DMG-SBP.response primitive is set to 1, both DMG Sensing Responder Addresses and DMG Sensing Responder IDs shall be included in the primitive. In this case, the DMG Number of Preferred Responders subfield shall be equal to the number of MAC addresses within the DMG Sensing Responder Addresses field and the number of AID/USIDs within the DMG Sensing Responder IDs field.

If the StatusCode parameter within the MLME-DMG-SBP.response primitive is set to SUCCESS, the DMG Number of Sensing Responders subfield within the DMG SBP Parameters shall be equal to the number of DMG sensing responders used in the DMG WLAN sensing procedure used by the DMG SBP responder to satisfy the DMG SBP request.

If the StatusCode parameter within the MLME-DMG-SBP.response primitive is set to PREFERRED\_MEASUREMENT\_SETUP\_PARAMETERS\_SUGGESTED, the DMG Number of Sensing Responders subfield within the DMG SBP Parameters should indicate a suggested number of DMG sensing responders.

NOTE–The method used by an DMG SBP responder to select DMG STAs to include in the DMG WLAN sensing procedure used in response to an MLME-DMG-SBP.request primitive in which the DMG Preferred Responder List subfield within the DMG SBP Parameters is equal to 0 or in which the DMG Preferred Responder List subfield and the DMG Mandatory Preferred Responder subfield within the DMG SBP Parameters are set to 1 and 0, respectively, is implementation dependent.

If the DMG SBP responder of an DMG SBP request that has resulted in an MLME-DMG-SBP.response primitive being issued with StatusCode parameter set to SUCCESS is not able to satisfy required parameters specified in the corresponding MLME-DMG-SBP.indication primitive after the MLME-DMG-SBP.response primitive was issued, it shall issue an MLME-DMG-SBPTERMINATION.request primitive with PeerSTAAddress parameter equal to the DMG SBP initiator’s MAC address within TBD ms. The DMG Measurement Setup ID within the MLME-DMG-SBPTERMINATION.request primitive issued by the DMG SBP responder shall be identical to the DMG Measurement Setup ID within the corresponding MLME-DMG-SBP.response primitive.

***TGbf Editor, append the subclause and the following text to 11.55.4 DMG SBP procedure***

**11. 55.4.3 DMG SBP Reporting#369**

A DMG SBP Responder is a DMG Sensing Initiator that provides service to the DMG SBP Initiator. The SME of the DMG SBP Responder (DMG Sensing Initiator) collects the DMG reports from the DMG Sensing Responders associated with the DMG Measurement Setup ID set at the DMG SBP setup. The reports are collected at the instance and/or at the burst, depending on the Report types, see (TBD Ref. DMG sensing reporting).

The SME of the DMG SBP Responder issues an MLME-DMG-SBPREPORT.request primitive to deliver the DMG reports collected from the DMG Sensing Responders at the instance or burst to the DMG SBP Initiator.

Upon receipt of an MLME-DMG-SBPREPORT.request primitive, the DMG SBP responder shall prepare DMG SBP Report frame(s) to be transmitted to the DMG SBP initiator indicated by the PeerSTAAddress parameter of the primitive.

The DMG Sensing Scheduling sub-element conveyed in the DMG SBP Response frame shall provide the schedule information at the DMG SBP setup. The transmission of the DMG SBP report frame(s) shall commence at the time scheduled for the delivery of the frames.

At the time scheduled to deliver the DMG SBP report frame(s), the DMG SBP responder shall delete all frames prepared for delivery at the preceding scheduled time.

***TGbf Editor, append the subclause and the following text to 11.55.4 DMG SBP procedure***

**11. 55.4.4 DMG SBP Termination#369**

An SME of the DMG SBP Initiator and DMG SBP responder may terminate the DMG SBP procedure by issuing the MLME-DMG-SBPTERMINATION.request primitive. The primitive initiates transmission of a DMG SBP Termination frame.

If the DMG SBP responder intends to terminate a DMG SBP procedure due to unsuccessful or terminated sensing measurement setups with the sensing responders, and if either the DMG Mandatory Number of Responders or the DMG Mandatory Preferred Responder subfield in the DMG SBP Request frame that invoked this DMG SBP procedure is set to 1, the DMG SBP responder may set the DMG SBP Setup Unsuccess subfield to 1 and include the DMG SBP Parameters element in the DMG SBP Termination frame.

A DMG SBP Responder may transmit the DMG SBP Termination frame to the DMG SBP Initiator at the time scheduled to send the DMG SBP Report frames.

A DMG SBP Initiator may transmit the DMG SBP Termination frame to the DMG SBP Responder at any media access allowed for its transmission.

An MLME-DMG-SBPTERMINATION.confirm primitive is delivered to the SME of the DMG STA that has sent the DMG SBP Termination frame.

An MLME-DMG-SBPTERMINATION.indication primitive is delivered to the SME of the DMG STA that received the DMG SBP Termination frame.

Delivery of the primitives shall terminate the DMG SBP Procedure(s) at the DMG STA as follows:

* If one of the subfields (Terminate All SBP Coordinated Monostatic Setups, Terminate All SBP Bistatic Setups, and Terminate all SBP Multistatic setups) is set to 1, ignore the DMG Measurement Setup ID field, and
* If the Terminate All SBP Coordinated Monostatic Setups subfield is set to 1, then terminate all DMG SBP procedures using measurement setups of the sensing type Coordinated Monostatic, and
* If the Terminate All SBP Bistatic Setups subfield is set to 1, then terminate all DMG SBP procedures using measurement setups of the sensing type Bistatic or coordinated Bistatic, and
* If the Terminate all SBP Multistatic setups subfield is set to 1, then terminate all DMG SBP procedures using measurement setups of the sensing type Multistatic.
* Otherwise, terminate the DMG SBP procedure identified with the DMG Measurement Setup ID indicated in the DMG Measurement Setup ID field

Issue of the primitives shall reset the DMG SBP procedure expiry timer to 0, respectively to the terminated DMG SBP procedure.

If the DMG SBP responder transmits a DMG SBP termination frame or receives a DMG SBP termination frame from the DMG SBP initiator, or after the expiry of the DMG SBP procedure expiry timer, the DMG SBP responder should terminate corresponding sensing measurement setup(s) with all the sensing responders identified by the DMG Measurement setup ID(s) associated with the DMG sensing procedure(s) triggered by the terminated DMG SBP procedure(s).

**References:**

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