IEEE P802.11
Wireless LANs

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| Comment Resolution for Clause 6.3 MLME SAP |
| Date: 2019-03-08 |
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Abstract

This submission proposes resolutions of comments received from TGba comment collection (TGba Draft 2.0).

* CIDs: 2189, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2592, 2593, 2594, 2595, 2612, 2655, 2694, 2713, 2714, 2715, 2764, 2765, 2794, 2795, 2796, 2797 (31 CIDs)

Revisions:

* Rev 0: Initial version of the document.
1. **Introduction**

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGba Draft. The introduction and the explanation of the proposed changes are not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGba Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGba Editor: Editing instructions preceded by “TGba Editor” are instructions to the TGba editor to modify existing material in the TGba draft. As a result of adopting the changes, the TGba editor will execute the instructions rather than copy them to the TGba Draft.***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CID | Commenter | Page.Line  | Clause | Comment | Proposed Change | Resolution |
| 2189 | Joseph Levy | 23. | 6.3.3.3 | IF WUR Capabilities, WUR Operation, and WUR Discovery are to be added to the MLME SAP interface, they need to be listed in 6.3.3.3.2 Semantics of the service primitive, it is not enough just to list them in the table. | append WUR Capabilities, WUR Operation, and WUR Discovery to the semantics of the service primitive parameters list. | **Rejected.**The WUR elements are added to the BSSDescriptionSet and as such there is no need to make changes to the semantics. |
| 2252 | Lei Huang | 25.9 | 6.3.7.3.2 | In the MLME-ASSOCIATE.Confirm primitive, the WUR Capabilities specifies the parameters within the WUR Capabilities element that are supported by the PEER STA not the STA. | P25L9: change "the STA" to "the peer STA" | **Revised.**Agree in principle with the commenter. WUR Capabilities in this primitive is extracted from the received Association Response frame. However, WUR AP is a better term than peer STA so STA is changed to WUR AP.  TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2252. |
| 2253 | Lei Huang | 25.18 | 6.3.7.3.2 | What is the WUR BSS? | add the definition or modify the text | **Revised.**Agree with the commenter that WUR BSS is not defined. Rephrased all sentences in clause 6.3 that mention WUR BSS in line with 9.4.2.291 (WUR Operation element). TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2253. |
| 2254 | Lei Huang | 27.4 | 6.3.8.3.2 | In the MLME-REASSOCIATE.Confirm primitive, the WUR Capabilities specifies the parameters within the WUR Capabilities element that are supported by the PEER STA not the STA. | P27L4: change "the STA" to "the peer STA" | **Revised.**Agree in principle with the commenter. WUR Capabilities in this primitive is extracted from the received Association Response frame. However, WUR AP is a better term than peer STA so STA is changed to WUR AP.  TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2254. |
| 2255 | Lei Huang | 24.62 | 6.3.7.3.2 | WUR Mode parameter is missing in the MLME-ASSOCIATE.confirm primitive and the MLME-REASSOCIATE.confirm primitive. | add the WUR Mode parameter and the corresponding description in the MLME-ASSOCIATE.confirm and MLME-REASSOCIATE.confirm primitives. | **Revised.**Agree in principle with the commenter. WUR Mode element is added as optionally present in MLME-(RE) ASSOCIATE.confirm primitives. TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2255. |
| 2256 | Lei Huang | 25.37 | 6.3.7.4.2 | WUR Mode parameter is missing in the MLME-ASSOCIATE.indication and MLME-REASSOCIATE.indication primitives. | add the WUR Mode parameter and the corresponding description in the MLME-ASSOCIATE.indication and MLME-REASSOCIATE.indication primitives | **Revised.**Agree in principle with the commenter. WUR Mode element is added as optionally present in MLME-(RE) ASSOCIATE.indication primitives. TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2256. |
| 2257 | Lei Huang | 26.9 | 6.3.7.5.2 | WUR Mode parameter is missing in the MLME-ASSOCIATE.response and MLME-REASSOCIATE.response primitives. | add the WUR Mode parameter and the corresponding description in the MLME-ASSOCIATE.response and MLME-REASSOCIATE.response primitives. | **Revised.**Agree in principle with the commenter. WUR Mode element is added as optionally present in MLME-(RE) ASSOCIATE.response primitives. TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2257. |
| 2258 | Lei Huang | 30.26 | 6.3.122.3.2 | WUR Operation parameter shall be removed from the MLME-WURMODESETUP.confirm and MLME-WURMODESETUP.response primitives | as in comment | **Revised.**WUR Operation parameter needs to be included in the primitives if the WUR Operation element is carried in the WUR Mode Setup frame. However, agree with the commenter that it should only be optionally present. TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2258. |
| 2376 | Mark Hamilton | 24.7 | 6.3.4.2.2 | Why is WUR Capabilities needed in the MLME-JOIN.request primitive? | Remove this subclause from the amendment. | **Rejected.**Even in baseline, the various capabilities (HT, VHT, DMG) etc. are passed to the MAC using the MLME-JOIN.request primitive. The same convention is followed here. The WUR Capabilities may be used to negotiate WUR Mode during Association. |
| 2377 | Mark Hamilton | 24.40 | 6.3.7.2 | WUR Capabilities and WUR Mode should be passed in to the MLME-ASSOCIATE.request primitive. | Add "WUR Capabilities" and "WUR Mode" to the parameter list and descriptive table for MLME-ASSOCIATE.request. Same thing for MLME-REASSOCIATE. | **Revised.**Agree with the commenter that WUR Mode may be optionally be passed in to the MLME-(RE) ASSOCIATE.request primitive to allow WUR Mode setup during Association. However, WUR capabilities need not be passed since it is already passed in the MLME-JOIN.request primitive. This is the same convention used in the baseline. TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2377. |
| 2378 | Mark Hamilton | 24.62 | 6.3.7.3.2 | WUR Mode should be passed out of the MLME-ASSOCIATE.confirm primitive | Add "WUR Mode" to the parameter list and descriptive table for MLME-ASSOCIATE.confirm. Same thing for MLME-REASSOCIATE. | **Revised.**Agree with the commenter that WUR Mode should be optionally passed out of the MLME-(RE) ASSOCIATE.confirm primitive to allow WUR Mode setup during Association. Same resolution is applied as CID 2255. TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2378. |
| 2379 | Mark Hamilton | 25.37 | 6.3.7.4.2 | WUR Mode should be passed out of the MLME-ASSOCIATE.indication primitive | Add "WUR Mode" to the parameter list and descriptive table for MLME-ASSOCIATE.indication. Same thing for MLME-REASSOCIATE. | **Revised.**Agree with the commenter that WUR Mode should be optionally passed out of the MLME-(RE) ASSOCIATE.indication primitive to allow WUR Mode setup during Association. Same resolution is applied as CID 2256. TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2379. |
| 2380 | Mark Hamilton | 26.8 | 6.3.7.5.2 | WUR Mode should be passed out of the MLME-ASSOCIATE.response primitive | Add "WUR Mode" to the parameter list and descriptive table for MLME-ASSOCIATE.response. Same thing for MLME-REASSOCIATE. | **Revised.**Agree with the commenter that WUR Mode should be optionally passed out of the MLME-(RE) ASSOCIATE.response primitive to allow WUR Mode setup during Association. Same resolution is applied as CID 2257. TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2380. |
| 2381 | Mark Hamilton | 29.8 | 6.3.11.2.2 | WUR Discovery should be passed into the MLME-START.request primitive. | Add "WUR Discovery" to the parameter list and descriptive table for MLME-START.request, conditional on being present when dot11WUROptionImplemented is true and either dot11WURDiscoveryImplemented or dot11WURNeighborDiscoveryImplemented is true. | **Revised.**Agree with the commenter that WUR Discovery should be passed to the MLME-START.request primitive to allow WUR AP to transmit WUR Discovery frames if the WUR AP supports WUR Discovery. However, instead of the element, it is better to pass the individual parameters: WUR Discovery Operating Class, WUR Discovery Channel andWUR Discovery Period to MLME-START.request primitive. TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2381. |
| 2382 | Mark Hamilton | 23.15 | 6.3.3.2 | WUR Capabilities should be passed into the MLME-SCAN.request primitive. | Add WUR Capabilities to the parameter list and descriptive table for MLME-SCAN.request. | **Revised.**Agree with the commenter that WUR Capabilities should be passed to the MLME- SCAN.request primitive to allow WUR non-AP STAs to probe for WUR APs.  TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2382. |
| 2592 | Rojan Chitrakar | 23.13 | 6.3.3 | WUR Scanning may be performed by WUR STAs to scan WUR Discovery channels for WUR Discovery frames. Scan primitives related to WUR Scanning is missing. | Modify existing Scan primitives for WUR Scanning or alternatively add new WUR Scan primitives. | **Revised.**Agree in principle with the commenter. Since WUR Scanning is very different from the baseline Active/Passive scanning, MLME SAPs related to WUR Scanning are added as independent primitives. TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2592. |
| 2593 | Rojan Chitrakar | 24.41 | 6.3.7 | WUR Mode element is allowed to be carried in (Re) Association Request/Response frames. The Associate primitives should also include WUR Mode. | Add WUR Mode to all applicable (Re) Associate Primitives as an optional entry when the STA intends to negotiate WUR Mode during association, or when a Association frame is received that carries a WUR Mode element. | **Revised.**Agree in principle with the commenter. Same resolutions are applied as CID 2255, 2256, 2257 and 2377. TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2593. |
| 2594 | Rojan Chitrakar | 24.4 | 6.3.4.2 | WUR Mode element is allowed to be carried in (Re) Association Request frames. The MLME-JOIN.request primitives should also include WUR Mode. | Add WUR Mode to the MLME-JOIN.request primitive as an optional entry when the STA intends to negotiate WUR Mode during association, | **Rejected.**It is better to pass WUR Mode element to the MLME-ASSOCIATE.request and MLME-REASSOCIATE.request primitives. |
| 2595 | Rojan Chitrakar | 28.33 | 6.3.11.2 | MLME-START.request should also include information necessary for WUR AP to transmit WUR Discovery frames. | Add information necessary for WUR AP to transmit WUR Discovery frames to the MLME-START.request primitive:WUR Discovery Operating Class, WUR Discovery Channel,WUR Discovery Period | **Revised.**Agree in principle with the commenter. WUR Discovery Operating Class, WUR Discovery Channel andWUR Discovery Period are added as optionally present in MLME-START.request primitive. This is the same resolution as CID 2381. TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2595. |
| 2612 | Rojan Chitrakar | 25.9 | 6.3.7.3.2 | The WUR Capabilities carried in the MLME-ASSOCIATE.confirm primitive should reflect the WUR capabilities supported by the WUR AP and not the STA. | Change the Description to:Specifies the parameters within the WUR Capabilities element that are supported by the WUR AP. The parameter is present if dot11WUROptionImplemented is true; otherwise, this parameter is not present. | **Accepted.** |
| 2655 | Tomoko Adachi |  | 6.3.7 | WUR mode setup can be also done through (Re)Association procedure. | Add WURMode that carries WUR Mode element as a primitive parameter to MLME-ASSOCIATION.request, MLME-ASSOCIATION.indication, MLME-REASSOCIATION.request,and MLME-REASSOCIATION.indication. Add WURMode and WUR Operation as primitive parameters to MLME-ASSOCIATION.confirm, MLME-ASSOCIATION.response, MLME-REASSOCIATION.confirm, and MLME ASSOCIATION.response. | **Revised.**Agree in principle with the commenter. Same resolutions are applied as CID 2255, 2256, 2257 and 2377. TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2655. |
| 2694 | Xiaofei Wang | 23.14 | 6.3.3 | WUR scanning seems to be missing the appropriate MLME primitives for start and report the scanning results. | Add MLME primitives and parameters for WUR scanning. | **Revised.**Agree with the commenter that MLME primitive related to WUR Scanning are missing. Same resolutions are applied as CID 2592.TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2694. |
| 2713 | Xiaofei Wang | 23.25 | 6.3.3.3.2 | There are more than one values in WUR capabilties element. "The value" should be "The values" | as in comment. | **Accepted.** |
| 2714 | Xiaofei Wang | 23.39 | 6.3.3.3.2 | There are more than one values in WUR Operation element."The value" should be "The values" | as in comment. | **Accepted.** |
| 2715 | Xiaofei Wang | 23.52 | 6.3.3.3.2 | There are more than one values in WUR Discovery element."The value" should be "The values" | as in comment. | **Accepted.** |
| 2764 | Yonggang Fang | 25.18 | 6.3.7.3.2 | What is WUR BSS? It needs to add the definition of WUR BSS in section 3.2 | As in the comment. | **Revised.**Agree with the commenter that WUR BSS is not defined. Same resolution is applied as for CID 2253: rephrased all sentences in clause 6.3 that mention WUR BSS in line with 9.4.2.291 (WUR Operation element). TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2764. |
| 2765 | Yonggang Fang | 29.46 | 6.3.122.2.2 | What is the PeerSTAAddress? Is it the WUR receiver address? Or it is WUR transmitter address? Or the MAC address of main radio ? Need to clarfiy that. | Please clarify | **Rejected.**Since this primitive is used to request that a WUR Mode Setup frame be sent, it is understood that the PeerSTAAddress indicates the MAC address of the main radio of the target STA to which the WUR Mode Setup frame is addressed. |
| 2794 | Yunsong Yang | 24.41 | 6.3.7 | According to Table 9-36 and Table 9-37, WUR Mode element can be included in the Association Request/Response frames. Therefore, all 4 primitives under clause 6.3.7 (Associate) should include a WUR Mode parameter, which is optionally present if dot11WUROptionImplemented is true; otherwise, not present. | Amend clause 6.3.7 such that a WUR Mode parameter is included in each of MLME-ASSOCIATE.request, MLME-ASSOCIATE.confirm, MLME-ASSOCIATE.indication, and MLME-ASSOCIATE.response primitive, as the last parameter inserted above VendorSpecificInfo parameter. And, states, in the description column of these primitives, that the parameter is optionally present if dot11WUROptionImplemented is true; otherwise, not present. | **Revised.**Agree in principle with the commenter. Same resolutions are applied as CID 2255, 2256, 2257 and 2377. TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2794. |
| 2795 | Yunsong Yang | 24.42 | 6.3.7 | WUR Capabilties parameter should be added to MLME-ASSOCIATE.request primitive. | Amend clause 6.3.7.2 MLME-ASSOCIATE.request by adding WUR Capabilties parameter in the cited primitive, as the first inserted parameter. | **Rejected.**WUR capabilities need not be passed in the MLME-ASSOCIATE.request since it is already passed in the MLME-JOIN.request primitive. This is the same convention used in the baseline. |
| 2796 | Yunsong Yang | 26.38 | 6.3.8 | According to Table 9-38 and Table 9-39, WUR Mode element can be included in the Reassociation Request/Response frames. Therefore, all 4 primitives under clause 6.3.8 (Reassociate) should include a WUR Mode parameter, which is optionally present if dot11WUROptionImplemented is true; otherwise, not present. | Amend clause 6.3.8 such that a WUR Mode parameter is included in each of MLME-REASSOCIATE.request, MLME-REASSOCIATE.confirm, MLME-REASSOCIATE.indication, and MLME-REASSOCIATE.response primitive, as the last parameter inserted above VendorSpecificInfo parameter. And, states, in the description column of these primitives, that the parameter is optionally present if dot11WUROptionImplemented is true; otherwise, not present. | **Revised.**Agree in principle with the commenter. Same resolutions are applied as CID 2255, 2256, 2257 and 2377. TGba editor to make the changes shown in 11-19/0327r0 under all headings that include CID 2796. |
| 2797 | Yunsong Yang | 26.39 | 6.3.8 | WUR Capabilties parameter should be added to MLME-REASSOCIATE.request primitive. | Amend 6.3.8.2 MLME-REASSOCIATE.request by adding WUR Capabilties parameter in the cited primitive, as the first inserted parameter. | **Rejected.**WUR capabilities need not be passed in the MLME-REASSOCIATE.request since it is already passed in the MLME-JOIN.request primitive. This is the same convention used in the baseline. |

**Discussion:** None

**Propose:**

Revised for CIDs 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2377, 2378, 2379, 2380, 2381, 2382, 2592, 2593, 2655, 2694, 2764, 2794, 2796 as per discussion and editing instructions in 11-19/0327r0.

* Layer management
* Overview of management model
* Generic management primitives
* MLME SAP interface

***TGba editor: Modify the following sections in 802.11ba D2.0 based on TGax D4.0 as below (Track Change ON):***

* Scan
	+ - 1. MLME-SCAN.request (CID 2382)

6.3.3.2.2 Semantics of the service primitive

***Change the primitive parameters as follows (not all existing parameters in the baseline are shown):***

The primitive parameters are as follows:

MLME-SCAN.request(

...,

WUR Capabilities,

VendorSpecificInfo

)

***Insert the following entries into the unnumbered table in this subclause maintaining the primitive order above:***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| WUR Capabilities | As defined in WUR Capabilities element | As defined in 9.4.2.290 (WUR Capabilities element) | Specifies the parameters within the WUR Capabilities element that are supported by the STA. The parameter is present if dot11WUROptionImplemented is true and ScanType = ACTIVE; otherwise, this parameter is not present. (#2382) |

* Associate

6.3.7.2 MLME-ASSOCIATE.request (CID 2377, 2655, 2794)

6.3.7.2.2 Semantics of the service primitive

Change the primitive parameters as follows (not all parameters are shown):

The primitive parameters are as follows:

MLME-ASSOCIATE.request(

...,

WUR Mode,

VendorSpecificInfo

)

***Insert the following entries into the unnumbered table in this subclause maintaining the primitive order above:***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| WUR Mode | WUR Mode element | As defined in 9.4.2.292 (WUR Mode element) | Specifies the proposedservice parameters for theWUR Mode Setup request. The parameter is optionally present if dot11WUROptionImplemented is true; otherwise, this parameter is not present. (#2377, 2655, 2794) |

* MLME-ASSOCIATE.confirm (CID 2252, 2253, 2255, 2378, 2593, 2655, 2764, 2794)
* Semantics of the service primitive

Change the primitive parameters as follows (not all parameters are shown):

The primitive parameters are as follows:

MLME-ASSOCIATE.confirm(

...,

WUR Mode,

VendorSpecificInfo

)

***Insert the following entries into the unnumbered table in this subclause maintaining the primitive order above:***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| WUR Capabilities | As defined in WUR Capabilities element | As defined in 9.4.2.290 (WUR Capabilities element) | Specifies the parameters within the WUR Capabilities element that are supported by the WUR AP. (#2252) The parameter is present if dot11WUROptionImplemented is true; otherwise, this parameter is not present. |
| WUR Operation | As defined in WUR Operation element | As defined in 9.4.2.291 (WUR Operation element) | Provides additional information forWUR operation. (#2253, 2764) The parameter is present if dot11WUROptionImplemented is true; otherwise not present. |
| WUR Mode | WUR Mode element | As defined in 9.4.2.292 (WUR Mode element) | Specifies the proposedservice parameters for theWUR Mode Setup request. The parameter is optionally present if dot11WUROptionImplemented is true and the WUR Mode element is present in the Association Request frame that elicited the Association Response frame; otherwise, this parameter is not present. (#2255, 2378, 2593, 2655, 2794) |

* MLME-ASSOCIATE.indication (CID 2256, 2379, 2593, 2655, 2794)
* Semantics of the service primitive

Change the primitive parameters as follows (not all existing parameters in the baseline are shown):

The primitive parameters are as follows:

MLME-ASSOCIATE.indication(

...,

WUR Mode,

VendorSpecificInfo

)

Insert the following entry into the unnumbered table in this subclause maintaining the primitive order above:

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| WUR Mode | WUR Mode element | As defined in 9.4.2.292 (WUR Mode element) | Specifies the proposedservice parameters for theWUR Mode Setup request. The parameter is present if the WUR Mode element is present in the Association Request frame received from the STA; otherwise, this parameter is not present. (#2256, 2379, 2593, 2655, 2794) |

* MLME-ASSOCIATE.response (CID 2253, 2257, 2380, 2593, 2655, 2764, 2794)
* Semantics of the service primitive

Change the primitive parameters as follows (not all existing parameters in the baseline are shown):

The primitive parameters are as follows:

MLME-ASSOCIATE.response(

...,

WUR Mode,

VendorSpecificInfo

)

***Insert the following entries into the unnumbered table in this subclause maintaining the primitive order above:***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| WUR Operation | As defined in WUR Operation element | As defined in 9.4.2.291 (WUR Operation element) | Provides additional information for WUR operation. (#2253, 2764) The parameter is present if dot11WUROptionImplemented is true; otherwise not present. |
| WUR Mode | WUR Mode element | As defined in 9.4.2.292 (WUR Mode element) | Specifies the proposedservice parameters for theWUR Mode Setup request. The parameter is optionally present if dot11WUROptionImplemented is true and the WUR Mode element is present in the Association Request frame received from the STA; otherwise, this parameter is not present. (#2257, 2380, 2593, 2655, 2794) |

* Reassociate

6.3.8.2 MLME-REASSOCIATE.request (CID 2377, 2593, 2655, 2796)

6.3.8.2.2 Semantics of the service primitive

Change the primitive parameters as follows (not all parameters are shown):

The primitive parameters are as follows:

MLME-REASSOCIATE.request(

...,

WUR Mode,

VendorSpecificInfo

)

***Insert the following entries into the unnumbered table in this subclause maintaining the primitive order above:***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| WUR Mode | WUR Mode element | As defined in 9.4.2.292 (WUR Mode element) | Specifies the proposedservice parameters for theWUR Mode Setup request. The parameter is optionally present if dot11WUROptionImplemented is true; otherwise, this parameter is not present. (#2377, 2593, 2655, 2796) |

* MLME-REASSOCIATE.confirm (CID 2254, 2253, 2255, 2378, 2593, 2655, 2764, 2796)
* Semantics of the service primitive

Change the primitive parameters as follows (not all existing parameters in the baseline are shown):

The primitive parameters are as follows:

MLME-REASSOCIATE.confirm(

...,

WUR Mode,

VendorSpecificInfo

)

***Insert the following entries into the unnumbered table in this subclause maintaining the primitive order above:***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| WUR Capabilities | As defined in WUR Capabilities element | As defined in 9.4.2.290 (WUR Capabilities element) | Specifies the parameters within the WUR Capabilities element that are supported by the WUR AP. (#2254) The parameter is present if dot11WUROptionImplemented is true; otherwise, this parameter is not present. |
| WUR Operation | As defined in WUR Operation element | As defined in 9.4.2.291 (WUR Operation element) | Provides additional information forWUR operation (#2253, 2764). The parameter is present if dot11WUROptionImplemented is true; otherwise not present. |
| WUR Mode | WUR Mode element | As defined in 9.4.2.292 (WUR Mode element) | Specifies the proposedservice parameters for theWUR Mode Setup request. The parameter is optionally present if dot11WUROptionImplemented is true and the WUR Mode element is present in the Association Request frame that elicited the Association Response frame; otherwise, this parameter is not present. (#2255, 2378, 2593, 2655, 2796) |

* MLME-REASSOCIATE.indication (CID 2256, 2379, 2593, 2655, 2796)
* Semantics of the service primitive

Change the primitive parameters as follows (not all parameters are shown):

The primitive parameters are as follows:

MLME-REASSOCIATE.indication(

...,

WUR Mode,

VendorSpecificInfo

)

Insert the following entry into the unnumbered table in this subclause maintaining the primitive order above:

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| WUR Mode | WUR Mode element | As defined in 9.4.2.292 (WUR Mode element) | Specifies the proposedservice parameters for theWUR Mode Setup request. The parameter is present if the WUR Mode element is present in the Association Request frame received from the STA; otherwise, this parameter is not present. (#2256, 2379, 2593, 2655, 2796) |

* MLME-REASSOCIATE.response (CID 2253, 2257, 2380, 2593, 2655, 2764, 2796)
* Semantics of the service primitive

Change the primitive parameters as follows (not all existing parameters in the baseline are shown):

The primitive parameters are as follows:

MLME-REASSOCIATE.response(

...,

WUR Mode,

VendorSpecificInfo

)

***Insert the following entries into the unnumbered table in this subclause maintaining the primitive order above:***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| WUR Operation | As defined in WUR Operation element | As defined in 9.4.2.291 (WUR Operation element) | Provides additional information for WUR operation. (#2253, 2764) The parameter is present if dot11WUROptionImplemented is true; otherwise not present. |
| WUR Mode | WUR Mode element | As defined in 9.4.2.292 (WUR Mode element) | Specifies the proposedservice parameters for theWUR Mode Setup request. The parameter is optionally present if dot11WUROptionImplemented is true and the WUR Mode element is present in the Association Request frame received from the STA; otherwise, this parameter is not present. (#2257, 2380, 2593, 2655, 2796) |

* Start
* MLME-START.request (CID 2253, 2381, 2595, 2764)
* Semantics of the service primitive

Change the primitive parameters as follows (not all existing parameters in the baseline are shown):

MLME-START.request(

...,

WUR Discovery Operating Class,

WUR Discovery Channel,

WUR Discovery Period,

VendorSpecificInfo

)

***Insert the following entry into the unnumbered table in this subclause maintaining the primitive order above:***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| WUR Operation | As defined in WUR Operation element | As defined in 9.4.2.291 (WUR Operation element) | Provides additional information for WUR operation. (#2253, 2764) The parameter is present if dot11WUROptionImplemented is true; otherwise not present. |
| WUR Discovery Operating Class | Integer | As defined in 9.4.2.293 (WUR Discovery element) | Specifies the operating class to be used for transmission of WUR Discovery frames. The parameter is present if dot11WUROptionImplemented is true and dot11WURDiscoveryImplemented is true; otherwise, this parameter is not present. (#2381, 2595) |
| WUR Discovery Channel | Integer | As defined in 9.4.2.293 (WUR Discovery element) | Specifies the channel to be used for transmission of WUR Discovery frames. The parameter is present if dot11WUROptionImplemented is true and dot11WURDiscoveryImplemented is true; otherwise, this parameter is not present. (#2381, 2595) |
| WUR Discovery Period | Integer | As defined in 9.4.2.293 (WUR Discovery element) | Specifies the number of time units (TU) between consecutive WUR Discovery frames. The parameter is present if dot11WUROptionImplemented is true and dot11WURDiscoveryImplemented is true; otherwise, this parameter is not present. (#2381, 2595) |

* WUR Mode Setup
* MLME-WURMODESETUP.confirm (CID 2253, 2258, 2764)
* Function

This primitive reports the result of a WUR Setup request/response procedure in 30.7.2 (WUR Mode Setup).

* Semantics of the service primitive

The primitive parameters are as follows:

MLME-WURMODESETUP.confirm(

PeerSTAAddress,

DialogToken,

WURMode,

 WUR Operation)

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| WUR Operation | As defined in WUR Operation element  | As defined in 9.4.2.291 (WUR Operation element) | Provides additional information for WUR operation. (#2253, 2764) The parameter is optionally present if dot11WUROptionImplemented is true; otherwise not present. (#2258) |

* MLME-WURMODESETUP.response (CID 2253, 2258, 2764)
* Function

This primitive is used to send a WUR Mode Setup frame, in response to a received WUR Mode Setup frame or as an unsolicited WUR Mode Setup frame.

* Semantics of the service primitive

The primitive parameters are as follows:

MLME-WURMODESETUP.response(

PeerSTAAddress,

DialogToken,

WURMode,

 WUR Operation)

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| WUR Operation | As defined in WUR Operation element  | As defined in 9.4.2.291 (WUR Operation element) | Provides additional information for WUR operation. (#2253, 2764) The parameter is optionally present if dot11WUROptionImplemented is true; otherwise not present. (#2258) |

***TGba editor: Insert the following sections after 6.3.123 (WUR Mode Teardown):***

* + 1. WUR Scanning (CID 2592, 2694)

6.3.124.1 General

The following MLME primitives support the WUR scanning procedure described in 30.11 (WUR Discovery).

6.3.124.2 MLME-WURSCAN.request

6.3.124.2.1 Function

This primitive requests that a WUR Scanning be initiated to discover WUR APs.

* + - * 1. Semantics of the service primitive

The primitive parameters are as follows:

MLME-WURSCAN.request(

CompressedBSSID,

 CompressedSSID,

 ChannelList, MaxChannelTime)

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| CompressedBSSID | Integer | As described in 30.4.1 (General) | Specifies the desired compressed BSSID or is set to zero when the compressed BSSID is not specified. |
| CompressedSSID | Integer | As described in 9.10.3.3 (WUR Discovery frame format) | Specifies the desired compressed SSID or is set to zero when the compressed SSID is not specified. |
| ChannelList | Set of integers | Each channel in the list is a valid WUR Discovery channel. | Specifies a list of channels to scan for WUR Discovery frames. |
| MaxChannelTime | Integer | N/A | The maximum time (in TU) to spend oneach channel when performing WUR Scanning. |

* + - * 1. When generated

This primitive is generated by the SME to request that a WUR Scanning be initiated to discover WUR APs.

* + - * 1. Effect of receipt

This request initiates the WUR scanning. When the CompressedBSSID parameter is set to a non-zero value, the WUR non-AP STA scans for WUR Discovery frames containing matching compressed BSSID (based on the ID field and the Type Dependent Control field). When the CompressedSSID parameter is set to a non-zero value, the WUR non-AP STA scans for WUR Discovery frames containing matching compressed SSID.

6.3.124.3 MLME-WURSCAN.confirm

6.3.124.3.1 Function

This primitive returns the descriptions of the set of WUR APs discovered by the WUR Scanning.

* + - * 1. Semantics of the service primitive

The primitive parameters are as follows:

MLME-WURSCAN.confirm(

WURAPDescriptionSet,

 ResultCode)

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| WURAPDescriptionSet | Set of WURAPDescriptions | N/A | The WURAPDescriptionSet contains zero or more instances of a WURAPDescription, each of which describes a WUR AP discovered during the WUR Scanning. |
| ResultCode | Enumeration | SUCCESS, NOT\_SUPPORTED | Indicates the result  |

Each WURAPDescription identifies one WUR AP and consists of the parameters shown in the following table:

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| Transmitter ID | Integer | As defined in 30.4.2 (Transmitter ID) | The Transmitter ID of the WUR AP. |
| Compressed BSSID | Integer | As described in 9.10.3.3 (WUR Discovery frame format) | The 12 MSBs of the compressed BSSID of the WUR AP. |
| Compressed SSID | Integer | As described in 9.10.3.3 (WUR Discovery frame format) | The 16 LSBs of the Short-SSID of the WUR AP. |
| Operating Channel | Operating class and channel information as defined in 9.4.1.22(Operating Class and Channel field) | As described in 9.10.3.3 (WUR Discovery frame format) | Specifies the primary channel of the WUR AP. |

* + - * 1. When generated

This primitive is generated by the MLME as a result of an MLME-WURSCAN.request primitive.

* + - * 1. Effect of receipt

The SME is notified of the results of the WUR scanning.