IEEE P802.11  
Wireless LANs

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| Normative text for scanning related MLMEs | | | | |
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Abstract

The submission provides normative text for active scanning process and to MLME related functionality. The MLME related functionality enables reporting of the new discovered BSSs without additional delays and the scanning to be able to stop scanning operation.

The submission is related to 11-12-151r8 requirement 6.1.1.

**6.3.3.3 MLME-SCAN.confirm**

**6.3.3.3.2 Semantics of the service primitive**

*Instructions to Editor: Modify the explanation of the ResultCode parameter of the MLME-SCAN.confirm primitive as follows:*

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** |
| ResultCode | Enumeration | SUCCESS, INTERMEDIATE\_SCAN\_RESULT, NOT\_SUPPORTED | Indicates the result of the MLME- SCAN.confirm primitive.  If SUCCESS, the MLME-SCAN.confirm contains information of all BSSs that has been received during the period from the point when the corresponding MLME-SCAN.request primitive was invoked to the point the scan process was ended or terminated.  If INTERMEDIATE\_SCAN\_RESULT, the MLME-SCAN.confirm contains a BSS information that has been received. The scan process is still ongoing.  If NOT\_SUPPORTED, the requested active scanning is not allowed in the current regulatory domain. |

**6.3.3.3.3 When generated**

*Instructions to Editor: Change 6.3.3.3.3 as shown below:*

This primitive is generated by the MLME as a result of an MLME-SCAN.request primitive or MLME-SCAN-STOP.request to ascertain the operating environment of the STA. The primitive is immediately invoked to report on every found BSS during the scan procedure.

**6.3.3.3.4 Effect of receipt**

*Instructions to Editor: Change 6.3.3.3.4 as shown below:*

As indicated by the ResultCode, the SME is notified of the intermediate or final results of the scan procedure.

**6.3.3.3ai1 MLME-SCAN-STOP.request**

*Instructions to Editor: Add a new clause 6.3.3.3ai1 and subclauses as shown below:*

**6.3.3.3ai1.1 Function**

This primitive terminates any ongoing scan.

**6.3.3.3ai1.2 Semantics of the service primitive**

The primitive parameters are as follows:

MLME-SCAN-STOP.request (

VendorSpecificInfo

)

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid range** | **Description** |
| VendorSpecificInfo | A set of elements | As defined in 8.4.2.28 | Zero or more elements. |

**6.3.3.3ai1.3 when generated**

This primitive is generated by the SME as for a STA to stop any ongoing scan process.

**6.3.3.3ai1.4 Effect of receipt**

This request terminates any ongoing scan procedures. The passive scanning is stopped immediately the primitive is received and active scanning is stopped after the max channel time of the currently scanned channel has elapsed. The confirmation of the scan termination is provided through MLME-SCAN.confirm primitive.

**10.1.4.2 Passive scanning**

*Instructions to Editor: Append the following text to the as the last paragraph of the clause.*

If the MLME receives an MLME-SCAN-STOP.request primitive, the STA shall immediately stop the ongoing passive scanning process at the scanned channel, and shall not initiate scanning at any new channel. The MLME shall issue an MLME-SCAN.confirm primitive with the BSSDescriptionSet containing the gathered information since the last issue of MLME-SCAN.comfirm primitive, or if the primitive has not been issued since the beginning of the scan, having the ResultCode set to SCAN\_SUCCESS.

**10.1.4.3.1 Introduction**

*Instructions to Editor: Change the text as shown with track changes*

Active scanning involves the generation of Probe Request frames and the subsequent processing of received responses to Probe Request frames. The details of the active scanning procedures are as specified in the following subclauses.

**10.1.4.3.2 Active scanning procedure**

*Instructions to Editor: Delete the current clause 10.1.4.3.3 and move the text including the Figure and incorporate the identified changes to clause 10.1.4.3.2.*

Upon receipt of the MLME-SCAN.request primitive with ScanType indicating an active scan, a STA shall use the following procedure:

For each channel to be scanned:

a) Wait until the ProbeDelay time has expired or a PHYRxStart.indication primitive has been received.

b) Perform the Basic Access procedure as defined in 9.3.4.2.

c) Send a probe request to the broadcast destination address, with the SSID and BSSID from the MLME-SCAN.request primitive. When the SSID List is present in the MLME-SCAN.request primitive, send one or more Probe Request frames, each with an SSID indicated in the SSID List and the BSSID from the MLME-SCAN.request primitive.

d) Set a ProbeTimer to 0 and start the ProbeTimer.

e) If PHY-CCA.indication (busy) primitive has not been detected before the ProbeTimer reaches MinChannelTime, then set NAV to 0 and scan the next channel, else ~~the MLME shall issue MLME-SCAN.received primitive with the BSSDescriptionSet containing information of the AP when Probe Response or Beacon frame is received from the AP for the first time.~~  process the received probe responses or Beacon, and when new AP or new information of the AP is detected issue MLME-SCAN Confirm primitive with the ResultCode equal to INTERMEDIATE\_SCAN\_RESULT and the BSSDescriptionSet containing information of the AP.

f)set NAV to 0 and scan the next channel.

See Figures 10-ai1 and 10-3.



**Figure 10-ai8—Example of active scanning process when Probe Request frame is addressed to individual address.**



**Figure 10-3—Example of active scanning process when Probe Request frame is addressed to broadcast address.**

When all channels in the ChannelList have been scanned, the MLME shall issue an MLME-SCAN.confirm primitive with Resultcode set to SCAN\_SUCCESS and the BSSDescriptionSet containing all of the information gathered during the scan.

If the MLME receives an MLME-SCAN-STOP.request primitive, the STA shall complete the ongoing active scanning process at the scanned channel, and shall not initiate scanning at any new channel. The MLME shall issue an MLME-SCAN.confirm primitive with the ResultCode set to SCAN\_SUCCESS and BSSDescriptionSet containing all of the information gathered during the scan.