IEEE P802.11
Wireless LANs

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| P802.11ai CID 31236 |
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Abstract

This document discusses CID 31236 on P802.11ai/D10.0 and proposes a resolution to it.

Note to editor: The page/line number references are against D10.0. The redline is against 10.1-alpha.

# CID 31236

### Comment

I believe that some of the "out of scope" resolutions to comments in the previous round are in error (note that a comment is in scope if it "Is in a recirculation, and relates to text that is the target of an unsatisfied "must be satisfied" comment from a current "no" voter"; see 13/0230):

5.6. CID31008

"it's not the value that is present or not present, it's the parameter"

5.6.1. Reject.

5.6.2. Out of scope.

See CID 20062-20068.

5.9. CID31014

"When all channels in the ChannelList have been scanned, and the ReportingOption of the MLME-SCAN.request primitive is AT\_END or not present, the MLME shall issue an MLME-SCAN.confirm primitive with one or more of BSSDescriptionSet, BSSDescriptionFromFDSet, or BSSDescriptionFromMeasurementPilotSet containing all of the information gathered during the scan." -- the ResultCode is not specified"

5.9.1. Reject.

5.9.2. Out of scope.

See CID 20072.

5.11. CID31011

"and the scanning FILS STA detects a BSS whose MLME-SCAN.confirm primitive has not been issued during the ongoing scan," -- the "whose MLME-SCAN ..." bit is not clear and under the plausible interpretation "have sent a .confirm with that BSSID" is wrong (e.g. you want to issue a new SCAN.cfm if some parameters have changed). It also imposes a potentially unbound storage requirement on the STA"

5.11.1. Straw poll

5.11.1.1.1. in favor of making a text change?

5.11.1.1.2. Y/N: 1/3

5.11.2. Reject.

5.11.3. Out of scope.

See CID 10647, 20072.

5.13. CID31012

""If a FILS STA has the ReportingOption parameter in the MLME-SCAN.request primitive not equal to IMMEDIATE or CHANNEL\_SPECIFIC, then the STA shall follow the procedures indicated in 11.1.4.1" -- but 11.47.2.2 then only describes IMMEDIATE (at 115.37), not CHANNEL\_SPECIFIC"

5.13.1. Straw poll

5.13.1.1.1. in favor of making a text change?

5.13.1.1.2. Y/N: 0/5

5.13.2. Reject.

5.13.3. Out of scope.

See CID 20071.

5.14. CID31027

""Multiple MLME-SCAN.confirm primitives can be issued when the value of the ReportingOption parameter in the MLME-SCAN.request primitive is CHANNEL\_SPECIFIC or IMMEDIATE. When the value of the ReportingOption parameter value is AT\_END, or the ReportingOption parameter is not present, a single MLME-SCAN.confirm primitive is issued."" -- a parameter does not have a value if it is not present"

5.14.1. Reject.

5.14.2. Out of scope.

See CID 20062-20068.

5.16. CID31022

""The IPv6 Gateway MAC address is the MAC address of the IPv6 default gateway." -- this statement is missing for IPv4. Also the article is inconsistent with the absence of the articles in surrounding text"

5.16.1. Straw poll

5.16.1.1.1. in favor of making a text change?

5.16.1.1.2. Y/N: 0/5

5.16.2. Reject.

5.16.3. Out of scope.

See CID 10654, 20083.

5.20. CID31035

"Ref CID 20091. The resolution of this comment seems to have gone in the direction of getting rid of the "shall"s, but everything in this subclause is normative (this is not Clause 9)"

5.20.1. Straw poll

5.20.1.1.1. in favor of making a text change?

5.20.1.1.2. Y/N: 1/4

5.20.2. Reject.

5.20.3. Out of scope.

See CID 20091.

5.21. CID31030

"Ref CIDs 20064/20065. A parameter (here ReportingOption) does not have a value if it is not present"

5.21.1. Reject.

5.21.2. Out of scope.

See CID 20064, 20065.

5.22. CID31029

"Ref CIDs 20064/20065. A parameter (here ReportingOption) does not have a value if it is not present"

5.22.1. Reject.

5.22.2. Out of scope.

See CID 20064, 20065.

5.23. CID31010

"Ref CID 20072. The ReportingOption == IMMEDIATE case is not covered. In this case an MLME-SCAN.confirm still needs to be returned, per 6.3.3.3.3"

5.23.1. Straw poll

5.23.1.1.1. in favor of making a text change?

5.23.1.1.2. Y/N: 0/4

5.23.2. Reject.

5.23.3. Out of scope.

See CID 20072.

### Proposed Change

Accept the proposed changes for the CIDs identified in this comment (CIDs 3xxxx) as having been incorrectly rejected as being out of scope.

### Approach

Address each identified CID from the previous recirculation separately. Details for this are shown at the end of this document. Based on that review, all the identified comments apart from CID 31029 and CID 31030 are not “out-of-scope” resolutions, i.e., they all are based on a new strawpoll that was used to determine that there is no consensus in the BRC to make the proposed change. These are technical resolutions. As far as CID 31029 and CID 31030 are concerned, both of those are repeated comments that were resolved with a technical reason and that technical reason is repeated as part of the resolution for thse comments and the referenced comments 20064 and 20065 were not valid since they did not provide editorial instructions that can be immediately adopted to satisfy the comment, i.e., those comments were not valid for piling up additional comments. As such, this new CID 31236 could be resolved with one of the following resolutions:

Option 1:

“Rejected. Only two of the cited CID 3xxxx comments were rejected based on being “out-of-scope”. Those two comments (CID 31029 and 31030) pile up on two comments (CID 20064 and 20065) which were invalid comments since they did not provide editorial instructions that can be immediately adopted to satisfy the comment.”

Option 2:

“Revised. Only two of the cited CID 3xxxx comments were rejected based on being “out-of-scope”. Those two comments (CID 31029 and 31030) pile up on two comments (CID 20064 and 20065) which were invalid comments since they did not provide editorial instructions that can be immediately adopted to satisfy the comment. Apply the redline changes as shown in <this document> for CIDs 31022, 31012, 31011, 31014, 31008 <TODO – confirm the list of acceptable changes>.”

## CID 31008

Clause Number: 11.1.4.1

Page: 95

Line: 61

Comment:

"An MLME-SCAN.confirm primitive is issued each time that a suitable BSS is discovered when value of the ReportingOption parameter in the MLME-SCAN.request primitive is present and is equal to IMMEDIATE. An MLME-SCAN.confirm primitive is issued each time that the scanning STA has completed the scanning of a channel when the value of the ReportingOption parameter in the MLME-SCAN.request primitive present and is equal to CHANNEL\_SPECIFIC." -- it's not the value that is present or not present, it's the parameter

Proposed Change:

Change the cited text to "An MLME-SCAN.confirm primitive is issued each time that a suitable BSS is discovered when the ReportingOption parameter in the MLME-SCAN.request primitive is present and is IMMEDIATE. An MLME-SCAN.confirm primitive is issued each time that the scanning STA has completed the scanning of a channel when the ReportingOption parameter in the MLME-SCAN.request primitive is present and is CHANNEL\_SPECIFIC."

Resolution:

Reject. The CRC did not agree to make a change to the draft.

STRAW POLL: Are you in favor of making a change to the draft in response to the comment:
Y: -- 0
N: x x x x x -- 5
A: x x x -- 3

Discussion:

This is not an “out of scope” resolution.

Redline showing the changes proposed by the comment:

D10.0 Page 95 Line 52 – Page 96 Line 5

To actively scan, the STA shall transmit Probe Request frames containing a wildcard SSID (see 9.4.2.2 (SSID element)), the desired SSID, or one or more SSID List elements, but a DMG STA might also have to transmit DMG Beacon frames or perform beamforming training prior to the transmission of Probe Request frames. When the SSID List element is present in the Probe Request frame, one or more of the SSID elements may include a wildcard SSID (see 9.4.2.2 (SSID element)). The exact procedure for determining the SSID or SSID List values in the MLME-SCAN.request primitive is not specified in this standard. When a STA scans for a BSS whose AP does not support the SSID List element, or for a BSS for which AP support of the SSID List element is unknown, the SSID element with an SSID or wildcard SSID shall be included in the MLME-SCAN.request primitive. During FILS scanning, the scanning STA may optimize the scanning process by using intermediate results, including the Reduced Neighbor Report element. Details of how to optimize scanning is out of scope of this standard. An MLME-SCAN.confirm primitive is issued each time that a suitable BSS is discovered when the ReportingOption parameter in the MLME-SCAN.request primitive is present and is IMMEDIATE. An MLME-SCAN.confirm primitive is issued each time that the scanning STA has completed the scanning of a channel when the ReportingOption parameter in the MLME-SCAN.request primitive is present and is CHANNEL\_SPECIFIC.

## CID 31014

Clause Number: 11.1.4.3.2

Page: 97

Line: 35

Comment:

"When all channels in the ChannelList have been scanned, and the ReportingOption of the MLME-SCAN.request primitive is AT\_END or not present, the MLME shall issue an MLME-SCAN.confirm
primitive with one or more of BSSDescriptionSet, BSSDescriptionFromFDSet, or BSSDescriptionFromMeasurementPilotSet containing all of the information gathered during the scan." -- the ResultCode is not specified

Proposed Change:

Change the cited text to "When all channels in the ChannelList have been scanned, and the ReportingOption of the MLME-SCAN.request primitive is AT\_END or not present, the MLME shall issue an MLME-SCAN.confirm primitive with the ResultCode equal to SUCCESS and one or more of BSSDescriptionSet, BSSDescriptionFromFDSet, or BSSDescriptionFromMeasurementPilotSet containing all of the information gathered during the scan."

Resolution:

Reject. The CRC did not agree to make a change to the draft.

STRAW POLL: Are you in favor of making a change to the draft in response to the comment:
Y: 0
N: x x x x x 5
A: x x x 3

Discussion:

This is not an “out-of-scope” resolution.

Redline showing the changes proposed by the comment:

D10.0 Page 97 Lines 34-39 (note: The extra “the” with strikethrough looks like an editorial issue; this is all new text added by P802.11ai so there should be no strikethrough here.)

When all channels in the ChannelList have been scanned, and the ReportingOption parameter of the MLME-SCAN. request primitive is AT\_END or not present, the MLME shall issue an MLME-SCAN.confirm primitive with the ResultCode equal to SUCCESS and one or more of BSSDescriptionSet, BSSDescriptionFromFDSet, or BSSDescriptionFromMeasurementPilotSet containing all of the information gathered during the scan.

## CID 31011

Clause Number: 11.1.4.3.2

Page: 97

Line: 14

Comment:

"and the scanning FILS STA detects a BSS whose MLME-SCAN.confirm primitive has not been issued during the ongoing scan," -- the "whose MLME-SCAN ..." bit is not clear and under the plausible interpretation "have sent a .confirm with that BSSID" is wrong (e.g. you want to issue a new SCAN.cfm if some parameters have changed). It also imposes a potentially unbound storage requirement on the STA

Proposed Change:

Delete the cited text at the cited location

Resolution:

REJECTED (TGai General: 2016-08-16 14:37:15Z) The comment is against text that has not been modified within the last ballot nor is it effected by text changed in the last ballot.

The BRC could not reach consensus on making the requested change (Straw Poll: 1-3)

Discussion:

This is not an “out-of-scope” resolution (strawpoll and no consensus).

Redline showing the changes proposed by the comment:

D10.0 Page 97 Lines 9-15

If the ReportingOption parameter of the MLME-SCAN.request primitive is IMMEDIATE, then an MLME-SCAN.confirm primitive with the ResultCode equal to INTERMEDIATE\_SCAN\_RESULT and one or more of BSSDescriptionSet, BSSDescriptionFromFDSet, or BSSDescriptionFromMeasurementPilotSet containing information of the detected BSS is immediately issued;

## CID 31012

Clause Number: 11.47.2.2

Page: 116

Line: 13

Comment:

"If a FILS STA has the ReportingOption parameter present in the MLME-SCAN.request primitive and it is
not equal to IMMEDIATE or CHANNEL\_SPECIFIC, then the STA shall follow the procedures indicated in
11.1.4.1 (General) and not the procedures provided in this clause." -- this should also apply if the parameter is not present (it might not be, per 14.17), which is the same thing as the only remaining case, namely AT\_END

Proposed Change:

Change the cited text to "Unless a FILS STA has the ReportingOption parameter present in the MLME-SCAN.request primitive and it is IMMEDIATE or CHANNEL\_SPECIFIC, the STA shall follow the procedures indicated in 11.1.4.1 (General) and not the procedures provided in this clause."

Resolution:

REJECTED (TGai General: 2016-08-16 14:44:16Z) The comment is out of scope: i.e., it is not on changed text, text affected by changed text

The BRC could not reach consensus on making the requested change (Straw Poll 5-0)

Discussion:

This is not an “out-of-scope” resolution (strawpoll and no consensus).

Redline showing the changes proposed by the comment:

D10.0 Page 112 Lines 47-49

Unless a FILS STA has the ReportingOption parameter present in the MLME-SCAN.request primitive and it is

IMMEDIATE or CHANNEL\_SPECIFIC, the STA shall follow the procedures indicated in

[11.1.4.1 (General)](#_bookmark252) and not the procedures provided in this clause.

## CID 31027

Clause Number: 6.3.3.3.1

Page: 14

Line: 45

Comment:

"Multiple MLME-SCAN.confirm primitives can be issued when the value of the ReportingOption parameter in the MLME-SCAN.request primitive is CHANNEL\_SPECIFIC or IMMEDIATE. When the value of the ReportingOption parameter value is AT\_END, or the ReportingOption parameter is not present, a single MLME-SCAN.confirm primitive is issued." -- a parameter does not have a value if it is not present

Proposed Change:

Change the cited text to "Multiple MLME-SCAN.confirm primitives can be issued when the ReportingOption parameter is present in the MLME-SCAN.request primitive and is CHANNEL\_SPECIFIC or IMMEDIATE. When the ReportingOption parameter is present and is AT\_END, or the ReportingOption parameter is not present, a single MLME-SCAN.confirm primitive is issued."

Resolution:

Reject. The CRC did not agree to make a change to the draft.

STRAW POLL: Are you in favor of making a change to the draft in response to the comment:
Y: 0
N: x x x x x x - 6
A: x x - 2

Discussion:

This is not an “out-of-scope” resolution.

Redline showing the changes proposed by the comment:

D10.0 Page 14 Lines 45-50

This primitive returns the descriptions of the set of BSSs detected by the scan process. Multiple MLME-SCAN.confirm primitives can be issued when the ReportingOption parameter is present in the MLME-SCAN.request primitive and is CHANNEL\_SPECIFIC or IMMEDIATE. When the ReportingOption parameter is present and is AT\_END, or the ReportingOption parameter is not present, a single MLME-SCAN.confirm primitive is issued.

## CID 31022

Clause Number: 9.4.2.184.3

Page: 70

Line: 28

Comment:

"The IPv6 Gateway MAC address is the MAC address of the IPv6 default gateway." -- this statement is missing for IPv4. Also the article is inconsistent with the absence of the articles in surrounding text

Proposed Change:

Delete "The" in the cited text at the cited location. Add "IPv4 Gateway MAC address is the MAC address of the IPv4 default gateway." after "IPv4 Gateway Address is the IPv4 address of the default gateway when IPv4 is used." at line 27

Resolution:

REJECTED (TGai General: 2016-08-16 14:53:18Z) The comment is out of scope: i.e., it is not on changed text, text affected by changed text

The BRC could not reach consensus on making the requested change (Straw Poll 5-0).

Discussion:

This is not an “out-of-scope” resolution (strawpoll and no consensus).

Redline showing the changes proposed by the comment:

D10.0 Page 70 Lines 18-29

9.4.2.185.3 IP Address Data field for response

The format of the IP Address Data field for response is shown in [Figure 9-589s (IP Address Data field format for response).](#_bookmark162)

NOTE—IPv4 addressing is described in RFC 791. IP Subnet and Subnet Mask is described RFC 917. IPv6 addressing, IPv6 prefix and prefix-length is described in RFC 4291. A default gateway in computer networking is a device that is assumed to know how to forward packets on to other networks or the Internet. IPv4 Gateway Address is the IPv4 address of the default gateway when IPv4 is used. IPv4 Gateway MAC address is the MAC address of the IPv4 default gateway. IPv6 Gateway Address is the IPv6 address of the default gateway when IPv6 is used. IPv6 Gateway MAC address is the MAC address of the IPv6 default gateway.

## CID 31035

Clause Number: 10.27.11

Page: 91

Line: 23

Comment:

Ref CID 20091. The resolution of this comment seems to have gone in the direction of getting rid of the "shall"s, but everything in this subclause is normative (this is not Clause 9)

Proposed Change:

Change all the present simples (e.g. "is immediately followed") relating to normative behaviour to "shall"s (e.g. "shall be immediately followed") in the cited subclause

Resolution:

REJECTED (TGai General: 2016-08-16 15:08:07Z) -- The comment cites text that has not been modified within the last ballot nor is it effected by text changed in the last ballot. The BRC agreed to not make a change (straw poll 4-1).

Discussion:

This is not an “out-of-scope” resolution (strawpoll and no consensus).

Redline showing the changes proposed by the comment:

D10.0 Page 91 Line 27 - Page 92 Line 3

**10.27.11** **Element fragmentation**

The general format of elements limits the size of the information to 255 octets in an element without Element ID Extension field or 254 octets in an element with Element ID Extension field. Information that is too

large to fit in a single element shall be fragmented into a series of elements consisting of the element that the information does not fit, immediately followed by one or more Fragment elements as illustrated in [Figure 10-40a](#_bookmark243) [(Example of the element fragmentation without Element ID Extension).](#_bookmark243) Information that fits in a single element shall not be fragmented. All the information for a fragmented element shall appear in the same MMPDU.

The information to be fragmented is divided into M + N portions, where:

Element without Element ID Extension:

— L is the size of the information in octets.

— M is Floor (L/255).

— N is equal to 1 if L mod 255 > 0 and equal to 0 otherwise.

Element with Element ID Extension:

— L is the size of the information in octets.

— M is Floor ((L+1)/255).

— N is equal to 1 if (L-254) mod 255 > 0 and equal to 0 otherwise.

The element into which the information does not fit shall be filled with the first portion of information and is termed the leading element. The leading element shall contain 255 octets of information in case of the element without Element ID Extension, or 254 octets of information in case of the element with Element ID Extension. This element shall be immediately followed by M-1 Fragment elements, each containing the next portion of 255 octets of information. If N = 1 these elements shall be immediately followed by the last portion of information.

NOTE—A Fragment element never follows an element with fewer than 255 octets of information without Element ID Extension, and an element with fewer than 254 octets of information with Element ID Extension. A Fragment element is never fragmented.

## CID 31030

Clause Number: 11.1.4.3.2

Page: 97

Line: 21

Comment:

Ref CIDs 20064/20065. A parameter (here ReportingOption) does not have a value if it is not present

Proposed Change:

At the cited location change "If the ReportingOption parameter of the MLME-SCAN.request primitive is CHANNEL\_SPECIFIC" to "If the ReportingOption parameter is present in the MLME-SCAN.request primitive and is CHANNEL\_SPECIFIC"

Resolution:

REJECTED (TGai General: 2016-08-16 15:12:21Z) The comment is against text that has not been modified within the last ballot nor is it effected by text changed in the last ballot. It refers to a previous comment that was rejected with the following response:

If the parameter is not present, then it can't equal IMMEDIATE. This is logical text, not like a programming language where "NULL pointers" have to be handled.

Discussion:

This is rejecting a repeated comment with a repeated technical reason. The referenced comments 20064 and 20065 were not valid since they did not provide editorial instructions that can be immediately adopted to satisfy the comment.

Redline showing the changes proposed by the comment:

D10.0 Page 97 Lines 17-18

If the ReportingOption parameter is present in the MLME-SCAN.request primitive and is CHANNEL\_SPECIFIC, do the following:

## CID 31029

Clause Number: 11.1.4.3.2

Page: 97

Line: 14

Comment:

Ref CIDs 20064/20065. A parameter (here ReportingOption) does not have a value if it is not present

Proposed Change:

At the cited location change "If the ReportingOption parameter of the MLME-SCAN.request primitive is IMMEDIATE" to "If the ReportingOption parameter is present in the MLME-SCAN.request primitive and is IMMEDIATE"

Resolution:

REJECTED (TGai General: 2016-08-16 15:14:57Z) - The comment is against text that has not been modified within the last ballot nor is it effected by text changed in the last ballot. The comment refers back to a previous comment that was rejected with the following reasion:

REJECT If the parameter is not present, then it can't equal IMMEDIATE. This is logical text, not like a programming language where "NULL pointers" have to be handled.

Discussion:

This is rejecting a repeated comment with a repeated technical reason. The referenced comments 20064 and 20065 were not valid since they did not provide editorial instructions that can be immediately adopted to satisfy the comment.

Redline showing the changes proposed by the comment:

D10.0 Page 97 Lines 9-15

If the ReportingOption parameter is present in the MLME-SCAN.request primitive and is IMMEDIATE, and the scanning FILS STA detects a BSS whose MLME-SCAN.confirm primitive has not been issued during the ongoing scan, then an MLME-SCAN.confirm primitive with the ResultCode equal to INTERMEDIATE\_SCAN\_RESULT and one or more of BSSDescriptionSet, BSSDescriptionFromFDSet, or BSSDescriptionFromMeasurementPilotSet containing information of the detected BSS is immediately issued;

## CID 31010

Clause Number: 11.1.4.3.2

Page: 98

Line: 34

Comment:

Ref CID 20072. The ReportingOption == IMMEDIATE case is not covered. In this case an MLME-SCAN.confirm still needs to be returned, per 6.3.3.3.3

Proposed Change:

After "If the ReportingOption of the MLMESCAN.request primitive is AT\_END or not present, then the MLME shall issue an MLME-SCAN.confirm primitive with the ResultCode set to SUCCESS and with one or more of BSSDescriptionSet, BSSDescriptionFromFDSet, or BSSDescriptionFromMeasurementPilotSet containing all of the information gathered during the scan." at the cited location add "If the ReportingOption of the MLME-SCAN.request primitive is present and is IMMEDIATE, then the MLME shall issue an MLME-SCAN.confirm primitive with the ResultCode set to SUCCESS but no BSSDescriptionSet, BSSDescriptionFromFDSet, or BSSDescriptionFromMeasurementPilotSet."

Resolution:

REJECTED (TGai General: 2016-08-16 15:21:39Z) - The comment is against text that has not been modified within the last ballot nor is it effected by text changed in the last ballot. The current comment provides information on additional requested changes that were not provided as part of the original / cited comment.

The BRC could not reach consensus on making the requested change (Stawpoll 4-0)

Discussion:

This is not an “out-of-scope” rejection (strawpoll and no consensus).

Redline showing the changes proposed by the comment:

D10.0 Page 98 Lines 30-39

If the MLME receives an MLME-SCAN-STOP.request primitive, the STA shall stop scanning. The STA should discard any Probe Request frame queued for transmission. If the STA is transmitting a Probe Request frame, the STA shall complete the transmission of the Probe Request frame. The STA shall not continue the active scanning process on unscanned channels listed in the ChannelList parameter of the MLME-SCAN.request primitive. If the ReportingOption parameter of the MLME-SCAN.request primitive is AT\_END or not present, then the MLME shall issue an MLME-SCAN.confirm primitive with the ResultCode set to SUCCESS and with one or more of BSSDescriptionSet, BSSDescriptionFromFDSet, or BSSDescriptionFromMeasurementPilotSet containing all of the information gathered during the scan. If the ReportingOption of the MLME-SCAN.request primitive is present and is IMMEDIATE, then the MLME shall issue an MLME-SCAN.confirm primitive with the ResultCode set to SUCCESS but no BSSDescriptionSet, BSSDescriptionFromFDSet, or BSSDescriptionFromMeasurementPilotSet.