IEEE P802.11
Wireless LANs

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| 802.11IEEE P802.11aj D3.0 Mandatory Draft Review (MDR) Report |
| Date: 2016-11-03 |
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**Abstract**

This document contains the report of the 802.11aj Mandatory Draft Review.

# 3999Introduction

## Purpose of this document

This document is the report from the group of volunteers that participated in the P802.11aj/D3.0 mandatory draft review.

This document contains recommendations for changes to P802.11aj to bring it into improved compliance to IEEE-SA and WG11 style.

Those recommended changes need to be reviewed by TGaj and approved, or ownership of the issues taken by TGaj.

## Process / references

The MDR process is described in:

* 11-11/615r5 – Mandatory Draft Review process
	+ https://mentor.ieee.org/802.11/dcn/11/11-11-0615-05-0000-wg802-11-mec-process.doc

And references:

* 11-09/1034r11 – 802.11 Editorial Style Guide
	+ https://mentor.ieee.org/802.11/dcn/09/11-09-1034-11-0000-802-11-editorial-style-guide.doc

## Acknowledgements

The 802.11 technical editors (Robert Stacey and Peter Ecclesine) gratefully acknowledge the work and contribution of:

* <Volunteers Here>

Review assignments:

1. Style guide clause 2.1 to 2.6 – Jiamin Chen
2. Style guide clause 2.7 to 2.18 – Edward Au
3. Style guide clause 3 – Robert Stacey
4. MIB style and compiles with no extra warnings – Yongho Seok
5. ANA check – Robert Stacey

## Actions arising

# Findings

**2.7 Capitalization**

**2.8 Terminology**

**2.9 Use of verbs & problematic words**

**2.9.1 Which/that**

**2.9.2 Missing & use of articles (indexicals)**

**2.9.3 Missing noun in noun phrase**

**2.10 Numbers**

**2.11 Maths operators and relations**

**2.12 Hyphenation**

# Individual clauses

***Findings from Robert Stacey***

Clause 4 (General description)

OK. Declarative statements only.

Clause 6 (Layer management)

Checked for presence statements: OK

Checked for consistency: OK

Clause 9 (Frame formats)

**9.2.4.1.10 +HTC/Order subfield**

“For 45MG STAs, the Order subfield is 1 bit in length. It is used for two purposes:”

There is no such thing as an Order subfield (it’s called “+HTC/Order subfield” in the baseline). The +HTC/Order subfield length is not dependent on the STA type. Change to:

“A 45MG STA uses the +HTC/Order subfield for two purposes:”

Use of “may” in the locations listed below. Frame formats section is descriptive; avoid use of normative verbs.

P27L27, P27L30, P62L17

Annexes

Includes PICS

Includes MIB

# ANA

***TGaj editor, please perform actions shown below in “actions arising”***

| **Resources by Doc1Subclause for MDR** |
| --- |
| **RefDoc1Subclause** | **ResourceName** | **Status** |
| 8.2.4.1.2 | ProtocolVersions | NP |
| 8.2.4.1.3 | FrameTypes | NP |
| 8.2.4.1.3 | DataSubTypes | NP |
| 8.2.4.1.3 | ExtendedSubTypes | NP |
| 8.2.4.1.3 | ExtendedControlSubTypes | NP |
| 8.2.4.1.3 | ControlSubTypes | NP |
| 8.2.4.1.3 | ManagementSubTypes | NP |
| 8.2.6 | TLV encodings | NP |
| 8.4.1.1 | AuthenticationAlgorithmNumbers | NP |
| 8.4.1.11 | Categories | OK |
| 8.4.1.4 | Capabilities | NP |
| 8.4.1.7 | ReasonCodes | OK |
| 8.4.1.9 | StatusCodes | OK |
| 8.4.2.1 | ElementIDs | NP |
| 8.4.2.1 | Element ID Extension 1 | OK |
| 8.4.2.100.2 | Active Path Selection Protocol | NP |
| 8.4.2.27.2 | CipherSuiteSelectors | NP |
| 8.4.2.27.3 | AKMSuiteSelectors | NP |
| 8.4.2.27.4 | RSNCapabilities | NP |
| 8.4.2.29 | ExtendedCapabilities | NP |
| 8.4.2.50 | FastBSSTransitionSubElementIDs | NP |
| 8.4.4 | Info IDs | NP |
| 8.5.14.28 | WNM-Notification types | NP |
| 8.5.2.1 | SpectrumManagementActionFrames | NP |
| 8.5.8.1 | PublicActionFrames | OK |
| 8.8.3 | ShortFrameTypes | NP |
| 8.8.4 | ShortControlFrameSubTypes | NP |
| 8.8.5 | ShortManagementFrameSubTypes | NP |
| annex C | dot11mac | See Action 1 |
| C.3 | dot11Groups | OK |
| C.3 | dot11OperationEntry | NP |
| C.3 | dot11phy | OK |
| C.3 | dot11smt | OK |
| C.3 | dot11StationConfigEntry | NP |
| C.3 | ieee802dot11 | NP |
| C.3 | dot11Compliances | OK |
| D.1 | BehaviorLimits | NP |
| E.1 | OperatingClassesInJapan | NP |
| E.1 | OperatingClassesInEurope | NP |
| E.1 | OperatingClassesGlobal | NP |
| E.1 | OperatingClassesInUSA | NP |
| None | MAC addresses | NP |
| Notes:NP – Not presentOK – Present and values are correct |

Actions arising:

Action 1: {dot11mac 13} was assigned for dot1145MGCounterTable but is unused in draft. Send release request to ANA.

# MIB

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| *Editing Instruction: TGaj Editor revises Annex C as follows* **TGaj Editor: Replace “45mg(“ with “fourtyfivemg(“ throughout Annex C.** **TGaj Editor: Remove the following from Annex D because dot11EDCATableTXOPLimit which was updated from P802.11mc D8.0 does not have any PHY dependent wording.** ~~Change the definition of “dot11EDCATableTXOPLimit” in the “SMT EDCA Config TABLE” in C.3 as follows:~~~~dot11EDCATableTXOPLimit OBJECT-TYPESYNTAX Unsigned32 (0..65535)MAX-ACCESS read-writeSTATUS currentDESCRIPTION"This is a control variable.It is written by the MAC upon receiving an EDCA Parameter Set in a Beacon frame.Changes take effect as soon as practical in the implementation.This attribute specifies the maximum number of microseconds of an EDCA TXOP for a given AC. The default value for this attribute is 1) 0 for all PHYs, if dot11EDCATableIndex is 1 or 2; this implies that the sender can send one MSDU in an EDCA TXOP, 2) 3008 microseconds for Clause 18, Clause 21, Clause 25, Clause 26 and Clause 19 PHY and 6016 microseconds for Clause 17 PHY, if dot11EDCATableIndex is 3, 3) 1504 microseconds for Clause 18, Clause 21, Clause 25, Clause 26 and Clause 19) PHY and 3264 microseconds for Clause 17 PHY, if dot11EDCATableIndex is 4."::= { dot11EDCAEntry 5 }~~**TGaj Editor: Change the following editing instruction because the position of the inserted texts (the end of the Station Management (SMT) Attributes) is not clear.**Insert the following tables (“dot11CDMGSTAConfigTable”) and (“dot1145MGSTAConfigTable”) at the end of the ~~“Station ManagemenT (SMT) Attributes”~~ “dot11S1GStationConfigTable” part of C.3:**TGaj Editor: Change the Dot11CDMGSTAConfigEntry as the following.** Dot11CDMGSTAConfigEntry ::=SEQUENCE {dot11CDMGOptionImplemented TruthValue,dot11DynamicChannelTransferImplemented TruthValue,dot11OpportunisticTransmissionsActivated TruthValue,dot11CDMGSpatialsharingActivated TruthValue,dot11CDMGClusteringActivated TruthValue}**TGaj Editor: Define the following MIB variables or remove it as the below editing instruction. (Because of the MIB compiling error, this document simply proposes to remove the following MIB variables from Dot1145MGSTAConfigEntry.)- dot11DynamicChannelTransferImplemented- dot11OpportunisticTransmissionsActivated- dot11SpatialsharingActivated** Dot1145MGSTAConfigEntry ::=SEQUENCE {dot1145MGOptionImplemented TruthValue,~~dot11DynamicChannelTransferImplemented TruthValue,dot11OpportunisticTransmissionsActivated TruthValue,dot11SpatialsharingActivated TruthValue,~~dot1145MGClusteringActivated TruthValue}**TGaj Editor: Change the following editing instruction because the position of the inserted texts (the end of the PHY Attributes) is not clear.**Insert the following table~~s~~ (“dot11 Phy CDMG TABLE”) ~~and (“dot11CDMGOperation TABLE”)~~ at the end of ~~“PHY Attributes”~~ “dot11 S1G Transmit Beamforming Config TABLE“ section in C.3:**TGaj Editor: Define the entries of dot11PHY45MGTable. (Because of the MIB compiling error, this document simply proposes to remove dot11PHY45MGTable.)** ~~--\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*-- \* dot11 Phy 45MG TABLE--\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*dot11PHY45MGTable OBJECT-TYPESYNTAX SEQUENCE OF Dot11PHYCDMGEntryMAX-ACCESS not-accessibleSTATUS currentDESCRIPTION"Entry of attributes for dot11Phy45MGTable. Implemented as a table indexedon ifIndex to allow for multiple instances on an Agent."::= { dot11phy 30}~~~~dot11PHY45MGEntry OBJECT-TYPESYNTAX Dot11PHY45MGEntryMAX-ACCESS not-accessibleSTATUS currentDESCRIPTION"An entry in the dot11PHY45MGEntry Table. ifIndex - Each IEEE802.11 interface is represented by an ifEntry. Interface tables in thisMIB module are indexed by ifIndex."INDEX {ifIndex}::= { dot11PHY45MGTable 1 }-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*-- \* End of dot11 PHY 45MG TABLE-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*~~**TGaj Editor: Change the following editing instruction because the position of the inserted texts (the end of the MAC Attribute Templates) is not clear.**Insert the following tables (“dot11CDMGOperation TABLE”) and (“dot1145MGOperation TABLE”) at the end of the ~~“MAC Attribute Templates”~~ “dot11BSSStatisticsTable” section in C.3:**TGaj Editor: Change the Dot11CDMGOperationEntry and Dot1145MGOperationEntry as the following. (Because dot11DCTTimeouts are duplicated, the below name changes are proposed.)** Dot11CDMGOperationEntry ::=SEQUENCE {dot11CDMGDCTTimeout Unsigned32~~,~~}dot11CDMGDCTTimeout OBJECT-TYPESYNTAX Unsigned32 (1..64000)UNITS "milliseconds"MAX-ACCESS read-writeSTATUS currentDESCRIPTION"This is a control variable.It is written by the SME or an external management entity.Changes take effect as soon as practical in the implementation.Dynamic Channel Transfer Timeout (in milliseconds)"DEFVAL { 1000 }::= { dot11CDMGOperationEntry 1 }Dot1145MGOperationEntry ::=SEQUENCE {dot1145MGDCTTimeout Unsigned32~~,~~}dot1145MGDCTTimeout OBJECT-TYPESYNTAX Unsigned32 (1..64000)UNITS "milliseconds"MAX-ACCESS read-writeSTATUS currentDESCRIPTION"This is a control variable.It is written by the SME or an external management entity.Changes take effect as soon as practical in the implementation.Dynamic Channel Transfer Timeout (in milliseconds)"DEFVAL { 1000 }::= { dot1145MGOperationEntry 1 }**TGaj Editor: Change the following editing instruction because the position of the inserted texts (the end of the Groups - units of conformance) is not clear.**Insert the following groups (“dot11CDMGComplianceGroup” and“dot11CDMGOperationsComplianceGroup”) at the end of the ~~“Groups - units of conformance”~~ “dot11PADComplianceGroup” section in C.3: **TGaj Editor: Change the dot11CDMGComplianceGroup and dot11CDMGOperationsComplianceGroup as the following.** dot11CDMGComplianceGroup OBJECT-GROUPOBJECTS {dot11CDMGOptionImplemented,dot11DynamicChannelTransferImplemented,dot11OpportunisticTransmissionsActivated,dot11CDMGSpatialsharingActivated,dot11CDMGClusteringActivated}STATUS currentDESCRIPTION"Attributes that configure the CDMG Group for IEEE Std 802.11."::= { dot11Groups 95}dot11CDMGOperationsComplianceGroup OBJECT-GROUPOBJECTS {dot11CDMGDCTTimeout}STATUS currentDESCRIPTION"Attributes that configure the CDMG Operation for IEEE Std 802.11."::= { dot11Groups 96} **TGaj Editor: Change the following editing instruction at P281 L39 because the position of the inserted texts (the end of the “dot11Compliance” module) is not clear.**Insert the following groups at the end of the ~~“dot11Compliance”~~ module “GROUP dot11FILSComplianceGroup” of the “Compliance Statements” section of C.3:**TGaj Editor: Change the following editing instruction because the position of the inserted texts (the end of the Groups - units of conformance) is not clear.**Insert the following groups (“dot1145MGComplianceGroup” and“dot1145MGOperationsComplianceGroup”) at the end of the ~~“Groups - units of conformance”~~ “dot11PADComplianceGroup” section in C.3:**TGaj Editor: Change the dot1145MGComplianceGroup and dot1145MGOperationsComplianceGroup as the following.** dot1145MGComplianceGroup OBJECT-GROUPOBJECTS {dot1145MGOptionImplemented,~~dot11DynamicChannelTransferImplemented,dot11OpportunisticTransmissionsActivated,dot11SpatialsharingActivated,~~dot1145MGClusteringActivated}STATUS currentDESCRIPTION"Attributes that configure the 45MG Group for IEEE Std 802.11."::= { dot11Groups 97}dot1145MGOperationsComplianceGroup OBJECT-GROUPOBJECTS {dot1145MGDCTTimeout}STATUS currentDESCRIPTION"Attributes that configure the 45MG Operation for IEEE Std 802.11."::= { dot11Groups 98}**TGaj Editor: Change the following editing instruction at P282 L62 because the position of the inserted texts (the end of the “dot11Compliance” module) is not clear.**Insert the following groups at the end of the ~~“dot11Compliance”~~ module “GROUP dot11FILSComplianceGroup” of the “Compliance Statements” section of C.3:**TGaj Editor: Remove “dot11Phy45MGComplianceGroup” at P283 L39 and P283 L16 because dot11Phy45MGComplianceGroup is not defined.** |

# IEEE-SA MEC

## The MEC comments

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## The response to the MEC comments