IEEE P802.11  
Wireless LANs

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| IEEE P802.11be/D4.0 Mandatory Draft Review (MDR) Report | | | | |
| Date: 2023-08-13 | | | | |
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**Abstract**

This document contains the report of the IEEE P802.11be D4.0 Mandatory Draft Review.

r0: section headings.

r1: added findings from Ming and Graham.

r1: added findings from Po-Kai.

# Introduction

## Purpose of this document

This document is the report from the group of volunteers that participated in the P802.11be/D4.0 mandatory draft review.

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

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

## Process / references

The MDR process is described in:

* [11-11/615r6](https://mentor.ieee.org/802.11/dcn/11/11-11-0615-06-0000-wg802-11-mec-process.doc) – WG802.11 MEC Process

And references:

* [11-09/1034r20](https://mentor.ieee.org/802.11/dcn/09/11-09-1034-20-0000-802-11-editorial-style-guide.docx) – 802.11 Editorial Style Guide

A setup meeting will be held with and review topics assigned to volunteers. The review comments from the volunteers will be compiled into this document.

## Acknowledgements

The 802.11 technical editor (Robert Stacey) gratefully acknowledges the work and contribution of:

* TBD

# Findings

## Style

### Style Gude 2.1 – Frames

#### Style Guide 2.1.1 – Frame Format Figures

Emily Qi

#### Style Guide 2.1.2 – Naming Frames

Joe Levy

### Style Guide 2.2 – true/false

Rubayet Shafin

### Style Guide 2.3 – “is set to”

Rubayet Shafin

### Style Guide 2.4 – Information Elements/Subelements

#### Style Guide 2.4.1 – Information Elements/subelements – Naming

Ming Gan

“MLO Link Information element”, is this name aligned with that “<Purpose> does not include the word “information””?

For editorial style guide provided by Robert, the following sentence is confusing. Is that saying that <Purpose> is not exact same as “Information”, or it can’t contain “Information”. Generally speaking, element already includes the meaning of “information”. On the other hand, REVme D3. 0 still has a few instances where <Purpose> contains “information”.

Elements should be called the “<Purpose> element”, where <Purpose> does not include the word “information” (e.g., the “QoS Capability element”)

[01] Page 14, line 30: Please replace “MLO Link Information element” with “MLO Cross Link element”.

[02] Page 33, line 21: Please replace “MLO Link Information element” with “MLO Cross Link element”.

[03] Page 192, line 37: Please replace “MLO Link Information element” with “MLO Cross Link element”.

[04] Page 212, line 38: Please replace “MLO Link Information” with “MLO Cross Link”.

[05] Page 212, line 39: Please replace “MLO Link Information element” with “MLO Cross Link element”.

[06] Page 295, line 48: Please replace “MLO Link Information element” with “MLO Cross Link element”.

[07] Page 295, line 51: Please replace “MLO Link Information element” with “MLO Cross Link element”.

[08] Page 296, line 1: Please replace “MLO Link Information element” with “MLO Cross Link element”.

[09] Page 296, line 10: Please replace “MLO Link Information element” with “MLO Cross Link element”.

[10] Page 544, line 11: Please replace “MLO Link Information element” with “MLO Cross Link element”.

[11] Page 551 line 35: Please replace “MLO Link Information element” with “MLO Cross Link element”.

[12] Page 551, line 38: Please replace “MLO Link Information element” with “MLO Cross Link element”.

[13] Page 551, line 44: Please replace “MLO Link Information element” with “MLO Cross Link element”.

[14] Page 551, line 48: Please replace “MLO Link Information element” with “MLO Cross Link element”.

[15] Page 551, line 51: Please replace “MLO Link Information element” with “MLO Cross Link element”.

[16] Page 551, line 54: Please replace “MLO Link Information element” with “MLO Cross Link element”.

[17] Page 551, line 58: Please replace “MLO Link Information element” with “MLO Cross Link element”.

[18] Page 551, line 59: Please replace “MLO Link Information element” with “MLO Cross Link element”.

#### Style Guide 2.4.2 – Definition Conventions

Ming Gan

No findings

#### Style Guide 2.4.3 – Element Inclusion Conventions

Ming Gan

No findings

### Style Guide 2.5 – Removal of functions and features

Not applicable

### Style Guide 2.6 – Capitalization

Alfred Asterjadhi/Edward Au

### Style Guide 2.7 – Terminology: frame vs packet vs PPDU vs MPDU

Atsushi Shirakawa

### Style Guide 2.8 – Use of verbs & problematic words

#### normative, non-normative, ensure

Carol Ansley

#### Style Guide 2.8.1 – which/that

Carol Ansley

#### Style Guide 2.8.2 – articles

Joe Levy

#### Style Guide 2.8.3 – missing nouns

Stephen McCann

#### Style Guide 2.8.4 – unnecessary nouns

Stephen McCann

#### Style Guide 2.8.5 – unicast and multicast

Atsushi Shirakawa

### Style Guide 2.9 – Numbers

Alfred Asterjadhi/Edward Au

### Style Guide 2.10 – Maths operators and relations

Claudio da Silva

### Style Guide 2.11 – Hyphenation

Alfred Asterjadhi/Edward Au

### Style Guide 2.12 – References to SAP primitives

Graham Smith

This new way of describing the primitives, and indicating when you might want to provide full details, is described in 11me D 3.0 at

“6.5 MLME SAP primitives

6.5.1 Introduction

MLME SAP primitives are detailed in this clause when they do not directly correspond to frame exchanges described in subsequent clauses, where the primitive parameters differ significantly from the fields in the respective frames, or when the primitives may not be clear from the descriptions in those clauses.”

Hence, again, I suggest deleting from P80.27 to P112.40

### Style Guide 2.13 – References to the contents of a field/subfield

Emily Qi

### Style Guide 2.14 – MIB attributes

Yongho Seok

### Style Guide 2.15 – Hanging Paragraphs

Claudio da Silva

### Style Guide 2.16 – Abbreviations

Ross Yu

### Style Guide 2.17 – Format for code/pseudocode

Ross Yu

### Style guide 3 – Style applicable to specific Clauses

#### Definitions (Clause 3)

Youhan Kim

#### General Description (Clause 4)

Po-Kai Huang

Clause 4 provides a general description of the wireless system. It should be written in declarative, not normative, language.

[01] Page 71, line 57: Please replace two instances of “may” with “might”.

#### Frame formats (Clause 9) – shall or may?

Ming Gan

[01] Page 204, line 64: Please replace “shall” with “does”.

[02] Page 236, line 48: Please replace “may” with “might”.

[03] Page 294, line 45: Please replace “may” with “might”.

[04] Page 308, line 7: Please replace “may” with “might”.

#### SAP interfaces (Clause 6)

Graham Smith

I have looked at Clause 6 of 11be Draft 4.0. They have added 5 MLME SA interfaces to Table 6-1 and these look OK. However, they have also added the same 5 in all their glory into section 6.5. The new idea introduced in 11me, is that the 31 pages describing these individual primitives are not required. There is enough in the Table, together with the references, to instruct the user on what to do.

I would propose that the 31 pages from 80.27 to 112.40 are deleted.

If, however, the authors feel that the full details are needed because it is particularly complicated or the contents of the primitives are not obvious from the text, then they can opt to include them in their full glory. However, in this case, in Table 6-1, the references in the Table should be to 6.5.24a/b/c/d/e/f. The Comment column can stay.

BUT

The idea of the Table 6-1 is that in the vast majority of cases the primitives are obvious once the Type is specified and hence we do not need the full descriptions which wasted hundreds of pages.

#### New top level clauses

Emily Qi

#### Annex A – Bibliography

Not applicable

#### Annex B – PICS

Po-Kai Huang

[01] Page 924, line 33: Please replace “EHT Action frames” with “EHT Action frame”.

[02] Page 925, line 31: Please replace “EHT Action frames” with “EHT Action frame”.

[03] Page 926, line 21: Please replace “FR76” for EHT NDP Announcement frame with “FR77”. Note otherwise, there are duplicate FR76.

Several instances about bold texts in B.4.40.1 EHT PHY features and B.4.40.2 EHT MAC features. Note that in revme D3.1 all texts in the corresponding clause are not bold. Also, fix several editorial. Details below.

[04] Page 926, line 37: add one row above EHT P1 with only “Are the following PHY protocol features supported?” in the column of Protocol capability

[05] Page 926, line 37: Please replace “**EHTP1**” with “EHTP1” and “**PHY operating modes**” with “PHY operating modes”

[06] Page 926, line 60: Please replace “**EHTP2**” with “EHTP2” and “**EHT PPDU formats**” with “EHT PPDU format”

[07] Page 928, line 4: Please replace “**EHTP3**” with “EHTP3” and “**BSS Bandwidth**” with “BSS Bandwidth”

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[08] Page 928, line 55: Please replace “**EHTP4**” with “EHTP4” and “**EHT LTF formats**” with “EHT-LTF formats”

[09] Page 930, line 16: Please replace “**EHTP5**” with “EHTP5” and “**RU support**” with “RU support”

[10] Page 931, line 42: Please replace “**EHTP6**” with “EHTP6” and “**Coding**” with “Coding”

[11] Page 931, line 54: Please replace “**EHTP7**” with “EHTP7” and “**EHT MCS support**” with “EHT-MCS support”

[12] Page 934, line 14: Please replace “**EHTP8**” with “EHTP8” and “**Preamble**” with “Preamble”

[13] Page 934, line 41: Please replace “**EHTP9**” with “EHTP9” and “**Sounding**” with “Sounding”

[14] Page 935, line 50: Please replace “**EHTP10**” with “EHTP10” and “**Spatial reuse**” with “Spatial reuse”

[15] Page 935, line 55: Please replace “**EHTP11**” with “EHTP11” and “**Power boost factor**” with “Power boost factor”

[16] Page 936, line 7: Please replace “**Are the following MAC protocol features supported?**” with “Are the following MAC protocol features supported?”

[17] Page 936, line 10: Please replace “**EHTM1**” with “EHTM1” and “**EHT capabilities signaling**” with “EHT capabilities signaling”

[18] Page 936, line 31: Please replace “**EHTM2**” with “EHTM2” and “**Signaling of EHT operation**” with “Signaling of EHT operation”

[19] Page 936, line 34: Please replace “**EHTM3**” with “EHTM3” and “**HE variant HT Control field**” with “HE variant HT Control field”

[20] Page 936, line 43: Please replace “**EHTM4**” with “EHTM4” and “**Restricted TWT**” with “Restricted TWT”

[21] Page 936, line 45: Please replace “**EHTM5**” with “EHTM5” and “**EPCS priority access**” with “EPCS priority access”

[22] Page 936, line 47: Please replace “**EHTM6**” with “EHTM6” and “**Triggered TXOP sharing procedure**” with “Triggered TXOP sharing procedure”

[23] Page 936, line 48: Please replace “**EHTM7**” with “EHTM7” and “**EHT BSS operation**” with “EHT BSS operation”

[24] Page 936, line 57: Please replace “**EHTM8**” with “EHTM8” and “**Transmit beamforming**” with “Transmit beamforming”

[25] Page 936, line 57: Reference of EHTM8.1 to EHTM8.6 is 36.1.1, which is a PHY clause even though we talk about MAC function. The right reference seems to be 9.4.2.313 EHT Capabilities element. This is how HE provide the reference for Transmit beamforing. See revme D3.1

[26] Page 937, line 30: Please replace “**EHTM9**” with “EHTM9” and “**MU Beamforming capable**” with “MU Beamforming capable”

[27] Page 937, line 44: Please replace “**EHTM10**” with “EHTM10” and “**EHT MLD features**” with “EHT MLD features”

[28] Page 939, line 17: Please replace “**EHTM11**” with “EHTM11” and “**EHT sounding protocol**” with “EHT sounding protocol”

[29] Page 926, line 32: Please add description to all the references in References column of B.4.3 IUT configuration, B.4.4.2 MAC frames, B.4.40.1 EHT PHY features and B.4.40.2 EHT MAC features. For example, “Clause 17” should be “Clause 17 (Orthogonal frequency division multiplexing (OFDM) PHY specification)”. Note that in revme D3.1, all references have descriptions.

#### Annex G – Frame exchange sequences

Not applicable

## ANA

Check for correct use of numbers against database.

Check names against database (update database if names have changed).

Robert Stacey

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| **Resource** | **Value** | **Name** | **Status** |
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Additional Actions:

## MIB

Yongho Seok

The compiled MIB is embedded as the following.

[Embed MIB after compilation]

### Detailed proposed changes

* MIB Detail

# Collateral findings

# IEEE-SA MEC

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