

CI 00 SC 0 P0 L0 MyBallot # 433
 Raissinia, Ali
 Comment Type ER Comment Status X
 0
 SuggestedRemedy
 0
 Proposed Response Response Status O

CI 00 SC 17, 18, 19 P0 L0 MyBallot # 628
 Godfrey, Tim
 Comment Type E Comment Status X
 To assist readers who are new to the standard, it might be helpful to include the original Task Groups in the main title line for clauses 17, 18, and 19. That would clearly associate the "common names" for these PHYs with the appropriate clause when viewing the table on contents or PDF bookmarks.
 SuggestedRemedy
 For example:
 "17. 802.11a: Orthogonal frequency division multiplexing (OFDM) PHY specification for the 5 GHz band"
 "18. 802.11b: High Rate direct sequence spread spectrum (HR/DSSS) PHY specification"
 "19. 802.11g: ERP specification"
 Proposed Response Response Status O

CI 00 SC Bookmarks P0 L0 MyBallot # 543
 Hunter, David
 Comment Type ER Comment Status X
 Revision misspelled "Revisin"
 SuggestedRemedy
 Use word processor that spellchecks Bookmarks.
 Proposed Response Response Status O

CI 00 SC Bookmarks 19 P0 L0 MyBallot # 544
 Hunter, David
 Comment Type ER Comment Status X
 Why defining all the other acronyms and not "ERP"?
 SuggestedRemedy
 Spell out "Extended Rate PHY (ERP)" in title.
 Proposed Response Response Status O

CI 00 SC Compelte Doc P0 L0 MyBallot # 599
 Kumar, Rajneesh
 Comment Type E Comment Status X
 Top Left of every pageTop left of most of the pages read "Revision with IEEE Corrections, Clarifications & Enhancments". Spelling of Enhancements is wrong
 SuggestedRemedy
 Enhancements
 Proposed Response Response Status O

CI 00 SC General P0 L0 MyBallot # 570
 Liu, Changwen
 Comment Type E Comment Status X
 Why the ODFM PHY specification for 2.4GHz is not included?
 SuggestedRemedy
 0
 Proposed Response Response Status O

Cl 00 SC General P0 L0 MyBallot # 615
 Williams, Richard
 Comment Type E Comment Status X
 Bookmark for page iii has incorrect spelling
 SuggestedRemedy
 Change 'Revisin' to 'Revision'.
 Proposed Response Response Status O

Cl 00 SC General P0 L0 MyBallot # 338
 Hillman, Garth
 Comment Type E Comment Status X
 Well, congratulations to IEEE 802.11. It is quite impressive (and lengthy) to see this standard finally consolidated.
 SuggestedRemedy
 Keep up the good work!!
 Proposed Response Response Status O

Cl 00 SC General P0 L0 MyBallot # 395
 Kandala, Srinivas
 Comment Type TR Comment Status D
 Since Tge draft has been stable and the "ma" draft is incomplete (see comment on clause 5) and the chances of another amendment approved in the next 2 years is very close to 0, I respectfully request the TG/WG to ensure that the amendment in Tge gets rolled in this cycle itself.
 SuggestedRemedy
 As the editor of Tge I can not change my vote in good conscience on this unless the Tge amendment is also added to the draft.
 Proposed Response Response Status W
 PROPOSED REJECT. IEEE rules are that a revision may include only approved amendment to a standard. As 802.11e is not yet approved, it cannot be included. As well, the 802.11ma PAR allowed for the inclusion of amendments approved by the IEEE-SA in a window of six months after the approval of the 802.11ma PAR. 802.11e was not approved by the IEEE-SA within this window, either.

Cl 00 SC General P0 L0 MyBallot # 396
 LEMBERGER, URIEL
 Comment Type ER Comment Status X
 Regulatory related requirements are spreaded in the document in noncosistant way, and sometimes duplicated in two different locations.
 SuggestedRemedy
 Use consistant way to define regulatory related information like transmit power for example having all in annex I and reference to this point from other parts of the document
 Proposed Response Response Status O

Cl 00 SC General P0 L0 MyBallot # 244
 Palm, Stephen
 Comment Type TR Comment Status D
 If an implementor wished to implement an 802.11g or 802.11a only product, this document provides no guidance as to which clauses and phrases are relevant.
 SuggestedRemedy
 Clearly indicate which clauses and phrsases are applicable to the individual amendments of 802.11a through 802.11j
 Proposed Response Response Status W
 PROPOSED REJECT. Once 802.11REV-2005 is published, IEEE rules require that the individual amendments (802.11a-j) disappear. These distinctions are not indicated in the revision of the standard.

Cl 00 SC Generally P0 L0 MyBallot # 34
 Stephens, Adrian
 Comment Type E Comment Status X
 Please do a spell check. There are multiple typos that will be detected in this way.
 SuggestedRemedy
 Spellcheck
 Proposed Response Response Status O

Cl 00 SC Generally P0 L0 MyBallot # 71

Stephens, Adrian

Comment Type E Comment Status X

There are 105 instances of "per". Most of these are the meaning "for each". About 6 of the have different meanings: "as defined in", "through".

Recommend that only the more common meaning be acceptable, and uses such as "per 8.2.3.4" should be reworded.

SuggestedRemedy

Check and re-word to avoid overloading the word.

Proposed Response Response Status O

Cl 00 SC Generally P0 L0 MyBallot # 532

Jalfon, Marc

Comment Type TR Comment Status D

The aPHY-RX-START-Delay parameter has been introduced without adequate definition. For its use in section 9.2.5.4, it is clearly the delay between the start of the packet on-air, and receiving the PHY-RXSTART.ind. For all PHYs, there is a preamble and a PLCP header to be received before the PHY can emit this indication. However, the change appears to believe only the OFDM PHYs have this behaviour.

SuggestedRemedy

Add a definition for this parameter somewhere. I have made separate comments in each place where it is wrongly defined to be zero.

Proposed Response Response Status W

PROPOSED ACCEPT. Definitions will be added to the appropriate clauses.

Cl 00 SC Generally P0 L0 MyBallot # 40

Stephens, Adrian

Comment Type TR Comment Status D

The aPHY-RX-START-Delay parameter has been introduced without adequate definition. For its use in section 9.2.5.4, it is clearly the delay between the start of the packet on-air, and receiving the PHY-RXSTART.ind. For all PHYs, there is a preamble and a PLCP header to be received before the PHY can emit this indication. However, the change appears to believe only the OFDM PHYs have this behaviour.

SuggestedRemedy

Add a definition for this parameter somewhere. I have made separate comments in each place where it is wrongly defined to be zero.

Proposed Response Response Status W

PROPOSED ACCEPT. Definitions will be added to the appropriate clauses.

Cl 00 SC Generally P0 L0 MyBallot # 48

Stephens, Adrian

Comment Type E Comment Status X

I know that it's kind of hard to achieve, but I have always felt that the reference model in section 5.8 should map onto the clause description better than it does.

Part of the problem is the way we use language "a STA associates à" instead of "the SME of the STA initiates an association.request". The use of loose language and failure to identify which logical entity is responsible for normative behaviour causes loss of clarity.

SuggestedRemedy

I think we need an "SME procedures" clause. Logically, what needs to be done is each the word "the STA" or "the AP", check to see if this is a rule for the SME, and if so, move it to the SME section.

Then we need a cross-check, the MLME_SAP and PLME_SAP should export interfaces that support the behaviour in this section.

A non-trivial undertaking, I know, but I hope it would be worth it.

Proposed Response Response Status O

Cl 00 SC Introduction P0 L0 MyBallot # 590
 Richard, Paine
 Comment Type E Comment Status X
 PiiiL8 bad sentence
 SuggestedRemedy
 change "membership has the following membership:" to "membership"
 Proposed Response Response Status O

Cl 00 SC page iii P0 L0 MyBallot # 573
 McCann, Stephen
 Comment Type E Comment Status X
 Editor's note does not specify year of change, only month
 SuggestedRemedy
 Add 2005 as year to months, e.g. March 2005 work item
 Proposed Response Response Status O

Cl 00 SC none P0 L0 MyBallot # 306
 Kruys, Jan
 Comment Type E Comment Status X
 misspelling
 SuggestedRemedy
 In the header - spell "enhancements" correctly
 Proposed Response Response Status O

Cl 01 SC 1.2 P0 L0 MyBallot # 307
 Kruys, Jan
 Comment Type T Comment Status D
 Last bullet item is not correct: DFS etc is required in the 5GHz band everywhere
 SuggestedRemedy
 Remove " in Europe"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 00 SC Page 1 P0 L0 MyBallot # 545
 Hunter, David
 Comment Type ER Comment Status X
 Title: Technolgoy
 SuggestedRemedy
 Use word processor that spellchecks anything.
 Proposed Response Response Status O

Cl 02 SC 2, pp. 3 P3 L0 MyBallot # 5
 Aboba, Bernard
 Comment Type ER Comment Status X
 Out of date reference.
 SuggestedRemedy
 Change "802.1X-REV" to "802.1X-2004" throughout the document.
 Proposed Response Response Status O

Cl 00 SC page 1 & Cover page P1 L0 MyBallot # 4
 Aboba, Bernard
 Comment Type ER Comment Status X
 Misspelling.
 SuggestedRemedy
 Change "Technolgoy" to "Technology"
 Proposed Response Response Status O

Cl 02 SC 2, pp. 3 P3 L0 MyBallot # 6
 Aboba, Bernard
 Comment Type ER Comment Status X
 Add reference.
 SuggestedRemedy
 Add reference to RFC 4017, "EAP Method Requirements for Wireless LANs"
 Proposed Response Response Status O

Cl 02 SC 2. P0 L0 MyBallot # 495

Engwer, Darwin

Comment Type **TR** Comment Status **D**

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl 03 SC 3. P0 L0 MyBallot # 546

Hunter, David

Comment Type **ER** Comment Status **X**

Header: "Enhancments"

SuggestedRemedy

Spellcheck

Proposed Response Response Status **O**

Cl 03 SC 3. P0 L0 MyBallot # 496

Engwer, Darwin

Comment Type **TR** Comment Status **D**

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl 03 SC 3. P0 L0 MyBallot # 366

Watanabe, Fujio

Comment Type **TR** Comment Status **D**

No definition of SSID. Is ESSID equal to SSID? If so, why does not say ESSID instead of SSI

SuggestedRemedy

Add the definition of SSID, BSSID, and ESSID (if necessary) and add differentiation between ESSID and SSID if necessary.

Proposed Response Response Status **W**

PROPOSED REJECT. SSID and BSSID are defined as field names in clause 7. BSSID is defined in 7.1.3.3.3. SSID is defined in 7.3.2.1. They are not "terms" that require definition in clause 3. Any occurrence of "ESSID" is an error and will be corrected.

Cl 03 SC 3. P0 L0 MyBallot # 591

Richard, Paine

Comment Type **E** Comment Status **X**

P9L30 eliminated a definition, but didn't change numbering

SuggestedRemedy

change numbering

Proposed Response Response Status **O**

Cl 03 SC 3.114 P0 L0 MyBallot # 279

Kruys, Jan

Comment Type **T** Comment Status **D**

The definition is wrong and in any case EIRP is already defined elsewhere

SuggestedRemedy

Delete.

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl 03 SC 3.119 P0 L0 MyBallot # 280

Kruys, Jan

Comment Type T Comment Status D

This is not correct, it applies in the US, Japan etc too.

SuggestedRemedy

Replace with: A regulatory requirement to avoid that some of the available RF channels are more used than others.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Delete "per ERC/DEC/(99)23".

Cl 03 SC 3.121 P0 L0 MyBallot # 473

Engwer, Darwin

Comment Type TR Comment Status D

excess verbiage

SuggestedRemedy

change to: This standard describes such a frame format, but does not describe how such a mechanism or frame format would be used.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 03 SC 3.122 P0 L0 MyBallot # 191

Mike, Moreton

Comment Type TR Comment Status D

An AP is defined to include a STA, so there is no need to explicitly include it.

SuggestedRemedy

Remove "the AP's station(STA)".

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 03 SC 3.122 P0 L0 MyBallot # 190

Mike, Moreton

Comment Type TR Comment Status D

The definition of WLAN system only allows a single AP.

SuggestedRemedy

Replaces "Access Point" with "Access Points" and "AP's station" with "Access Points' stations

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Replace only "Access Point" with "Access Points". Also, insert "(WLAN)" after "Wireless Local Area Network" in the term being defined.

Cl 03 SC 3.122 P0 L0 MyBallot # 189

Mike, Moreton

Comment Type TR Comment Status D

"the AP's station (STA) and portal entities." is difficult to parse. Is it the AP's (STA and portal) or the (AP's STA) and portal?

SuggestedRemedy

replace with "portal entities and the AP's station(STA)

Proposed Response Response Status W

PROPOSED REJECT.

Cl 03 SC 3.13 P0 L0 MyBallot # 629

Olson, Tim

Comment Type E Comment Status X

This definition of BSA does not make grammatical sense.

SuggestedRemedy

Suggest striking the words "may communicate".

Proposed Response Response Status O

Cl 03 SC 3.13 P0 L0 MyBallot # 619

Godfrey, Tim

Comment Type E Comment Status X

The revised text reads: "The area containing the members of a basic service set (BSS) may communicate."

SuggestedRemedy

I suggest either "The area containing the members of a basic service set (BSS)" or "The area containing the members of a basic service set (BSS) that are able to communicate"

Proposed Response Response Status O

Cl 03 SC 3.13 P0 L0 MyBallot # 187

Mike, Moreton

Comment Type TR Comment Status D

"may communicate" needs to be removed from the end of the definition of BSA.

SuggestedRemedy

See comment

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 03 SC 3.13 P0 L0 MyBallot # 581

McCann, Stephen

Comment Type E Comment Status X

Definition needs a grammar tweak

SuggestedRemedy

remove "may communicate" from end of definition

Proposed Response Response Status O

Cl 03 SC 3.13 P0 L0 MyBallot # 471

Engwer, Darwin

Comment Type ER Comment Status X

sentence is not gramatically correct

SuggestedRemedy

fix

Proposed Response Response Status O

Cl 03 SC 3.13; page 5 P0 L0 MyBallot # 340

Hillman, Garth

Comment Type E Comment Status X

Incorrect sentence structure

SuggestedRemedy

delete "may communicate"

Proposed Response Response Status O

Cl 03 SC 3.14 P0 L0 MyBallot # 188

Mike, Moreton

Comment Type E Comment Status X

"membership in a BSS" is grammatically wrong (at least in my part of the world).

SuggestedRemedy

"membership of a BSS"

Proposed Response Response Status O

Cl 03 SC 3.14 P0 L0 MyBallot # 472

Engwer, Darwin

Comment Type TR Comment Status A

but STAs that have synchronized doesn't quite cover it, bcus a BSS is more than (say) just adopting a channel or hop sequence. It is being part of a *particular* BSS. And that means syncing, or joining that BSS and NOT joining all other BSSs. BSS uniqueness is tied to a specific BSSID.

SuggestedRemedy
fix

Proposed Response Response Status C

ACCEPT. Replace "STA Synchronornization procedure" with "Join service primitive".

Cl 03 SC 3.14 P0 L0 MyBallot # 582

McCann, Stephen

Comment Type E Comment Status X

typo

SuggestedRemedy
change "synchronornization" to "synchronization"

Proposed Response Response Status O

Cl 03 SC 3.14 P0 L0 MyBallot # 540

Perahia, Eldad

Comment Type E Comment Status X

spelling error: "synchronornization"

SuggestedRemedy
synchronization

Proposed Response Response Status O

Cl 03 SC 3.14 P0 L0 MyBallot # 630

Olson, Tim

Comment Type T Comment Status D

This new definition for BSS seems like it causes some interesting issues with other BSS definitions. For example the BSS basic rate set seems to indicate that all members of the BS must support the basic rate set. But if all that is required is to synchronize with the AP to become a member, this basic rate set definition seems awkward.

SuggestedRemedy
0

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. The footnote does not refer to the correct procedure for synchronization. The footnote should refer to clause 10.3.3, not 11.1. Replace "11.1" in the footnote with "10.3.3".

Cl 03 SC 3.14 P0 L0 MyBallot # 270

Karcz, Kevin

Comment Type E Comment Status X

"synchronization" is misspelled in "the STA synchronornization procedure"

SuggestedRemedy
edit

Proposed Response Response Status O

Cl 03 SC 3.18 P0 L0 MyBallot # 309

Kruys, Jan

Comment Type T Comment Status D

The definition of channel is a description, not a definition. Most of the descriptive material is wrong.

SuggestedRemedy
Replace with: channel: an instance of communications medium use for the purpose of passing protocol data units (PDUs) between two or more stations.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 03 SC 3.19 P0 L0 MyBallot # 569
 Liu, Changwen
 Comment Type E Comment Status X
 I would like to see a better writing for the sentence. I cannot understand it.
 SuggestedRemedy
 0
 Proposed Response Response Status O

CI 03 SC 3.24 P0 L0 MyBallot # 364
 Watanabe, Fujio
 Comment Type E Comment Status X
 There is no definitions of "Point coordinator" in the specification
 SuggestedRemedy
 Add the definition of Point Coordinator.
 Proposed Response Response Status O

CI 03 SC 3.22 P0 L0 MyBallot # 310
 Kruys, Jan
 Comment Type E Comment Status X
 The definition of confidentiality is not correct English
 SuggestedRemedy
 Replace with: data confidentiality a property of information that prevents disclosure to unauthorized individuals, entities, or processes.
 Proposed Response Response Status O

CI 03 SC 3.26 P0 L0 MyBallot # 312
 Kruys, Jan
 Comment Type E Comment Status X
 0
 SuggestedRemedy
 After "deauthentication" add "service"
 Proposed Response Response Status O

CI 03 SC 3.23 P0 L0 MyBallot # 311
 Kruys, Jan
 Comment Type E Comment Status X
 A station may be able to receive at any time.
 SuggestedRemedy
 After "transmit": remove "and may be able to receive"
 Proposed Response Response Status O

CI 03 SC 3.30 P0 L0 MyBallot # 313
 Kruys, Jan
 Comment Type E Comment Status X
 0
 SuggestedRemedy
 After "dissociation" add "service"
 Proposed Response Response Status O

CI 03 SC 3.32 P0 L0 MyBallot # 314
 Kruys, Jan
 Comment Type E Comment Status X
 Superfluous -see 3.35
 SuggestedRemedy
 Delete
 Proposed Response Response Status O

Cl 03 SC 3.35 P0 L0 MyBallot # 315

Kruys, Jan

Comment Type E Comment Status X

Too much text for a definition and it is not correct either: APs that use the wireless medium to perform DSS functions would fall outside the original definition.

SuggestedRemedy

Replace with: distribution system service (DSS): The set of services provided by the distributed system (DS) to transport MAC service data units (MSDUs) between stations comprising the D

Proposed Response Response Status O

Cl 03 SC 3.4 P0 L0 MyBallot # 308

Kruys, Jan

Comment Type E Comment Status X

The definition of ad-hoc network is superfluous.

SuggestedRemedy

Delete and add a sentence to the IBSS definition that ad-hoc network is some times used as vernacular for IBSS

Proposed Response Response Status O

Cl 03 SC 3.4, 3.21, 3.23 P0 L0 MyBallot # 548

Hunter, David

Comment Type ER Comment Status X

WM is defined in 3.2 and later in its formal entry.

SuggestedRemedy

Use only "WM" or "wireless medium"

Proposed Response Response Status O

Cl 03 SC 3.40 P0 L0 MyBallot # 316

Kruys, Jan

Comment Type E Comment Status X

EIRP is always determined by tx out and antenna gain:-)

SuggestedRemedy

Replace with: effective isotropically radiated power (EIRP): The equivalent power of a transmitted signal in terms of an isotropic (omnidirectional) radiator. The EIRP equals the product of the transmitter power and the antenna gain (reduced by any coupling losses between the transmitter and antenna).

Proposed Response Response Status O

Cl 03 SC 3.41 P0 L0 MyBallot # 317

Kruys, Jan

Comment Type E Comment Status X

Superfluous, see below

SuggestedRemedy

Delete

Proposed Response Response Status O

Cl 03 SC 3.42 P0 L0 MyBallot # 318

Kruys, Jan

Comment Type T Comment Status D

encapsulation is a term with a well defined meaning - whereas the def. only covers the crypto variant.

SuggestedRemedy

Replace with: Cryptographic encapsulation: The process of a.etc

Proposed Response Response Status W

PROPOSED ACCEPT. Also fix up the use of "encapsulation" to be "cryptographic encapsulation" throughout the document, as required.

CI 03 SC 3.46 P0 L0 MyBallot # 319

Kruys, Jan

Comment Type E Comment Status X

This is correct but incomplete - the 5GHz band is available world-wide on the same conditions except for the US. However, that will change shortly too. Therefore making this distinction here is useless.

SuggestedRemedy

Remove "in Europe" here and in all other appearances.

Proposed Response Response Status O

CI 03 SC 3.49 P0 L0 MyBallot # 320

Kruys, Jan

Comment Type E Comment Status X

O

SuggestedRemedy

Capitalize "group" and add "-as used in this standard"

Proposed Response Response Status O

CI 03 SC 3.5 P0 L0 MyBallot # 363

Watanabe, Fujio

Comment Type E Comment Status X

It seems to me that the definition of "association" states only an infrastructure mode. How about IBSS case? Is it possible to say "association" if two STAs communicate?

SuggestedRemedy

Add the definition of association in IBSS.

Proposed Response Response Status O

CI 03 SC 3.51 P0 L0 MyBallot # 274

Kruys, Jan

Comment Type E Comment Status X

the logic of the (non) capitalization is hard to follow -here and in many other places

SuggestedRemedy

Add a note to the beginning of the Definitions that explains the capitalization.

Proposed Response Response Status O

CI 03 SC 3.57 P0 L0 MyBallot # 99

Oakes, Ivan

Comment Type E Comment Status X

"intergration" should say "integration services"

SuggestedRemedy

as comment

Proposed Response Response Status O

CI 03 SC 3.67 P0 L0 MyBallot # 275

Kruys, Jan

Comment Type E Comment Status X

The MIC may use any sort of crypto and therefore the "symmetric" is not appropriate. The explanatory sentences do not belong in the definition section

SuggestedRemedy

message integrity code (MIC): A value generated by a cryptographic function. If the input data are changed, a new value cannot be correctly computed without knowledge of the cryptographic key(s) used by the cryptographic function.

Proposed Response Response Status O

Cl 03 SC 3.70 P0 L0 MyBallot # 365

Watanabe, Fujio

Comment Type E Comment Status X

The definition of "mobile station" seems to be only defined at an infrastructure mode. How about STA in IBSS? Don't we call Mobile Station? Or is STA in IBSS categorized as a Portable Station?

SuggestedRemedy

Add the definition of mobile station in IBSS

Proposed Response Response Status O

Cl 03 SC 3.73 P0 L0 MyBallot # 44

Stephens, Adrian

Comment Type ER Comment Status X

Definitions are not allowed to introduce normative behaviour (2005 style guide). "shall" is reserved for normative behaviour.

SuggestedRemedy

Replace "shall" with "is"

Proposed Response Response Status O

Cl 03 SC 3.76 P0 L0 MyBallot # 276

Kruys, Jan

Comment Type E Comment Status X

The definition is not a complete

SuggestedRemedy

3.73 nonce: A numerical value used in cryptographic operations associated with a given cryptographic key, that shall not be reused with that key, including over all reinitializations of the system, through all time.

Proposed Response Response Status O

Cl 03 SC 3.85 P0 L0 MyBallot # 277

Kruys, Jan

Comment Type E Comment Status X

The conditional does not make sense

SuggestedRemedy

3.85 pre-robust security network association (pre-RSNA): Any type of association used by a pair of stations (STAs) that does not use a 4-Way handshake for establishing authentication or association between them.

Proposed Response Response Status O

Cl 03 SC 3.86 P0 L0 MyBallot # 278

Kruys, Jan

Comment Type E Comment Status X

Superfluous

SuggestedRemedy

Delete

Proposed Response Response Status O

Cl 03 SC 3.90 P0 L0 MyBallot # 620

Godfrey, Tim

Comment Type E Comment Status X

The use of the word "liveness" in this definition is inconsistent with the definition of liveness provided in 3.63

SuggestedRemedy

Use a better word than "liveness" in the 3.90 definition, or modify the definition in 3.63, or both

Proposed Response Response Status O

Cl 04 SC 4. P0 L0 MyBallot # 621

Godfrey, Tim

Comment Type E Comment Status X

Definition of HiperLAN uses the word "ratio", not "radio"

SuggestedRemedy

The common definitions are "High Performance Radio Local Access Network" or "High Performance Radio Local Area Network"

Proposed Response Response Status O

Cl 04 SC 4. P0 L0 MyBallot # 497

Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 04 SC 4. P0 L0 MyBallot # 622

Godfrey, Tim

Comment Type E Comment Status X

Definition of "LED"

SuggestedRemedy

The common use (found in the majority of definitions) is that a LED is a "Light Emitting Diode" However, the only reference to LED in the standard in 11.1.2 does use the phrase "Light Emitting Display". Maybe both should be updated to "diode"?

Proposed Response Response Status O

Cl 05 SC 5. P0 L0 MyBallot # 498

Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 05 SC 5. P0 L0 MyBallot # 45

Stephens, Adrian

Comment Type TR Comment Status D

This section, and particularly section 5.2 creates a number of fictions that have created problems in understanding the system for implementers since the first approved version. These fictions will hopefully be addressed by future activities seeking to clarify architecture.

Specifically, an architecture consists of entities for which behaviour is defined connected by interfaces. If the interfaces are exposed to the outside world, they need to be concrete rather than abstract.

But we have a distribution service that provides an abstract description of communication between APs and portals. Unless the only implementations of the entire DS reside within a single physical realization or system from a single manufacturer, the interfaces between the A and portals are exposed and need to be standardised.

SuggestedRemedy

Recommend that this section (and particularly 5.2) carry a disclaimer such as: "don't believe this, it will confuse the heck out of you", or alternatively: "the architectural description is unde review by study group xxx".

Proposed Response Response Status W

PROPOSED REJECT. This standard describes the MAC and PHY and the air interface. It also describes the place of the MAC and PHY in a larger architecture. Describing the entire architecture in a normative fashion is beyond the scope of this standard. Clause 5 has the purpose of describing this architecture in a general fashion and not in a restrictive fashion, to allow future activities to extend this architecture.

Cl 05 SC 5. P0 L0 MyBallot # 393

Kandala, Srinivas

Comment Type TR Comment Status D

Text on the architecture is not included that were suggested as part of changes.

SuggestedRemedy

Add them.

Proposed Response Response Status W

PROPOSED REJECT. IT is not clear to the task group exactly what is the subject of this comment. The commenter is urged to clarify this in a future ballot.

Cl 05 SC 5.1.1.2 P0 L0 MyBallot # 549

Hunter, David

Comment Type ER Comment Status X

Incorrect punctuation for a list.

SuggestedRemedy

The format for a list of clauses or words (as opposed to complete sentences) is to put a colon after the intro (here "PHYs:") and remove all of the periods, except for the last.

Proposed Response Response Status O

Cl 05 SC 5.2 P0 L0 MyBallot # 550

Hunter, David

Comment Type TR Comment Status D

Last sentence before figure is false: STA might still be able to communicate with some other members of the BSS.

SuggestedRemedy

Replace "it can no longer directly communicate with other members of the BSS" with "it may r longer be capable of directly communicating with some of the other members of the BSS".

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Reverse the change in the last sentence of paragraph 3: Delete "BSA" and undelete "BSS".

Cl 05 SC 5.2 P0 L0 MyBallot # 103

Bagby, David

Comment Type TR Comment Status D

the language is changed to BSA (area) but the pic still indicates sets. Was this intentional or was the intent to label the ovals as areas?

SuggestedRemedy

Please make consistent.

Proposed Response Response Status W

PROPOSED REJECT. The text references Figure 1 as part of the description of a BSS. Afterward, the text moves to the concept of basic service area, which is independent of the figure.

Cl 05 SC 5.2 P0 L0 MyBallot # 102

Oakes, Ivan

Comment Type TR Comment Status D

The sentence "The portal provides the integration service between the DS and other LANs." muddies the concept of the portal as a unit or a SAP.

SuggestedRemedy

Replace the sentence by the definition of Portal as given in 3.84 "[The portal is] the logical poi at which the integration service is provided."

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 05 SC 5.2 P0 L0 MyBallot # 574

McCann, Stephen

Comment Type E Comment Status X

Figure 1 does not show the new BSA

SuggestedRemedy

Add BSA to Figure 1

Proposed Response Response Status O

Cl 05 SC 5.2.1 P0 L0 MyBallot # 575
 McCann, Stephen
 Comment Type E Comment Status X
 Text "Figure 1 does not show two IBSSs" is not true, as Figure 1 shows BSSs
 SuggestedRemedy
 Figure 1 should be changed to show IBSSs
 Proposed Response Response Status O

Cl 05 SC 5.2.2 P0 L0 MyBallot # 551
 Hunter, David
 Comment Type ER Comment Status X
 A STA has membership *in*, not *of*, a BSS
 SuggestedRemedy
 Replace "of" with "in".
 Proposed Response Response Status O

Cl 05 SC 5.2.2 P0 L0 MyBallot # 271
 Karcz, Kevin
 Comment Type E Comment Status X
 "synchronisation" is
 SuggestedRemedy
 0
 Proposed Response Response Status O

Cl 05 SC 5.2.2 P0 L0 MyBallot # 475
 Engwer, Darwin
 Comment Type TR Comment Status D
 If we intend the term "membership in a BSS" to have some meaning, then we need to define that.
 SuggestedRemedy
 Clearly define the term "membership".
 Proposed Response Response Status W
 PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

Cl 05 SC 5.2.2 P0 L0 MyBallot # 474
 Engwer, Darwin
 Comment Type ER Comment Status X
 The word "synchronisation" is not US grammar.
 SuggestedRemedy
 Change spelling of "synchronisation" to "synchronization".
 Proposed Response Response Status O

Cl 05 SC 5.2.2 P0 L0 MyBallot # 541
 Perahia, Eldad
 Comment Type E Comment Status X
 spelling error: "synchronisation"
 SuggestedRemedy
 synchronization
 Proposed Response Response Status O

CI 05 SC 5.2.3 P0 L0 MyBallot # 124
 Myles, Andrew
 Comment Type E Comment Status X
 "uncontrolld" is misspelt
 SuggestedRemedy
 Correct
 Proposed Response Response Status O

CI 05 SC 5.2.3 P0 L0 MyBallot # 583
 McCann, Stephen
 Comment Type E Comment Status X
 typo last paragraph before 5.2.3.1
 SuggestedRemedy
 change "uncontrolld" to "uncontrolled"
 Proposed Response Response Status O

CI 05 SC 5.2.3 P0 L0 MyBallot # 443
 Myles, Andrew
 Comment Type TR Comment Status D
 Text explains how uncontrolled port frames do not transit the DS unlike other frames.
 This may be true but it is not obvious why this fact is called out here
 SuggestedRemedy
 Justify the statement that uncontrolled port frames do not transit the DS (at least in a response to this comment if not the actual text)
 Proposed Response Response Status W

CI 05 SC 5.2.3 P0 L0 MyBallot # 553
 Hunter, David
 Comment Type ER Comment Status X
 "uncontrolld"
 SuggestedRemedy
 Spellcheck
 Proposed Response Response Status O

PROPOSED ACCEPT. Uncontrolled port frames were introduced in 802.11i. For example, 802.1X frames are terminated within the AP, even though they are addressed as if they should be forwarded to the DS. (no change to the text of the draft.)

CI 05 SC 5.2.3 P0 L0 MyBallot # 245
 Edney, Jon
 Comment Type T Comment Status D
 New paragraph about "controlled port frame" very confusing and using undefined terms
 SuggestedRemedy
 Data sent to the AP's STA address by an associated STA always transmits the DS, except when the data's destination is the uncontrolled port of the 802.1X authenticator in which case the data is delivered directly to the authenticator. Note that the transit of the DS may be conceptual rather than actual.

CI 05 SC 5.2.3 P0 L0 MyBallot # 594
 Newton, Paul
 Comment Type E Comment Status X
 Change "An uncontrolld port frame in an RSNA is formatted as if it is to be sent to the DS but does not, in fact, transmit the DS"
 SuggestedRemedy
 "An uncontrolled port frame in an RSNA is formatted as if it is to be sent to the DS but does not in fact, transmit the DS"
 Proposed Response Response Status O

Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE. Change the last paragraph in 5.2.3 to: "Data sent to the AP's STA address by one of the STAs associated with it conceptually transmits the DS unless it utilizes the 802.1X Ethertype. 802.1X frames must have the "To DS" bit set, even though they do not in fact transit the DS."

CI 05 SC 5.2.3 P0 L0 MyBallot # 542
 Perahia, Eldad
 Comment Type E Comment Status X
 spelling error: "unctonrolled"
 SuggestedRemedy
 uncontrolled
 Proposed Response Response Status O

CI 05 SC 5.2.3 P0 L0 MyBallot # 442
 Myles, Andrew
 Comment Type E Comment Status X
 "unctonrolled" is misspelt
 SuggestedRemedy
 Correct
 Proposed Response Response Status O

CI 05 SC 5.2.3 P0 L0 MyBallot # 93
 Oakes, Ivan
 Comment Type TR Comment Status D
 The last sentence on page 21 has been corrected. It would be more consistent it it just re-iterate the AP definition.
 SuggestedRemedy
 Replace the sentence starting "An access pointà" with the definition from 3.2 "[An Access Poi is] any entity that has station functionality and provides access to the distribution services, via the wireless medium (WM), for associated stations."
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 05 SC 5.2.3 P0 L0 MyBallot # 592
 Richard, Paine
 Comment Type E Comment Status X
 P22L11 misspelled word "unctonrolled"
 SuggestedRemedy
 Change "unctonrolled" to "uncontrolled"
 Proposed Response Response Status O

CI 05 SC 5.2.3 P0 L0 MyBallot # 424
 Chaplin, Clint
 Comment Type E Comment Status X
 The sentence "IEEE 802.11 logically separates the WM from the distribution system medium (DSM)." is the first time the term WM is used in the standard; please define here.
 SuggestedRemedy
 0
 Proposed Response Response Status O

CI 05 SC 5.2.3 P0 L0 MyBallot # 420
 Chaplin, Clint
 Comment Type E Comment Status X
 Spelling error: "unctonrolled"
 SuggestedRemedy
 Correct to "uncontrolled"
 Proposed Response Response Status O

Cl 05 SC 5.2.3 P0 L0 MyBallot # 125

Myles, Andrew

Comment Type TR Comment Status D

Text explains how uncontrolled port frames do not transit the DS unlike other frames.

This may be true but it is not obvious why this fact is called out here

SuggestedRemedy

Justify the statement that uncontrolled port frames do not transit the DS (at least in a response to this comment if not the actual text)

Proposed Response Response Status W

PROPOSED ACCEPT. Uncontrolled port frames were introduced in 802.11i. For example, 802.1X frames are terminated within the AP, even though they are addressed as if they should be forwarded to the DS. (no change to the text of the draft.) This is a duplicate of comment 4

Cl 05 SC 5.2.3 P0 L0 MyBallot # 552

Hunter, David

Comment Type ER Comment Status X

Using term "provide" in different ways in same sentence

SuggestedRemedy

Replace "provides" with "enables".

Proposed Response Response Status O

Cl 05 SC 5.2.3, pp. 22 P22 L0 MyBallot # 8

Aboba, Bernard

Comment Type TR Comment Status D

The 2nd paragraph is confusing. Since according to 802.1X all frames go to both the controller and uncontrolled port, there is no such thing as an "uncontrolled port frame".

SuggestedRemedy

Change paragraph to: "Data sent to the AP's STA address by one of the STAs associated with it conceptually transmits the DS unless it utilizes the 802.1X Ethertype. Therefore such frames must have the "To DS" bit set, even though they do not in fact transit the DS."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Resolved with resolution of comment 245.

Cl 05 SC 5.2.3, pp. 22 P22 L0 MyBallot # 7

Aboba, Bernard

Comment Type ER Comment Status X

Misspelling.

SuggestedRemedy

Change "unctrlonrolled" to "uncontrolled" throughout the document.

Proposed Response Response Status O

Cl 05 SC 5.2.3.1 P0 L0 MyBallot # 466

Yang, Lily

Comment Type TR Comment Status D

Is ESS only the union of all BSS with the same SSID? Figure 3 and 6 seem to suggest that, but the text is very vague. Does ESS include DS as part of it or is ESS only the part of the L2 network that is built on 802.11?

SuggestedRemedy

Say explicitly what ESS means, in relation to BSS and DS. IS ESS the union of all BSS and DS or just the union of BSS?

Proposed Response Response Status W

PROPOSED ACCEPT. Add to the end of the first paragraph in 5.2.3.1: "An ESS is the union of the BSSs connected by a DS. The ESS does not include the DS."

Cl 05 SC 5.2.3.1 P0 L0 MyBallot # 554

Hunter, David

Comment Type ER Comment Status X

"physically disjointed" is not correct English

SuggestedRemedy

Replace "disjointed" with "disjoint"

Proposed Response Response Status O

Cl 05 SC 5.2.3.1 P0 L0 MyBallot # 421

Chaplin, Clint

Comment Type E Comment Status X

The following: "Two of the most common are when an ad hoc network is operating in a location that also has an ESS network, and when physically overlapping IEEE 802.11 networks have been set up by different organizations." I would suggest to add the case where two different access and security policies are needed in the same location.

SuggestedRemedy

Change to: "Three of the most common are when an ad hoc network is operating in a location that also has an ESS network, when physically overlapping IEEE 802.11 networks have been set up by different organizations, and when two or more different access and security policies are needed in the same location."

Proposed Response Response Status O

Cl 05 SC 5.2.3.2 P0 L0 MyBallot # 404

Edwards, Bruce

Comment Type ER Comment Status X

The expansion of the doubly-nested acronym "CCMP" is too confusing. Also use of the MAC acronym for something other than Medium Access Controller is a bad idea.

SuggestedRemedy

Explain only the first level of acronym or all levels with a single phrase. "called Counter mode with Cipherblock chaining with Message authentication code Protocol (CCMP)"

Proposed Response Response Status O

Cl 05 SC 5.2.3.2 P0 L0 MyBallot # 422

Chaplin, Clint

Comment Type E Comment Status X

I was going to complain that many times acronyms are used without definition, and then I run across this section, which goes too far in the opposite direction. Pulling in amendments into the base standard will point out areas like this, where it is no longer necessary to define acronyms at this particular point. For instance, this is not the first use of the term AP, and yet it's expanded here.

SuggestedRemedy

0

Proposed Response Response Status O

Cl 05 SC 5.2.3.2 P0 L0 MyBallot # 368

Watanabe, Fujio

Comment Type E Comment Status X

implements the EAP Authenticator roles, and..

SuggestedRemedy

implements the Extensible Authentication Protocol (EAP) Authenticator role..

Proposed Response Response Status O

Cl 05 SC 5.2.3.2 P0 L0 MyBallot # 369

Watanabe, Fujio

Comment Type E Comment Status X

, and a STA always implements a Supplicant PAE and implements the Extensible Authentication Protocol (EAP) peer role.

SuggestedRemedy

, and a STA always implements a Supplicant PAE and implements the EAP peer role.

Proposed Response Response Status O

Cl 05 SC 5.2.3.2 P0 L0 MyBallot # 367

Watanabe, Fujio

Comment Type E Comment Status X

An access point (AP) always implements

SuggestedRemedy

An AP always implements

Proposed Response Response Status O

Cl 05 SC 5.2.3.2 P0 L0 MyBallot # 556

Hunter, David

Comment Type ER Comment Status X

"EAP" is used before it is defined

SuggestedRemedy

Switch the usages of "EAP" and "Extensible Authentication Protocol (EAP)".

Proposed Response Response Status O

Cl 05 SC 5.2.3.2 P0 L0 MyBallot # 423

Chaplin, Clint

Comment Type TR Comment Status D

"a STA always implements a Supplicant PAE and implements the Extensible Authentication Protocol (EAP) peer role." Repeat after me: an AP is a STA, but not all STAs are APs. AP STAs do not implement a supplicant PAE.

SuggestedRemedy

Change to: "a non-AP STA always implements a Supplicant PAE and implements the Extensible Authentication Protocol (EAP) peer role."

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 05 SC 5.2.3.2 P0 L0 MyBallot # 555

Hunter, David

Comment Type ER Comment Status X

Need period at the end of the list.

SuggestedRemedy

Add period after "(TKIP)"

Proposed Response Response Status O

Cl 05 SC 5.2.3.2, pp. 24 P24 L0 MyBallot # 9

Aboba, Bernard

Comment Type ER Comment Status X

EAP method requirements are defined in RFC 4017, which was approved by IEEE 802.11.

SuggestedRemedy

In the 2nd paragraph, change "use of an EAP method that supports mutual authentication of th AS and the STA." to "use of an EAP method that supports the requirements of RFC 4017, including mutual authentication of the AS and the STA."

Proposed Response Response Status O

Cl 05 SC 5.2.4 P0 L0 MyBallot # 72

Oakes, Ivan

Comment Type TR Comment Status D

This section is irrelevant to the specification, remove it

SuggestedRemedy

Delete section 5.2.4 "Area Concepts" including the diagram

Proposed Response Response Status W

PROPOSED REJECT. This section is informative in nature and helps the implementer to understand the vague and time varying aspects of wireless communication. It also helps to explain why the standard uses set, rather than area, for its specification.

Cl 05 SC 5.3 P0 L0 MyBallot # 104

Bagby, David

Comment Type TR Comment Status D

why was the first paragraph removed? Was it there an error in the paragraph or did someone just feel it was unnecessary?

SuggestedRemedy

I would like to see the paragraph remain.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Duplicate of 105.

Cl 05 SC 5.3 P0 L0 MyBallot # 558
 Hunter, David
 Comment Type E Comment Status X
 Misused m-dashes make it appear as if the word between the m-dashes are a single clause
 SuggestedRemedy
 Replace m-dashes with parens.
 Proposed Response Response Status O

Cl 05 SC 5.3 P0 L0 MyBallot # 557
 Hunter, David
 Comment Type ER Comment Status X
 Need period at the end of the list.
 SuggestedRemedy
 Add period after "TPC"
 Proposed Response Response Status O

Cl 05 SC 5.3 P0 L0 MyBallot # 563
 Odman, Knut
 Comment Type E Comment Status X
 Page 27, Last sentence in 5.3: "DS" should be omitted
 SuggestedRemedy
 Delete the old "DS" before new "the DSS"
 Proposed Response Response Status O

Cl 05 SC 5.3 P0 L0 MyBallot # 105
 Bagby, David
 Comment Type TR Comment Status D
 why was the first paragraph removed? Was it there an error in the paragraph or did someone just feel it was unnecessary?
 SuggestedRemedy
 Retain the paragraph
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE. See resolution to 476.

Cl 05 SC 5.3 P0 L0 MyBallot # 476
 Engwer, Darwin
 Comment Type TR Comment Status D
 the first sentence is confusing; drop it
 SuggestedRemedy
 retain the last three sentences of the first paragraph
 Proposed Response Response Status W
 PROPOSED ACCEPT. Restore the deleted paragraph (the first paragraph of 5.3), except for the first sentence.

Cl 05 SC 5.3.1 P0 L0 MyBallot # 559
 Hunter, David
 Comment Type ER Comment Status X
 Need period at the end of the list.
 SuggestedRemedy
 Add period after "TPC"
 Proposed Response Response Status O

Cl 05 SC 5.3.2 P0 L0 MyBallot # 560

Hunter, David

Comment Type ER Comment Status X

Need period at the end of the list.

SuggestedRemedy

Add period after "Reassociation"

Proposed Response Response Status O

Cl 05 SC 5.3.2 P0 L0 MyBallot # 616

Turner, Sandra

Comment Type E Comment Status X

05/105r4 wording is slightly different for the first sentence in the 2nd paragraph.

SuggestedRemedy

Follow 05/105r4 wording: "This service is represented in the IEEE 802.11 architecture by arrows within the APs, indicating that the service is used to cross media and possibly address space boundaries.

Proposed Response Response Status O

Cl 05 SC 5.3.3 P0 L0 MyBallot # 106

Bagby, David

Comment Type TR Comment Status D

I think these changes are incorrect. The effect of the language change is to couple the address space to be an attribute of the DSM. However, this is coupling is too strict. Consider a DS operating at the IP layer: IP runs over enet and the DSM address space is that of enet, but the address space of the DS is IP. I think the section really did want to say DS and not DSM as changed.

SuggestedRemedy

put back to "DS"

Proposed Response Response Status W

PROPOSED ACCEPT. Reverse the changes from DS to DSM in paragraphs 4 and 5.

Cl 05 SC 5.3.3 P0 L0 MyBallot # 467

Yang, Lily

Comment Type E Comment Status X

This clause makes more sense if it is after 5.4 with more explanation of what DSS means.

SuggestedRemedy

Combine 5.3 and 5.4 into one clause, and reorder such that the content of 5.3.3 is after the overview of the services are presented.

Proposed Response Response Status O

Cl 05 SC 5.4 P0 L0 MyBallot # 477

Engwer, Darwin

Comment Type TR Comment Status D

paragraph 5: Inconsistent terminology

SuggestedRemedy

change "MAC management service data path" to "MAC management service path".

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 05 SC 5.4.1.1 P0 L0 MyBallot # 561

Hunter, David

Comment Type ER Comment Status X

Since "DSS" is defined as a singular "group service" then the reference to "a DSS" is incorrect.

SuggestedRemedy

Replace "a DSS" with "the DSS"

Proposed Response Response Status O

Cl 05 SC 5.4.1.2 P0 L0 MyBallot # 562

Hunter, David

Comment Type ER Comment Status X

Since "DSS" is defined as a singular "group service" then the reference to "a DSS" is incorrec

SuggestedRemedy

Replace "a DSS" with "one of the services in the DSS"

Proposed Response Response Status O

Cl 05 SC 5.4.3.2 P0 L0 MyBallot # 46

Stephens, Adrian

Comment Type E Comment Status X

"à BSS and IBSS RSNAs à" mistakenly implies that BSS is specific to the infrastructure BSS.

SuggestedRemedy

Replace with "infrastructure and independent BSS RSNAs"

Proposed Response Response Status O

Cl 05 SC 5.4.3.2 P0 L0 MyBallot # 534

Jalfon, Marc

Comment Type E Comment Status X

"à BSS and IBSS RSNAs à" mistakenly implies that BSS is specific to the infrastructure BSS.

SuggestedRemedy

Replace with "infrastructure and independent BSS RSNAs"

Proposed Response Response Status O

Cl 05 SC 5.4.3.3 P0 L0 MyBallot # 539

Ciotti, Frank

Comment Type E Comment Status X

The last paragraph of clause 5.4.3.3 indicates that data frames which are discarded due to confidentiality service failures are still acknowledged on the WM if they pass the FCS check. did not find this behavior defined elsewhere in the spec. Since I thought that Clause 5 did not contain normative text, I felt this behavior should be defined in either Clause 8 or perhaps in Clause 9.2.8 (ACK procedure)

SuggestedRemedy

Add normative text describing ACK procedure for frames discarded for failure of confidentiality service.

Proposed Response Response Status O

Cl 05 SC 5.4.4.1 P0 L0 MyBallot # 73

Oakes, Ivan

Comment Type TR Comment Status D

The first paragraph of adds nothing and may be incomplete given recent FCC rulings.

SuggestedRemedy

Remove 1st paragraph of 5.4.4.1 starting "ERC/DEC/(99)23à"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Replace the reference to ERC/DEC/(99)23 with "Radio regulations may require"

Cl 05 SC 5.4.4.2 P0 L0 MyBallot # 74

Oakes, Ivan

Comment Type TR Comment Status D

The first paragraph of adds nothing and may be incomplete given recent FCC rulings.

SuggestedRemedy

Remove 1st paragraph of 5.4.4.2 starting "ERC/DEC/(99)23à"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Replace the reference to ERC/DEC/(99)23 with "Radio regulations may require"

Cl 05 SC 5.5 P0 L0 MyBallot # 565

Odman, Knut

Comment Type T Comment Status D

Page 37, item c) 2) Management frames. Isn't it still true that a deauthentication when associated will imply disassociation? Compare 5.4.3.2, 5.5 and 11.3.3

SuggestedRemedy

Reinstate text.

Proposed Response Response Status W

PROPOSED REJECT. The text has not been deleted, but moved to class 1. The effect is the same. State 3 allows sending class 1, 2 and 3 frames.

Cl 05 SC 5.5 P0 L0 MyBallot # 75

Oakes, Ivan

Comment Type TR Comment Status D

a) 6) vi) Actions frames can be sent as class 1 frames, i.e. before association. As the Ap do not know of the existance of the STA before authentication, then the frame must be from STA to AP, but what procedures does this cover?

SuggestedRemedy

Move action frames to Class 3 for infratructure and however leave as class 1 for IBSS.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 05 SC 5.5 P0 L0 MyBallot # 192

Mike, Moreton

Comment Type TR Comment Status D

The additions to bullet a) 6) iv) make it a bit tautological.

SuggestedRemedy

Remove all the new text after (but NOT including) "Deauthentication notification when in State implies disassociation as well,"

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 05 SC 5.5 P0 L0 MyBallot # 370

Watanabe, Fujio

Comment Type E Comment Status X

a) Class 1 framesà. 6) Management frames -> 6) is a wrong number

SuggestedRemedy

Change to 2) Management frames

Proposed Response Response Status O

Cl 05 SC 5.5 P0 L0 MyBallot # 142

Visscher, Bert

Comment Type TR Comment Status D

In many implementations WDS frames are accepted between STA's (i.e. AP's) without having gone through the association procedure.

SuggestedRemedy

Add an explicit note indicating that WDS frames must result in a deauthenticate notification unless both peers have established a state 3 relationship with each other.

Proposed Response Response Status W

PROPOSED REJECT. The standard is clear on when data frames may be accepted by a ST and when a STA must deauthenticate another STA upon receipt of a data frame.

Cl 05 SC 5.5 P0 L0 MyBallot # 564

Odman, Knut

Comment Type T Comment Status D

Page 37, item b) 1) iii) Disassociation. Belongs to c) class 3.

SuggestedRemedy

Move item to c) class 3.

Proposed Response Response Status W

PROPOSED REJECT. It appears that the commenter is confused between "class 2" and "state 2". If a class 3 frame (a data frame) is received from a STA while in State 2 (authenticated but not associated), the receiving STA is to send a disassociation frame, to synchronize the sending STA to state 2. Moving this to class 3 would allow the only response to this situation to be deauthentication, which is not desirable.

Cl 05 SC 5.5 P0 L0 MyBallot # 148

Ecclesine, Peter

Comment Type E Comment Status X

a) Management Frames numbered '6' instead of '2'

SuggestedRemedy

change to '2'

Proposed Response Response Status O

Cl 05 SC 5.5 P0 L0 MyBallot # 107

Bagby, David

Comment Type TR Comment Status D

page 36 û should the class 1 list in a) 6) really be numbered a) 2) to make the outline format correct? Also in c) shouldn't the removal of 2) cause the next 3) -> 2)?

SuggestedRemedy

correct as required

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 05 SC 5.5 P0 L0 MyBallot # 405

Edwards, Bruce

Comment Type E Comment Status X

Section c describing Class 3 frames should renumber clause 3 since clause 2 seems to be completely deleted. It probably is just a text processor artifact that it didn't

SuggestedRemedy

Make the change.

Proposed Response Response Status O

Cl 05 SC 5.5 P0 L0 MyBallot # 246

Edney, Jon

Comment Type TR Comment Status D

The sending of data frames as class 1 frames has been restricted to IBSS. I see no reason for this change and, furthermore, it removes a potentially useful method by which stations might i future communicate to the SME of an AP without transiting the DS (there is already a precede for this)

SuggestedRemedy

Remove the words "in an IBSS"

Proposed Response Response Status W

PROPOSED REJECT. The cited sentence refers only to operation of an independent BSS (see both ToDS and FromDS equal to zero). Adding the words "in an IBSS" helps to clarify this. If the commenter disagrees, please provide more complete description of the precedent not cited in your comment.

Cl 05 SC 5.5 P0 L0 MyBallot # 193

Mike, Moreton

Comment Type ER Comment Status X

Second sub-bullet of bullet a) is labelled "6".

SuggestedRemedy

Change to 2.

Proposed Response Response Status O

Cl 05 SC 5.7 P0 L0 MyBallot # 47

Stephens, Adrian

Comment Type E Comment Status X

I've always wondered about the value of this section. The descriptions of messages are an incomplete and abstract representation of frame formats. Much information that is present in the frame formats is left out. The rules for what is in and what is out are not clear, which will lead to confusion.

SuggestedRemedy

Remove section 5.7

Proposed Response Response Status O

Cl 05 SC 5.7.8 P0 L0 MyBallot # 149

Ecclesine, Peter

Comment Type E Comment Status X

Direction of Message is given as a separate thing, but was an 'Information item' in Amendmer 802.11h, and only appears as Measurement Request Mode bits

SuggestedRemedy

Demote 'Direction of message' to be fourth 'Information item'

Proposed Response Response Status O

Cl 05 SC 5.8 P0 L0 MyBallot # 468

Yang, Lily

Comment Type TR Comment Status X

Figure 11 graphic ambiguity: the vertical line between MAC sublayer and MAC Sublayer Management Entity goes above the horizontal line of "MAC_SAP", why? On the right hand side The Station Management Entity is not a fully enclosed box: Is 802.1X Authenticator/Suppliar part of SME or not? If it is, then why is it not fully enclosed, and why is it drawn above the invisible horizontal line extended from "MAC_SAP"? If it is not part of SME, then we should clearly depict it that way, with interface between SME and it clearly marked.

SuggestedRemedy

Fix the graphic to match the actual meaning. The text can use some more clarification too if it not obvious from the graph.

Proposed Response Response Status O

Delete the vertical line extending above the MAC sublayer and MAC Sublayer Management Entity. Draw a single block above the MAC Data SAP, extending above both the MAC Sublayer and MAC Sublayer Management Entity and label it "802.1X". Delete the box label "802.1X Authenticator/Suppliar".

Cl 05 SC 5.9 P0 L0 MyBallot # 78

Oakes, Ivan

Comment Type TR Comment Status D

It is unclear how the Controlled Port gets blocked after being Unblocked.

SuggestedRemedy

Add a new section after 5.9.2.2 "Disassociation" with the contents "Disassociation instigated t either end of the link causes the installed PTK and, on a non-AP STA, the GTK keys to be removed from IEEE 802.11 and the Controlled Port to become Blocked. All subsequent MSDUs transmitted and received between the peers are not encrypted or decrypted."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Add the section as described in the suggested remedy, replacing "all subsequent" with the words "Until the controlled port again becomes unblocked,"

Cl 05 SC 5.9.2.1 P0 L0 MyBallot # 77

Oakes, Ivan

Comment Type TR Comment Status D

It is unclear if the uncontrolled port MSDUs (i.e. EAPOL frames) are themselves encrypted once the PTK and GTK keys are installed.

SuggestedRemedy

Add a sentence "Installing the PTK, and where applicable the GTK keys, causes the MAC to encrypt and decrypt all subsequent MSDUs irrespective of their path through the controlled or uncontrolled ports."

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 05 SC 5.9.2.1 P0 L0 MyBallot # 444

Myles, Andrew

Comment Type E Comment Status X

"Anonce" in Figure 14 is incorrect font size

SuggestedRemedy

Correct

Proposed Response Response Status O

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

CI 05 SC 5.9.2.1 P0 L0 MyBallot # 76

Oakes, Ivan

Comment Type E Comment Status X

Figure 12 and 13 used the term "blocked", this can be read to mean the action "block the port now". I suggest making this clearer by adding the word "remains"

SuggestedRemedy

Changed "Blocked" to "Remains Blocked" in Figure 12 and 13.

Proposed Response Response Status O

CI 05 SC 5.9.2.1 P0 L0 MyBallot # 126

Myles, Andrew

Comment Type E Comment Status X

"Anonce" in Figure 14 is incorrect font size

SuggestedRemedy

Correct

Proposed Response Response Status O

CI 05 SC 5.9.2.1 P0 L0 MyBallot # 478

Engwer, Darwin

Comment Type ER Comment Status X

Figure 12 represents the first use of a Message Sequence Chart (MSC) within the revised draft. Needs an explanation of the diagram syntax.

SuggestedRemedy

Add description of MSC syntax, i.e. entities at the top, messages/ events between the entities with time increasing from top to bottom. Even better would be to (also) cite a definitive reference document/ standard for this type of diagram (i.e. some ISO standard document) and then also add that to Annex E.

Proposed Response Response Status O

CI 05 SC 5.9.2.1, pp. 44 P44 L0 MyBallot # 10

Aboba, Bernard

Comment Type ER Comment Status X

Awkward separation of 4-way handshake functionality list.

SuggestedRemedy

Move "Confirm the cipher suite selection" to before Figure 13 (ideally on page 43).

Proposed Response Response Status O

CI 05 SC 5.9.3 P0 L0 MyBallot # 79

Oakes, Ivan

Comment Type TR Comment Status D security

5.9.3.1 suggests a STA must authenticate in an IBSS before EAPOL key exchange, thus allowing de-auth later. If not, then 5.9.3.1 implies de-auth with out auth? Further in an IBSS, can be assumed the link will make and break often. It is unclear how this is handled, i.e. whether the keys persist and how recovery may be achieved if one end is reset but not the other, i.e. one end is encrypted but not the other.

SuggestedRemedy

Add a sentence or two to 5.9.3.1 "In an IBSS, the 4-way handshake may follow 802.11 authentication of one STA to another. Such authentication may be used by the peer to uninst the PTK key and Block the Controlled Port thus resetting any previous handshake."

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 05 SC 5.9.4 P0 L0 MyBallot # 49

Stephens, Adrian

Comment Type E Comment Status X

"protocol must support". Use of "must" is deprecated.

SuggestedRemedy

Replace with an alternative, e.g. should

Proposed Response Response Status O

Cl 05 SC 5.9.4 P0 L0 MyBallot # 535

Jalfon, Marc

Comment Type E Comment Status X

"protocol must support". Use of "must" is deprecated.

SuggestedRemedy

Replace with an alternative, e.g. should

Proposed Response Response Status O

Cl 06 SC 6. P0 L0 MyBallot # 499

Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 06 SC 6.1.2 P0 L0 MyBallot # 431

Raissinia, Ali

Comment Type E Comment Status X

802.11 WEP, TKIP and CCMP provide "privacy" protection

SuggestedRemedy

Add the word Privacy prior to protection

Proposed Response Response Status O

Cl 06 SC 6.1.5 P0 L0 MyBallot # 143

Visscher, Bert

Comment Type TR Comment Status D

An MSDU representing a 802.1X frame must also be discarded if the destination address is unequal to the authenticator address, otherwise 802.1X encapsulated frames bypass the privacy function.

SuggestedRemedy

Add that 802.1X frames will also be discarded if the destination address is unequal to the authenticator address.

Proposed Response Response Status W

PROPOSED REJECT. All 802.1X frames will be processed by the privacy function. There is no bypassing it. The handling of misaddressed 802.1X frames is an issue for 802.1X.

Cl 06 SC 6.1.5 P0 L0 MyBallot # 80

Oakes, Ivan

Comment Type E Comment Status X

logical "or" should be "and" in "The IEEE 802.1X Controlled/Uncontrolled Ports discard the MSDU if the Controlled Port is not enabled or if the MSDU does not represent an IEEE 802.1X frame."

SuggestedRemedy

change "or" to "and"

Proposed Response Response Status O

Cl 06 SC 6.2.1.1.2 P0 L0 MyBallot # 479

Engwer, Darwin

Comment Type TR Comment Status D

incorrect direction indicated in text

SuggestedRemedy

Change "The source address (SA) parameter specifies an individual MAC sublayer address o the sublayer entity to which the MSDU is being transferred." to "The source address (SA) parameter specifies an individual MAC sublayer address of the sublayer entity from which the MSDU is being transferred."

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 06 SC 6.3.1 P0 L0 MyBallot # 281

Kruys, Jan

Comment Type E Comment Status X

Add data integrity as a service - it is a major component on the RNSA and authentication does not cover it.

SuggestedRemedy

Replace the first bullet with "a) data confidentiality and data integrity"

Proposed Response Response Status O

CI 07 SC 7. P0 L0 MyBallot # 51

Stephens, Adrian

Comment Type ER Comment Status X

The frame format section should describe structures and formats, not behaviour. I gave up counting when I reached 120 "shall"s in section 7 (got as far as 7.3.2.21.1). Example in 7.2.1.4: "All STAs update their NAV setting as appropriate..." which has nothing to do with definition of the PS-Poll frame format. Section 7 needs to be slimmed down to describe structure, with normative behaviour described in the clause appropriate to the architectural entity responsible for the behaviour.

SuggestedRemedy

Scan section 7 for use of the word "shall". Move any text describing behaviour into the appropriate section.

Where shall is used to introduce a constraint in the use of the format, this can be done with "i

Proposed Response Response Status O

CI 07 SC 7. P0 L0 MyBallot # 500

Enger, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent amendments and more focused individual changes, there remain unresolved inconsistencies between the text in this clause and other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 07 SC 7.1.3.1 P0 L0 MyBallot # 50

Stephens, Adrian

Comment Type E Comment Status X

The frame control fields are not valid in certain types of MPDU. This information is distributed throughout the subsections of section 7.1.3.1 (and sometimes it's missing).

SuggestedRemedy

I think you need a table of field versus type (I don't think subtypes are necessary, but they could easily be introduced) and indicate which uses are reserved.

Proposed Response Response Status O

CI 07 SC 7.1.3.1 P0 L0 MyBallot # 536

Jalfon, Marc

Comment Type E Comment Status X

The frame control fields are not valid in certain types of MPDU. This information is distributed throughout the subsections of section 7.1.3.1 (and sometimes it's missing).

SuggestedRemedy

I think you need a table of field versus type (I don't think subtypes are necessary, but they could easily be introduced) and indicate which uses are reserved.

Proposed Response Response Status O

CI 07 SC 7.1.3.1.9 P0 L0 MyBallot # 282

Kruys, Jan

Comment Type T Comment Status D

The "protected bit" is restricted to certain message types; removing that restriction here does not change the standard but makes adding in the management protection easier.

SuggestedRemedy

Remove the sentence "The Protected Frame field is set to 1 only within data frames and within management frames of subtype Authentication. The Protected Frame field is set to 0 in all other frames."

Proposed Response Response Status W

PROPOSED REJECT. This is being handled by Task Group W and is out of scope for this revision.

Cl 07 SC 7.1.3.3.2 P0 L0 MyBallot # 108

Bagby, David

Comment Type TR Comment Status D

better to say "All ones shall be interpreted as"

SuggestedRemedy

Change as suggested

Proposed Response Response Status W

PROPOSED REJECT. This is a descriptive paragraph. It is not specifying a normative behavior. The use of "shall" is not appropriate here.

Cl 07 SC 7.1.3.7 P0 L0 MyBallot # 432

Raissinia, Ali

Comment Type E Comment Status X

The Figure 37 and table-19 should be moved under this section and not under 7.1.3.8

SuggestedRemedy

Move the diagram

Proposed Response Response Status O

Cl 07 SC 7.2.1.1 P0 L0 MyBallot # 84

Oakes, Ivan

Comment Type TR Comment Status D

In the text for management, data and PS-Poll frames, there is specific text for setting NAV. This text is not present for RTS/CTS or ACK. This is misleading as it would suggest NAV should be processed for data, mgt and PS-Poll but not for these other frames types. I believe this to be wrong. I believe NAV should be processed for all frames types irrespective of type, and using a uniform rule. 9.2.5.4 gives almost the complete rule, but neglects the 32768 value. 7.1.3.2 mentions 32768 but neglects to mention the address rule. The PS-Poll text indicates even the receiving STA sets its NAV which is inconsistent. It also requires to knowledge of the duration of the ACK and SIFS which will depend on the basic rate set and operating mode and may not be known by all STAs. The SDL gives a good summary (page 721): "Update NAV using Duration/ID value from frames to all other stations. Else case is for DurId=32768 in the CF period". It would make the text very much clearer if there were only one statement, my suggestion is to remove the incomplete and inaccurate text from various sections in 7 and amend section 9 to have the complete rule, dropping any special case for PS-Poll.

SuggestedRemedy

In 9.2.5.4 Add the text add to the end first sentence "but shall be left unchanged if the Duration/ID is equal to 32768 or codes an AID". In 7.1.3.2 Remove the words "When the contents of the duration/ID field are less than 32768, ". In 7.2.1.4 remove the text "All STAs, upon receipt of a PS-Poll frame, update their NAV settings as appropriate under the coordination function rules using a duration value equal to the time, in microseconds, required to transmit one ACK frame plus one SIFS interval". Remove the last sentence from 7.2.2 "All Stations..." and similarly from 7.2.3 in the 3rd last paragraph.

Proposed Response Response Status W

PROPOSED REJECT. The text in 9.2.5.4 does not adequately cover all that the commenter proposed to remove from clause 7.

Cl 07 SC 7.2.1.2 P0 L0 MyBallot # 623

Godfrey, Tim

Comment Type E Comment Status X

This section does not specify how the RA field is to be set when the CTS is the first frame in the exchange.

SuggestedRemedy

Specify that the RA field is the address of the STA transmitting the frame in the last paragraph

Proposed Response Response Status O

Cl 07 SC 7.2.2 P0 L0 MyBallot # 81
Oakes, Ivan

Comment Type TR Comment Status D

Paragraph below table 4: "Association" has a specific meaning in 802.11. Using the term here may cause confusion as there is no association in an IBSS.

SuggestedRemedy

Replace the words "to which the station is associated" with "to which the STA is joined"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Resolved by the resolution of comment 247.

Cl 07 SC 7.2.2 P0 L0 MyBallot # 195
Mike, Moreton

Comment Type TR Comment Status D

"to ensure that the broadcast or multicast originated in the same BSS to which the station is associated" - a STA isn't associated with an IBSS, and broadcast frames may originate in another BSS across the DS.

SuggestedRemedy

"to ensure that it was transmitted by another member of the same BSS".

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Resolved by the resolution of comment 247.

Cl 07 SC 7.2.2 P0 L0 MyBallot # 194
Mike, Moreton

Comment Type T Comment Status D

I'd just like to express my immense appreciation to the group for the additions to table 4. This was a huge logical hole that made other descriptions much more complex than they needed to be.

SuggestedRemedy

None.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 07 SC 7.2.2 P0 L0 MyBallot # 247
Edney, Jon

Comment Type T Comment Status D

"to ensure that the broadcast or multicast originated in the same BSS to which the station is associated." This text is wrong since the rule also applies for IBSS

SuggestedRemedy

originated from a STA in the BSS for which the receiving STA is a member

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 07 SC 7.2.3 P0 L0 MyBallot # 248
Edney, Jon

Comment Type T Comment Status D

"to ensure that the broadcast or multicast originated in the same BSS to which the station is associated." This text is wrong since the rule also applies for IBSS

SuggestedRemedy

originated from a STA in the BSS for which the receiving STA is a member

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 07 SC 7.2.3 P0 L0 MyBallot # 82
Oakes, Ivan

Comment Type TR Comment Status D

Paragraph below figure 30: "Association" has a specific meaning in 802.11. Using the term here may cause confusion as there is no association in an IBSS. In addition action frames may be sent without association according to 5.5.

SuggestedRemedy

Replace the words "to which the station is associated" with "to which the STA is joined"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Resolved with the resolution of comment 248.

Cl 07 SC 7.2.3 P0 L0 MyBallot # 85
Oakes, Ivan

Comment Type TR Comment Status D

I welcome the addition explicitly of the vendor specific elements, but would like a limit on the length of the resulting MMPDU in order that implementations may have some bounds to design to.

SuggestedRemedy

Add at the end of section 7.2.3: "Where Vendor Specific elements are added to Management frames, the total MMPDU frame body shall not exceed 1500 bytes."

Proposed Response Response Status W

PROPOSED REJECT. The length of the MMPDU is limited by the maximum MSDU size (which limits the length of the frame body of all frames). See 7.1.3.5.

Cl 07 SC 7.2.3 P0 L0 MyBallot # 371
Watanabe, Fujio

Comment Type E Comment Status X

the BSSID also is validated to ensure that the broadcast This sentence has grammatical error.

SuggestedRemedy

the BSSID is also validated to ensure

Proposed Response Response Status O

Cl 07 SC 7.2.3 P0 L0 MyBallot # 196
Mike, Moreton

Comment Type TR Comment Status D

"to ensure that the broadcast or multicast originated in the same BSS to which the station is associated." doesn't cover the IBSS case.

SuggestedRemedy

replace with "to ensure that the frame was transmitted by another member of the same BSS"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Resolved with the resolution of comment 248.

Cl 07 SC 7.2.3.* & 7.3.2.26 & pos P0 L0 MyBallot # 109
Bagby, David

Comment Type TR Comment Status D

I oppose the introduction of vendor specific elements. If a specific function is sufficiently useful to the industry as to be needed, it should be standardized and included. This is an attempt to have a standard encourage non-standard operation - a very bad idea in the opinion of this reviewer. This reviewer will not vote to approve the draft until all the added vendor specific related changes are removed.

SuggestedRemedy

Remove all vendor specific element additions

Proposed Response Response Status W

PROPOSED REJECT. The definition of a standard vendor-specific information element is preferable to vendors independently choosing random values to carry their proprietary information. This, at least, allows standard implementations to operate correctly along side of implementations with vendor-specific extensions.

Cl 07 SC 7.2.3.1 P0 L0 MyBallot # 537
Jalfon, Marc

Comment Type E Comment Status X

These tables of things in order create potential future problems. If the current specification for order of elements coincidentally agrees with the numeric order of the elements, I propose that the management frame format sections only list which elements are present and there be a global rule that elements shall be transmitted in order of element ID for all frames.

SuggestedRemedy

If this suggestion is accepted, it is possible to go further, in each element, list the management frames that include it. The management frame formats then indicate the format of their fixed fields and indicate whether any elements are present or not.

Proposed Response Response Status O

Cl 07 SC 7.2.3.1 P0 L0 MyBallot # 52

Stephens, Adrian

Comment Type E Comment Status X

These tables of things in order create potential future problems. If the current specification for order of elements coincidentally agrees with the numeric order of the elements, I propose that the management frame format sections only list which elements are present and there be a global rule that elements shall be transmitted in order of element ID for all frames.

SuggestedRemedy

If this suggestion is accepted, it is possible to go further, in each element, list the management frames that include it. The management frame formats then indicate the format of their fixed fields and indicate whether any elements are present or not.

Proposed Response Response Status O

Cl 07 SC 7.2.3.1 P0 L0 MyBallot # 150

Ecclesine, Peter

Comment Type TR Comment Status D

Order 22 indicates 'Vendor specific' information, yet it was not present in 802.11i or previous amendments. On what basis is Order 22 included?

SuggestedRemedy

Justify or remove

Proposed Response Response Status W

PROPOSED ACCEPT. Order 22 is the next sequential value available. The definition of a standard vendor-specific information element is preferable to vendors independently choosing random values to carry their proprietary information. This, at least, allows standard implementations to operate correctly along side of implementations with vendor-specific extensions.

Cl 07 SC 7.2.3.10 P0 L0 MyBallot # 576

McCann, Stephen

Comment Type E Comment Status X

Change bar indication on Table 14

SuggestedRemedy

Not sure what has been changed here ?

Proposed Response Response Status O

Cl 07 SC 7.2.3.10 P0 L0 MyBallot # 158

Ecclesine, Peter

Comment Type TR Comment Status D

Order 10 indicates 'Vendor specific' information. On what basis is Order 10 included?

SuggestedRemedy

Justify or remove

Proposed Response Response Status W

PROPOSED ACCEPT. Order 10 is the next sequential value available. The definition of a standard vendor-specific information element is preferable to vendors independently choosing random values to carry their proprietary information. This, at least, allows standard implementations to operate correctly along side of implementations with vendor-specific extensions.

Cl 07 SC 7.2.3.10, pp. 75 P75 L0 MyBallot # 16

Aboba, Bernard

Comment Type TR Comment Status D

IEEE 802.11i already added authentication extensibility; therefore vendor-specific authentication mechanisms are not needed.

SuggestedRemedy

Delete Vendor-specific IE type 5 within Table 13.

Proposed Response Response Status W

PROPOSED REJECT. 802.11i added extensibility in a specific direction. This did not limit the use of the Authentication frame.

Cl 07 SC 7.2.3.11 P0 L0 MyBallot # 159

Ecclesine, Peter

Comment Type TR Comment Status D

Order 2 indicates 'Vendor specific' information. On what basis is Order 2 included?

SuggestedRemedy

Justify or remove

Proposed Response Response Status W

PROPOSED ACCEPT. Order 2 is the next sequential value available. The definition of a standard vendor-specific information element is preferable to vendors independently choosing random values to carry their proprietary information. This, at least, allows standard implementations to operate correctly along side of implementations with vendor-specific extensions.

Cl 07 SC 7.2.3.11, pp. 76 P76 L0 MyBallot # 17

Aboba, Bernard

Comment Type TR Comment Status D

No text specifying the behavior of a STA or AP receiving a vendor-specific IE it does not understand.

SuggestedRemedy

Add sentence to 7.2.3.11: "A STA receiving a Deauthentication frame containing a vendor-specific IE it does not understand shall ignore the vendor-specific IE."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See the resolution to comment 178.

Cl 07 SC 7.2.3.11, pp. 76 P76 L0 MyBallot # 177

Kuehnel, Thomas

Comment Type TR Comment Status D

No text specifying the behavior of a STA or AP receiving a vendor-specific IE it does not understand.

SuggestedRemedy

Add sentence to 7.2.3.11: "A STA receiving a Deauthentication frame containing a vendor-specific IE it does not understand shall ignore the vendor-specific IE."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See the resolution to comment 178.

Cl 07 SC 7.2.3.12 P0 L0 MyBallot # 53

Stephens, Adrian

Comment Type TR Comment Status D

This section indicates an action field followed by vendor specific elements. However the action field has a variable length, and does not encode its length (it is determined from the MPDU length). So it is not possible to follow it with anything.

SuggestedRemedy

Remove vendor-specific from Table 16.
I Recommend checking all occurrences of vendor specific for this bug.

Proposed Response Response Status W

PROPOSED REJECT. The "action details" field is variable length, as described by the commenter. The content of the action details is defined for the individual Action frames, as determined by the Category value. It is possible to determine the length of the action details entirely from the content of that field and the value of the Category.

Cl 07 SC 7.2.3.12 P0 L0 MyBallot # 538

Jalfon, Marc

Comment Type TR Comment Status D

This section indicates an action field followed by vendor specific elements. However the action field has a variable length, and does not encode its length (it is determined from the MPDU length). So it is not possible to follow it with anything.

SuggestedRemedy

Specify the length of vendor specific field

Proposed Response Response Status W

PROPOSED REJECT. The "action details" field is variable length, as described by the commenter. The content of the action details is defined for the individual Action frames, as determined by the Category value. It is possible to determine the length of the action details entirely from the content of that field and the value of the Category.

Cl 07 SC 7.2.3.12 P0 L0 MyBallot # 160

Ecclesine, Peter

Comment Type TR Comment Status D

Order 2 indicates 'Vendor specific' information. On what basis is Order 2 included?

SuggestedRemedy

Justify or remove

Proposed Response Response Status W

PROPOSED ACCEPT. Order 2 is the next sequential value available. The definition of a standard vendor-specific information element is preferable to vendors independently choosing random values to carry their proprietary information. This, at least, allows standard implementations to operate correctly along side of implementations with vendor-specific extensions.

CI 07 SC 7.2.3.12 P0 L0 MyBallot # 250

Tolpin, Alexander

Comment Type TR Comment Status D

This section indicates an action field followed by vendor specific elements. However the action field has a variable length, and does not encode its length (it is determined from the MPDU length). So it is not possible to follow it with anything.

SuggestedRemedy

Remove vendor-specific from Table 16. I recommend checking all occurrences of vendor specific for this bug.

Proposed Response Response Status W

PROPOSED REJECT. The "action details" field is variable length, as described by the commenter. The content of the action details is defined for the individual Action frames, as determined by the Category value. It is possible to determine the length of the action details entirely from the content of that field and the value of the Category.

CI 07 SC 7.2.3.12, pp. 76 P76 L0 MyBallot # 18

Aboba, Bernard

Comment Type TR Comment Status D

No text specifying the behavior of a STA or AP receiving a vendor-specific IE it does not understand.

SuggestedRemedy

Add sentence to 7.2.3.12: "A STA receiving an Action frame containing a vendor-specific IE it does not understand shall ignore the vendor-specific IE."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See the resolution to comment 178.

CI 07 SC 7.2.3.12, pp. 76 P76 L0 MyBallot # 176

Kuehnel, Thomas

Comment Type TR Comment Status D

No text specifying the behavior of a STA or AP receiving a vendor-specific IE it does not understand.

SuggestedRemedy

Add sentence to 7.2.3.12: "A STA receiving an Action frame containing a vendor-specific IE it does not understand shall ignore the vendor-specific IE."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See the resolution to comment 178.

CI 07 SC 7.2.3.3 P0 L0 MyBallot # 151

Ecclesine, Peter

Comment Type TR Comment Status D

Order 2 indicates 'Vendor specific' information. On what basis is Order 2 included?

SuggestedRemedy

Justify or remove

Proposed Response Response Status W

PROPOSED ACCEPT. Order 2 is the next sequential value available. The definition of a standard vendor-specific information element is preferable to vendors independently choosing random values to carry their proprietary information. This, at least, allows standard implementations to operate correctly along side of implementations with vendor-specific extensions.

CI 07 SC 7.2.3.3, pp. 71 P0 L0 MyBallot # 1

Hassan, Amer

Comment Type TR Comment Status D

No text specifying what a STA should do if it encounters a Dissassociation frame including a vendor-specific IE it does not understand.

SuggestedRemedy

Add sentence to 7.2.3.3: "A STA receiving a vendor-specific IE that it does not support shall ignore the vendor-specific IE."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See resolution to comment 178.

CI 07 SC 7.2.3.3, pp. 71 P71 L0 MyBallot # 11

Aboba, Bernard

Comment Type TR Comment Status D

No text specifying what a STA should do if it encounters a Dissassociation frame including a vendor-specific IE it does not understand.

SuggestedRemedy

Add sentence to 7.2.3.3: "A STA receiving a vendor-specific IE that it does not support shall ignore the vendor-specific IE."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See the resolution to comment 178.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

CI 07 SC 7.2.3.3, pp. 71 P71 L0 MyBallot # 178

Kuehnel, Thomas

Comment Type TR Comment Status D

No text specifying what a STA should do if it encounters a Dissassociation frame including a vendor-specific IE it does not understand.

SuggestedRemedy

Add sentence to 7.2.3.3: "A STA receiving a vendor-specific IE that it does not support shall ignore the vendor-specific IE."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Add the proposed sentence to the penultimate paragraph of 7.2.3. This makes the statement applicable to all management frames, not just the disassociation frame.

CI 07 SC 7.2.3.4 P0 L0 MyBallot # 152

Ecclesine, Peter

Comment Type TR Comment Status D

Order 9 indicates 'Vendor specific' information. On what basis is Order 9 included?

SuggestedRemedy

Justify or remove

Proposed Response Response Status W

PROPOSED ACCEPT. Order 9 is the next sequential value available. The definition of a standard vendor-specific information element is preferable to vendors independently choosing random values to carry their proprietary information. This, at least, allows standard implementations to operate correctly along side of implementations with vendor-specific extensions.

CI 07 SC 7.2.3.4, pp.71 P71 L0 MyBallot # 179

Kuehnel, Thomas

Comment Type TR Comment Status D

No text specifying how an AP should behave if it encounters an Association-Request frame including a vendor-specific IE it does not understand, or that does not include a vendor specific IE.

SuggestedRemedy

Add sentence to 7.2.3.4: "An AP receiving an Association Request frame including a vendor-specific IE it does not understand shall ignore the vendor-specific IE. An AP shall not fail to process an Association Request frame due to lack of a vendor-specific IE."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See the resolution to comment 178.

CI 07 SC 7.2.3.4, pp.71 P71 L0 MyBallot # 12

Aboba, Bernard

Comment Type TR Comment Status D

No text specifying how an AP should behave if it encounters an Association-Request frame including a vendor-specific IE it does not understand, or that does not include a vendor specific IE.

SuggestedRemedy

Add sentence to 7.2.3.4: "An AP receiving an Association Request frame including a vendor-specific IE it does not understand shall ignore the vendor-specific IE. An AP shall fail to process an Association Request frame that does not include a vendor-specific IE."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See the resolution to comment 178.

CI 07 SC 7.2.3.5 P0 L0 MyBallot # 153

Ecclesine, Peter

Comment Type TR Comment Status D

Order 6 indicates 'Vendor specific' information. On what basis is Order 6 included?

SuggestedRemedy

Justify or remove

Proposed Response Response Status W

PROPOSED ACCEPT. Order 6 is the next sequential value available. The definition of a standard vendor-specific information element is preferable to vendors independently choosing random values to carry their proprietary information. This, at least, allows standard implementations to operate correctly along side of implementations with vendor-specific extensions.

CI 07 SC 7.2.3.5 P0 L0 MyBallot # 197

Mike, Moreton

Comment Type ER Comment Status X

The line above the last row is too bold. (If it was deliberate, there are some sections where it isn't bold that need making bold)

SuggestedRemedy

Reduce it. Also 7.2.3.7, 7.2.3.8, 7.2.3.10, 7.2.3.11, 7.2.3.12

Proposed Response Response Status O

Cl 07 SC 7.2.3.5, pp. 72 P72 L0 MyBallot # 13

Aboba, Bernard

Comment Type TR Comment Status D

No text specifying when a vendor-specific IE can be sent within an Association Response.

SuggestedRemedy

Add sentence to 7.2.3.5: "A STA receiving an Association Response frame including a vendor specific IE it does not understand shall ignore the vendor-specific IE. An AP shall not send a vendor-specific IE within an Association Response unless a corresponding vendor-specific IE is included within the Association Request."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See the resolution to comment 178.

Cl 07 SC 7.2.3.5, pp. 72 P72 L0 MyBallot # 180

Kuehnel, Thomas

Comment Type TR Comment Status D

No text specifying when a vendor-specific IE can be sent within an Association Response.

SuggestedRemedy

Add sentence to 7.2.3.5: "A STA receiving an Association Response frame including a vendor specific IE it does not understand shall ignore the vendor-specific IE. An AP shall not send a vendor-specific IE within an Association Response unless a corresponding vendor-specific IE is included within the Association Request."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See the resolution to comment 178.

Cl 07 SC 7.2.3.6 P0 L0 MyBallot # 154

Ecclesine, Peter

Comment Type TR Comment Status D

Order 10 indicates 'Vendor specific' information. On what basis is Order 10 included?

SuggestedRemedy

Justify or remove

Proposed Response Response Status W

PROPOSED ACCEPT. Order 10 is the next sequential value available. The definition of a standard vendor-specific information element is preferable to vendors independently choosing random values to carry their proprietary information. This, at least, allows standard implementations to operate correctly along side of implementations with vendor-specific extensions.

Cl 07 SC 7.2.3.7 P0 L0 MyBallot # 155

Ecclesine, Peter

Comment Type TR Comment Status D

Order 6 indicates 'Vendor specific' information. On what basis is Order 6 included?

SuggestedRemedy

Justify or remove

Proposed Response Response Status W

PROPOSED ACCEPT. Order 6 is the next sequential value available. The definition of a standard vendor-specific information element is preferable to vendors independently choosing random values to carry their proprietary information. This, at least, allows standard implementations to operate correctly along side of implementations with vendor-specific extensions.

Cl 07 SC 7.2.3.8 P0 L0 MyBallot # 156

Ecclesine, Peter

Comment Type TR Comment Status D

Order 5 indicates 'Vendor specific' information. On what basis is Order 5 included?

SuggestedRemedy

Justify or remove

Proposed Response Response Status W

PROPOSED ACCEPT. Order 5 is the next sequential value available. The definition of a standard vendor-specific information element is preferable to vendors independently choosing random values to carry their proprietary information. This, at least, allows standard implementations to operate correctly along side of implementations with vendor-specific extensions.

Cl 07 SC 7.2.3.8, pp. 73 P73 L0 MyBallot # 182

Kuehnel, Thomas

Comment Type TR Comment Status D

No text specifying the behavior of an AP receiving a vendor-specific IE it does not understand

SuggestedRemedy

Add sentence to 7.2.3.8: "An AP receiving a Probe Request frame including a vendor-specific IE it does not understand shall ignore the vendor-specific IE."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See the resolution to comment 178.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

Cl 07 SC 7.2.3.8, pp. 73 P73 L0 MyBallot # 15

Aboba, Bernard

Comment Type TR Comment Status D

No text specifying the behavior of an AP receiving a vendor-specific IE it does not understand

SuggestedRemedy

Add sentence to 7.2.3.8: "An AP receiving a Probe Request frame including a vendor-specific IE it does not understand shall ignore the vendor-specific IE."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See the resolution to comment 178.

Cl 07 SC 7.2.3.9 P0 L0 MyBallot # 406

Edwards, Bruce

Comment Type ER Comment Status X

Why is there a reserved order element (18)? Since these don't correspond to element IDs, the seems to be no purpose to this.

SuggestedRemedy

Remove it

Proposed Response Response Status O

Cl 07 SC 7.2.3.9 P0 L0 MyBallot # 321

Sanwalka, Anil

Comment Type TR Comment Status D

Table 12 indicated that the 18th (order 18) is reserved. It is not clear what that means. Does that mean that there is a reserved element there? How can you have a reserved slot

SuggestedRemedy

Remove the 18th entry and shift all the remaining entries up one.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 07 SC 7.2.3.9 P0 L0 MyBallot # 157

Ecclesine, Peter

Comment Type TR Comment Status D

Order 22 indicates 'Vendor specific' information, yet it was not present in 802.11i or previous amendments. On what basis is Order 22 included?

SuggestedRemedy

Justify or remove

Proposed Response Response Status W

PROPOSED ACCEPT. Order 22 is the next sequential value available. The definition of a standard vendor-specific information element is preferable to vendors independently choosing random values to carry their proprietary information. This, at least, allows standard implementations to operate correctly along side of implementations with vendor-specific extensions.

Cl 07 SC 7.2.3.9 P0 L0 MyBallot # 390

Jokela, Jari

Comment Type TR Comment Status D

Order 18 is reserved but no explanation is given why it is reserved

SuggestedRemedy

Explain or remove 18 as reserved

Proposed Response Response Status W

PROPOSED ACCEPT. The table will be changed to decrease by 1 the value for the orders greater than 18.

Cl 07 SC 7.2.3.9, pp. 75 P75 L0 MyBallot # 14

Aboba, Bernard

Comment Type TR Comment Status D

No text specifying when a vendor-specific IE can be sent within a Probe Response or how it is interpreted by the STA.

SuggestedRemedy

Add sentence to 7.2.3.9: "A STA receiving a Probe Response frame including a vendor-specific IE it does not understand shall ignore the vendor-specific IE."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See the resolution to comment 178.

CI 07 SC 7.2.3.9, pp. 75 P75 L0 MyBallot # 181

Kuehnel, Thomas

Comment Type TR Comment Status D

No text specifying when a vendor-specific IE can be sent within a Probe Response or how it is interpreted by the STA.

SuggestedRemedy

Add sentence to 7.2.3.9: "A STA receiving a Probe Response frame including a vendor-specific IE it does not understand shall ignore the vendor-specific IE."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See the resolution to comment 178.

CI 07 SC 7.3.1.11 P0 L0 MyBallot # 375

Watanabe, Fujio

Comment Type ER Comment Status X

According to 7.3 (within management frames, fixed-length mandatory frame body components are defined as fixed fields; variable length mandatory and all optional frame body components are defined as information elements.), 7.3.1.11 Action field belongs to the 7.3.1 Fixed field. However, actual action frame has variable length.

SuggestedRemedy

Either 7.3 sentence will be changed to adequately include the action frame or make a new category for Action frame.

Proposed Response Response Status O

CI 07 SC 7.3.1.4 P0 L0 MyBallot # 547

Hunter, David

Comment Type ER Comment Status X

This seems to be the first place "ERP" is used outside of a table -- so the acronym should be defined here -- or at least a pointer included to the place where it is defined.

SuggestedRemedy

Replace "ERP" with "Extended Rate PHY (ERP)" in text.

Proposed Response Response Status O

CI 07 SC 7.3.1.9 P0 L0 MyBallot # 86

Oakes, Ivan

Comment Type TR Comment Status D

I think "Vendor Specific" (221/0xDD) should appear in the IE table not in the Status codes. Further I don't think a vendor specific status code is required, an implementation should instead use "Unspecified failure" or just "Successful" as appropriate.

SuggestedRemedy

Remove row for code 221 from Table 20 and insert the same into Table 22.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 07 SC 7.3.1.9 P0 L0 MyBallot # 572

Bilstad, Mark

Comment Type T Comment Status D

In Table 20, a "vendor specific" status code is defined. This does not seem to be very useful. At a minimum, the OUI of the AP vendor must be derived somehow in this context, but there is no text describing how this is done. Otherwise, this code has no other meaning than code 1 (unspecified failure). In fact, there does not seem to be any text about this status code that I can find. Even with the OUI derived somehow, this would still only allow 1 status code per vendor; again, not very useful.

SuggestedRemedy

Remove this status code from the table; or, add frame fields and text describing how a vendor can implement multiple vendor-specific status codes.

Proposed Response Response Status W

PROPOSED ACCEPT. This is an editing error. The value 221 is for the information element ID, not the status code. Remove the status code value 221 from table 20 and place it in table

CI 07 SC 7.3.1.9 P0 L0 MyBallot # 394

Kandala, Srinivas

Comment Type TR Comment Status D

Status code is assigned by another draft amendment with permission from ANA.

SuggestedRemedy

Assign another number.

Proposed Response Response Status W

PROPOSED REJECT. There is insufficient information in the comment to determine the status code value to which the commenter refers.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

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5/19/2005 5:16:58 PM CI 07 SC 7.3.1.9

CI 07 SC 7.3.1.9 P0 L0 MyBallot # 161

Ecclesine, Peter

Comment Type TR Comment Status D

Status code 221 indicates 'Vendor specific' information. On what basis is code 221 included?

SuggestedRemedy

Justify or remove

Proposed Response Response Status W

PROPOSED ACCEPT. See resolution to comment 86.

CI 07 SC 7.3.1.9 P0 L0 MyBallot # 322

Sanwalka, Anil

Comment Type TR Comment Status D

In table 20 what does a vendor specific status code mean? One is probably not enough for an particular vendor. Should this really be here or should this be in Table 22.

SuggestedRemedy

Remove vendor specific status code.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 07 SC 7.3.1.9, pp. 83 P83 L0 MyBallot # 19

Aboba, Bernard

Comment Type TR Comment Status D

No text specifying when a vendor-specific Status code can be sent, or how it is interpreted.

SuggestedRemedy

Add sentence to 7.3.1.9: "A vendor-specific status code shall only be sent if a corresponding vendor-specific IE was included in the requested operation. A STA receiving a vendor-specific IE it does not understand shall interpret it as though it had received a Status Code of 1 (Unspecified failure)."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. This status code has been deleted as a result of resolving other comments.

CI 07 SC 7.3.1.9, pp. 83 P83 L0 MyBallot # 175

Kuehnel, Thomas

Comment Type TR Comment Status D

No text specifying when a vendor-specific Status code can be sent, or how it is interpreted.

SuggestedRemedy

Add sentence to 7.3.1.9: "A vendor-specific status code shall only be sent if a corresponding vendor-specific IE was included in the requested operation. A STA receiving a vendor-specific IE it does not understand shall interpret it as though it had received a Status Code of 1 (Unspecified failure)."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. This status code has been deleted as a result of resolving other comments.

CI 07 SC 7.3.2 P0 L0 MyBallot # 372

Watanabe, Fujio

Comment Type E Comment Status X

Table 22 information element were explained at the next sections. However, the sequence of appearing information element (e.g. challenge text 7.3.2.8) are not well organized.

SuggestedRemedy

Revise the information element section in a sequence manner. (e.g., 7.3.2.8: challenge text element should be latter than 7.3.2.9 country information/7.3.2.10 hopping pattern).

Proposed Response Response Status O

CI 07 SC 7.3.2 P0 L0 MyBallot # 324

Sanwalka, Anil

Comment Type TR Comment Status D

In Table 22 the vendor specific element ID is not defined. It needs to be defined so that manufacturers don't start using others. I am assuming it just got left out by accident as there is a description of it in 7.3.2.26

SuggestedRemedy

Assign a vendor specific element ID.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 07 SC 7.3.2 P0 L0 MyBallot # 323

Sanwalka, Anil

Comment Type T Comment Status D

In Table 22 the WPA element ID is not specified. Since it is already in wide use. We need to specify it.

SuggestedRemedy

Add 221 as the WPA element ID and specify it.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. The element ID will be "vendor-specific", not WPA.

Cl 07 SC 7.3.2.1 P0 L0 MyBallot # 631

Olson, Tim

Comment Type T Comment Status D

Some Vendors have a feature where APs do not broadcast the SSID. TGk is adding a beaco measurement where RSSI is measured from a beacon or probe reponse. It would be useful to allow the SSID to remain wild in the probe response so that RSSI can be measured plus the SSID can remain hidden.

SuggestedRemedy

Add in "or Probe Response"à.

Proposed Response Response Status W

PROPOSED REJECT. If this is required for work in TGk, that task groups should undertake crafting the text in their draft. This will reduce the likelihood of incompatible changes to the standard.

Cl 07 SC 7.3.2.1 P0 L0 MyBallot # 325

Sanwalka, Anil

Comment Type TR Comment Status D

The change from broadcast to wildcard does not clarify the description. Might as well specifically say what it does.

SuggestedRemedy

Change "à indicate the wildcard SSID" to "à indicate that the transmitter of the frame is requesting probe response frames from all SSIDs."

Proposed Response Response Status W

PROPOSED REJECT. This is a description of the value of the field. Its use is described in 10.3.2.1.2 and 11.1.3.2.1

Cl 07 SC 7.3.2.1 P0 L0 MyBallot # 87

Oakes, Ivan

Comment Type E Comment Status X

defn: "wildcard noun [C] in computing, a sign that is used to represent any letter or series of letters"

SuggestedRemedy

Replace "the wildcard SSID" with "any SSID will match"

Proposed Response Response Status O

Cl 07 SC 7.3.2.14 P0 L0 MyBallot # 198

Mike, Moreton

Comment Type TR Comment Status X

Placing basic rates in the extended supported rates element is very dangerous because not a recipients will understand it, and may continually try to associate with APs that will continuous reject them. (I made this comment in 11g, but it was ignored *sigh*).

SuggestedRemedy

in this element only, the "basic rate bit" should be changed to be the "mandatory rate bit" and should be used to indicate rates that must be supported by STAs that support the PHY type in question. There is currently no way of signalling what these rates are, and they are required for correct operation of the 11g changes.

Proposed Response Response Status O

Cl 07 SC 7.3.2.25 P0 L0 MyBallot # 624

Godfrey, Tim

Comment Type E Comment Status X

In figure 77, the 5th field is listed as "Pairwise Cipher Suite"

SuggestedRemedy

It should be "Pairwise Cipher Suite Count"

Proposed Response Response Status O

CI 07 SC 7.3.2.25.3 P0 L0 MyBallot # 264
 Karcz, Kevin
 Comment Type E Comment Status X
 page 112, "dot11RSNAConfigNumberOfPTKSAReplay-Counters." should not have a hyphen.
 Page 113, "dot11RSNAConfigNumberOfGTKSAReplay-Counters" should not have a hyphen
 SuggestedRemedy
 edit
 Proposed Response Response Status O

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 595
 Newton, Paul
 Comment Type E Comment Status X
 Change "à., so that reserved information element IDs are not usurped for non-standard
 purposes and so that interoperability is more easily ahceived in the presence of non-standard
 information."
 SuggestedRemedy
 à., so that reserved information element IDs are not usurped for non-standard purposes and s
 that interoperability is more easily achieved in the presence of non-standard information.
 Proposed Response Response Status O

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 625
 Godfrey, Tim
 Comment Type E Comment Status X
 "achieved" is misspelled on the 3rd line. "x" is used instead of "Figure 80" on the 4th line.
 SuggestedRemedy
 Correct
 Proposed Response Response Status O

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 199
 Mike, Moreton
 Comment Type ER Comment Status X
 ahceived
 SuggestedRemedy
 change to "achieved"
 Proposed Response Response Status O

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 407
 Edwards, Bruce
 Comment Type ER Comment Status X
 The text says "in the standard format shown in x". I think it is referring to the next figure (Figur
 80) but I am not sure.
 SuggestedRemedy
 Replace "x" with the proper reference.
 Proposed Response Response Status O

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 600
 Reuss, Edward
 Comment Type E Comment Status X
 Spelling error - "ahceived"
 SuggestedRemedy
 Change "ahceived" to "achieved".
 Proposed Response Response Status O

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 596
 Newton, Paul
 Comment Type E Comment Status X
 Change "The information element is in the standard format shown in x and requiresà."
 SuggestedRemedy
 "The information element is in the standard format shown in figure 80 and requiresà."
 Proposed Response Response Status O

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 425
 Chaplin, Clint
 Comment Type E Comment Status X
 "ahceived"
 SuggestedRemedy
 "achieved"
 Proposed Response Response Status O

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 261
 Karcz, Kevin
 Comment Type TR Comment Status D
 The value for the Element ID is not defined in the text. EID also needs to be added to Table 2
 SuggestedRemedy
 Define the EID as 221 according to ANA.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE. The vendor-specific element ID is defined as 221 in table 22.

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 376
 Watanabe, Fujio
 Comment Type E Comment Status X
 spell miss : ahceived
 SuggestedRemedy
 achieved
 Proposed Response Response Status O

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 262
 Karcz, Kevin
 Comment Type E Comment Status X
 "ahceived" is misspelled
 SuggestedRemedy
 edit
 Proposed Response Response Status O

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 377
 Watanabe, Fujio
 Comment Type E Comment Status X
 In Figure 80, the length of Vendor specific content must be longer than 1
 SuggestedRemedy
 revise the length of vendor specific content to "n".
 Proposed Response Response Status O

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 263
 Karcz, Kevin
 Comment Type E Comment Status X
 "shown in x" should be "shown in Figure 80"
 SuggestedRemedy
 edit
 Proposed Response Response Status O

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 426
 Chaplin, Clint
 Comment Type TR Comment Status D
 "shown in x"
 SuggestedRemedy
 "shown in Figure 80"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 427

Chaplin, Clint

Comment Type TR Comment Status D

"The length of the information field (n) shall be $3 < n < 255$." Shouldn't that be "The length of the information field (n) shall be $3 \leq n \leq 255$."? It's unclear which fields the length field covers.

SuggestedRemedy

See comment.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Change the text to be " $3 < n \leq 255$ ".

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 566

Odman, Knut

Comment Type E Comment Status X

Page 113, 3rd line: word "achieved" spelled wrong

SuggestedRemedy

correct typo

Proposed Response Response Status O

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 144

Visscher, Bert

Comment Type E Comment Status X

typo: ahcieved instead of achieved

SuggestedRemedy

fix typo

Proposed Response Response Status O

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 571

Bilstad, Mark

Comment Type E Comment Status X

In figure 80, the vendor specific content field is shown with a size of 1 octet, but this is variable length according to the text

SuggestedRemedy

Replace the length with the word "variable"

Proposed Response Response Status O

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 577

McCann, Stephen

Comment Type E Comment Status X

Missing Figure in text "shown in x"

SuggestedRemedy

Change to "shown in Figure 80"

Proposed Response Response Status O

CI 07 SC 7.3.2.26 P0 L0 MyBallot # 200

Mike, Moreton

Comment Type T Comment Status D

It's probably worth making it clear that unlike other elements these can be repeated.

SuggestedRemedy

After "Each vendor specific information element may have a different OUI value" append "or may repeat an OUI used in one or more previous vendor specific information elements".

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. The text already provides for this situation. Change "Each vendor-specific information element may have a different OUI value." to "Each vendor-specific information element can have a different OUI value."

Cl 07 SC 7.3.2.26; Figure 80; pg 1 P0 L0 MyBallot # 342
 Hillman, Garth
 Comment Type T Comment Status D
 octets count below 'vendor specific content' incorrect
 SuggestedRemedy
 1 -> 0-(n-3); also, you may want to indicate that 'n' covers the octets in fields OUI and Vendor Specific Content.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE. See resolution to comment 427.

Cl 07 SC 7.3.2.26; pg 113 P0 L0 MyBallot # 341
 Hillman, Garth
 Comment Type E Comment Status X
 spelling error; incorrect reference
 SuggestedRemedy
 ahceived -> achieved; x -> Figure 80
 Proposed Response Response Status O

Cl 07 SC 7.3.2.9 P0 L0 MyBallot # 374
 Watanabe, Fujio
 Comment Type E Comment Status X
 , allow control of BSS diameter..
 SuggestedRemedy
 delete .
 Proposed Response Response Status O

Cl 07 SC 7.3.2.9 P0 L0 MyBallot # 373
 Watanabe, Fujio
 Comment Type E Comment Status X
 p.91 Table 20.1a is not existing
 SuggestedRemedy
 It should be Table 23.
 Proposed Response Response Status O

Cl 07 SC 7.3.2.9 P0 L0 MyBallot # 305
 Kruys, Jan
 Comment Type TR Comment Status D
 The coverage class definition is too crude to be useful at intermediate ranges. With longer range, increased guard time may be needed but this is dependent on the antenna type. Therefore Coverage class should be split in two components: Guardtime and Propagation tim
 SuggestedRemedy
 Change Coverage Class to include a guardTime parameter. Use the lower 5 bits for CCA and change the definition of the multiplier to: 0-9 = 1 usec, 10-12 = 2 usec, 21-31 = 3usec. Add Guard class as the upper three bits. Coverage Class: 0-7, multiplier for the basic guardtime (GI) defined in Table 109.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE. Jan to provide a submission with the specific text changes, before approval of this comment.

Cl 08 SC 8. P0 L0 MyBallot # 501
 Engwer, Darwin
 Comment Type TR Comment Status D
 After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.
 SuggestedRemedy
 Resolve the inconsistencies.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 08 SC 8. P0 L0 MyBallot # 302

Kruys, Jan

Comment Type TR Comment Status D

Section 8 contains many references to the internal interfaces of the MLME and SME in the sense of "shall do X". it should be clear that these "shalls" do not define mandatory statement that require verification testing etc.

SuggestedRemedy

Ideally, the MLME related material should be removed or referenced to an Annex that deals w the MLME. It may be more efficient to add a note to the beginning of this Clause that states "where referencence is made to the MLME interfaces and interface primitives, it should be understood that these refer to the informative models e.g. as presented in Annex"was clause 10". None of the statements "shall....." are to be considered compliance criteria.

Proposed Response Response Status W

PROPOSED REJECT. There is insufficient detail in the comment to identify the specific occurrences to which the commenter objects. The commenter is solicited to supply this detail in a subsequent ballot. Note: compliance requirements are identified in Annex A.

Cl 08 SC 8. P0 L0 MyBallot # 184

Mike, Moreton

Comment Type T Comment Status D

WEP is now so thoroughly broken that it should be removed from the standard.

SuggestedRemedy

Remove WEP and direct readers to the 1999 version of the standard for details.

Proposed Response Response Status W

PROPOSED REJECT. WEP is used in currently deployed products and continues to appear in new products. It is beyond the scope of this task group to remove this functionality.

Cl 08 SC 8.1.4 P0 L0 MyBallot # 283

Kruys, Jan

Comment Type E Comment Status X

sub h) - the sentence does not flow

SuggestedRemedy

Add "assumed to be" after "the transmitter is"

Proposed Response Response Status O

Cl 08 SC 8.2.1.2 P0 L0 MyBallot # 626

Godfrey, Tim

Comment Type E Comment Status X

Footnote 16 appears on the next page

SuggestedRemedy

Correct

Proposed Response Response Status O

Cl 08 SC 8.2.2.2.1 P0 L0 MyBallot # 378

Watanabe, Fujio

Comment Type ER Comment Status X

Information items: is not as same as Table 13 Authentication frame body. Authentication algorithm dependent information (none) must mean the challenge text in Table 13. There is no statement about the status code.

SuggestedRemedy

revised baed on Table 13

Proposed Response Response Status O

Cl 08 SC 8.2.2.2.1 P0 L0 MyBallot # 379

Watanabe, Fujio

Comment Type TR Comment Status D

What Status code should be used for the first frame of Open System Authentication. No statements

SuggestedRemedy

make a clear statement (status code)

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. There is a clear statement in Table 14 that the Status Code is reserved in the first frame of the open authentication algorithm. 7.1.1 clearly states th reserved fields are transmitted with a value of zero. In Table 13, delete "and set to 0".

CI 08 SC 8.2.2.2.2 P0 L0 MyBallot # 380

Watanabe, Fujio

Comment Type ER Comment Status X

Information items is not as same as Table 13. Also, there is not same sequence order as Tat 13 shows.

SuggestedRemedy

revise based on Table 13

Proposed Response Response Status O

CI 08 SC 8.2.2.3 P0 L0 MyBallot # 186

Mike, Moreton

Comment Type TR Comment Status D

Shared key authentication is known to enable dictionary attacks.

SuggestedRemedy

Strongly deprecate it, and say that it should only be used for backwards compatibility in situations where dictionary attacks are defended against.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. In 8.2, the statement that is requested by the commenter already appears.

CI 08 SC 8.2.2.3.2 P0 L0 MyBallot # 383

Watanabe, Fujio

Comment Type TR Comment Status D

What Status code should be used for the second frame of Shared System Authentication. No statements

SuggestedRemedy

make a clear statement (status code)

Proposed Response Response Status W

PROPOSED REJECT. There is a clear statement in Table 14 that the Status Code is reserve in the first (this is what is assumed to be meant by the commenter) frame of the shared key authentication algorithm. 7.1.1 clearly states that reserved fields are transmitted with a value zero.

CI 08 SC 8.2.2.3.2 P0 L0 MyBallot # 381

Watanabe, Fujio

Comment Type E Comment Status X

The result code of the requested authenticationà

SuggestedRemedy

The status code of the requested authenticationà

Proposed Response Response Status O

CI 08 SC 8.2.2.3.2 P0 L0 MyBallot # 382

Watanabe, Fujio

Comment Type E Comment Status X

Authentication algorithm dependent information= The authentication results means challenge text in Tale 13.

SuggestedRemedy

revised based on Table 13

Proposed Response Response Status O

CI 08 SC 8.2.2.3.3 P0 L0 MyBallot # 384

Watanabe, Fujio

Comment Type TR Comment Status D

What Status code should be used for the third frame Shared System Authentication. No statements

SuggestedRemedy

make a clear statement (status code)

Proposed Response Response Status W

PROPOSED REJECT. There is a clear statement in Table 14 that the Status Code is reserve in the third frame of the shared key authentication algorithm. 7.1.1 clearly states that reserver fields are transmitted with a value of zero.

Cl 08 SC 8.2.2.3.4 P0 L0 MyBallot # 385
 Watanabe, Fujio
 Comment Type E Comment Status X
 The result code of the requested authentication..
 SuggestedRemedy
 The status code of the requested authenticationà
 Proposed Response Response Status O

Cl 08 SC 8.3.3.3 P0 L0 MyBallot # 284
 Kruys, Jan
 Comment Type E Comment Status X
 Text and figure are inconsistent
 SuggestedRemedy
 In figure 101 change "encrypted MPDU" to "encapsulated"
 Proposed Response Response Status O

Cl 08 SC 8.4.10 P0 L0 MyBallot # 465
 Ptasinski, Henry
 Comment Type TR Comment Status D
 Deletion of PTKSA and GTKSA as described in first paragraph is too aggressive and results in unnecessary loss of connectivity. In an ESS, when a STA attempts to roam to a new AP, the STA should not delete the PTKSA or GTKSA for the old AP until a successful association response is received from the new AP. It should not delete the PTKSA or GTKSA e.g. when invoking authentication with an AP to which it currently is not associated.

SuggestedRemedy
 Relax the requirements for flushing PTKSA and GTKSA such that loss of connectivity is minimized.

Proposed Response Response Status W
 PROPOSED ACCEPT. Replace "When a SME receives or invokes of any of the MLME association, reassociation, disassociation, authentication, or deauthentication request or indication primitives, or if it believes that it has drifted out of radio range of another STA, it will delete some security associations." with "When a non-AP STA SME receives a successful MLME association or reassociation confirm primitive or receives or invokes an MLME disassociation or deauthentication primitive, it will delete some security associations. Similarl when an AP SME receives an MLME association or reassociation indication primitive, or receives or invokes an MLME disassociation or deauthentication primitive it will delete some security associations.

Cl 08 SC 8.4.2 P0 L0 MyBallot # 285
 Kruys, Jan
 Comment Type E Comment Status X
 0
 SuggestedRemedy
 Insert an empty line before NOTES and spell "Notes".
 Proposed Response Response Status O

Cl 08 SC 8.5.1.3 P0 L0 MyBallot # 464
 Ptasinski, Henry
 Comment Type TR Comment Status D
 GMK concept is unnecessary, and is defined inconsistently in the draft. This clause states: "The GTK shall be derived from the GMK" and "The GTK shall be a random number", which seem to conflict. Also, clause 3 defines the GMK as: "3.51 group master key (GMK): An auxiliary key that may be used to derive a group temporal key (GTK)." Which is it, may or she

SuggestedRemedy
 Delete GMK and Gnonce, or at least clarify that GMK is one possible method for deriving the GTK and remove any usage of 'shall' w.r.t. the GMK.

Proposed Response Response Status W
 PROPOSED ACCEPT. Remove "NOTES" and the numbers in front of the note items. Change "may" to "can", before update in the first note. In the second note, delete the first sentence. Then change "depicts one possible" to "depicts an example of a". Change "The Authenticator may derive" to "The Authenticator derives". Change "Here, the following" to "In this example, the following". Change "shall be a random" to "is a random". Change "GTK shall be derived" to "GTK is derived". Change "(TK) shall be" to "(TK) is".

Cl 08 SC 8.5.2 P0 L0 MyBallot # 428
 Chaplin, Clint
 Comment Type TR Comment Status D
 "EAPOL protocol version" is used only once in this draft, is defined nowhere in this draft, and does not have a reference to a definition in any other standard.

SuggestedRemedy
 Please define, or point to a definition.

Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE. Correct Figure 107 to include the Protocol Version (1 byte), Packet Type (1 byte) and Packet Body Length (2 bytes) above the Descriptor Type in the current figure. In the text immediately below Figure 107, change "EAPOL-key frame" to "EAPOL-key frame body".

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
 COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
 SORT ORDER: Clause, Subclause, page, line

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Cl 08 SC 8.5.3.7 P0 L0 MyBallot # 461
McClellan, Kelly

Comment Type E Comment Status X

This clause contains the statement: "None of the protocols defined by IEEE Std 802.11, 1999 Edition, and IEEE P802.1X-REV permit the AS, the Authenticator, the Supplicant, or either STA to verify these assumptions." Since this now refers to the previous version of the standard, it should be updated.

SuggestedRemedy

Change the informative reference from "1999 Edition" to "current edition" or "200_ edition" if tt statement is still true.

Proposed Response Response Status O

Cl 08 SC 8.5.6 P0 L0 MyBallot # 286
Kruys, Jan

Comment Type E Comment Status X

This section describes the implementation of an entity that falls outside the scope of 802.11. I should be moved to an informative annex.

SuggestedRemedy

0

Proposed Response Response Status O

Cl 08 SC 8.5.6.3 P0 L0 MyBallot # 54
Stephens, Adrian

Comment Type E Comment Status X

The pseudocode is inconsistent. Left arrow and an equals sign are both used to represent assignment.

SuggestedRemedy

The assignments of 802.1X::portValid on page 186 should be replaced with a left arrow symbol. Check also elsewhere this variable is used.

Make pseudo-code snippets in the state machines (e.g. Figure 118) consistent.

Proposed Response Response Status O

Cl 08 SC 8.5.7 P0 L0 MyBallot # 287
Kruys, Jan

Comment Type E Comment Status X

See preceding

SuggestedRemedy

0

Proposed Response Response Status O

Cl 08 SC 8.5.8 P0 L0 MyBallot # 288
Kruys, Jan

Comment Type T Comment Status D

There seems to be an inconsistency in that the 256 bit output is derived from a 256 RN input together with other parameters - clarification would help.

SuggestedRemedy

See preceding wrt to placement of this text - maybe H.6 is better place?

Proposed Response Response Status W

PROPOSED REJECT. The PRF-256 is described in clause 8.5.1.1. The output of this function is 256 bits. It is not clear what needs to be clarified.

Cl 08 SC 8.7 P0 L0 MyBallot # 289
Kruys, Jan

Comment Type E Comment Status X

This section describes implementation

SuggestedRemedy

It should either be part of the SDL pseudo code or moved to an informative annex.

Proposed Response Response Status O

Cl 09 SC 9. P0 L0 MyBallot # 273

Karcz, Kevin

Comment Type E Comment Status X

References to many clause numbers within the draft are preceeded by incorrect values. See 1st paragraph of clause 9 for example

SuggestedRemedy
edit

Proposed Response Response Status O

Cl 09 SC 9. P0 L0 MyBallot # 429

Chaplin, Clint

Comment Type TR Comment Status D

"These functions are expanded on in 2019.2 and 2159.3, and a complete functional descriptic of each is provided. Fragmentation and defragmentation are covered in 2239.4 and 2249.5. Multirate support is addressed in 2249.6. The allowable frame exchange sequences are listec in 2269.7. Finally, a number of additional restrictions to limit the cases in which MSDUs are reordered or discarded are described in 2289.8." Those references are incorrect; it seems as though quite a few references in this chapter have three digits prepended to them.

SuggestedRemedy
Correct

Proposed Response Response Status W

PROPOSED ACCEPT. The editor will correct all of the cross references.

Cl 09 SC 9. P0 L0 MyBallot # 627

Godfrey, Tim

Comment Type E Comment Status X

Clause reference numbers are incorrect throughout clause 9. For example: "IEEE 802.11 LAN are introduced in 9.1. These functions are expanded on in 2019.2 and 2159.3". Other 2000-range references are found throughout this clause

SuggestedRemedy

Truncate the first 3 digits of references above 2000

Proposed Response Response Status O

Cl 09 SC 9. P0 L0 MyBallot # 578

McCann, Stephen

Comment Type E Comment Status X

Many section 9 internal section reference numbers appear to be mal-formed, e.g. 2019.2

SuggestedRemedy

Correct internal section reference numbers, e.g. 2019.2 -> 9.2

Proposed Response Response Status O

Cl 09 SC 9. P0 L0 MyBallot # 386

Watanabe, Fujio

Comment Type ER Comment Status X

These functions are expanded on in 2019.2 and 2159.3à2239.4..

SuggestedRemedy

Revise to the proper number

Proposed Response Response Status O

Cl 09 SC 9. P0 L0 MyBallot # 502

Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 09 SC 9. P0 L0 MyBallot # 55

Stephens, Adrian

Comment Type ER Comment Status X

There seem to be some very high clause numbers in this section (e.g. 2019.2). While we're a productive group, I suspect we won't be into this kind of range until after my retirement.

SuggestedRemedy

Suspect, check and correct references that start with a 4-digit string.

Proposed Response Response Status O

CI 09 SC 9.1.1 P0 L0 MyBallot # 430

Chaplin, Clint

Comment Type TR Comment Status D

Incorrect section references

SuggestedRemedy

Correct

Proposed Response Response Status W

PROPOSED REJECT. It is unclear from the comment to which references the commenter refers.

CI 09 SC 9.1.1 P0 L0 MyBallot # 387

Watanabe, Fujio

Comment Type ER Comment Status X

see 2029.2.1, in 2019.2,

SuggestedRemedy

revise to the proper number

Proposed Response Response Status O

CI 09 SC 9.1.3 P0 L0 MyBallot # 290

Kruys, Jan

Comment Type E Comment Status X

The words "co-existence" and "concurrently" are confusing and not consistent with the rest of the DCF/PCF rules laid down in this standard

SuggestedRemedy

Replace with: 9.1.3 Combined use of DCF and PCF When a PC is operating in a BSS, the two access methods alternate, with a CFP followed by a CP. This is described in greater detail in 2159.3

Proposed Response Response Status O

CI 09 SC 9.1.4 P0 L0 MyBallot # 347

Black, Simon

Comment Type TR Comment Status D

The text 'When a directed MSDU, plus MAC header and FCS, is received from the LLC' is not correct. The latter items are not received from LLC - only the MSDU is.

SuggestedRemedy

Replace with 'When a directed MSDU is received from the LLC or a directed MMPDU is received from the MLME that would result in a length greater than `adot11FragmentationThreshold` when the MAC header and FCS are added, the MSDU or MMPDU shall be fragmented.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 09 SC 9.1.4 P0 L0 MyBallot # 391

Jokela, Jari

Comment Type TR Comment Status D

Text says that MSDU and MAC header and FCS are received from the LLC. This is not true, only MSDU is received from the LLC.

SuggestedRemedy

Fix.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See resolution to comment 347.

Cl 09 SC 9.1.4 P0 L0 MyBallot # 434

Raissinia, Ali

Comment Type TR Comment Status D

The added comment shows that the LLC layer needs to send down the MAC header and FCS field. Since FCS field is generated within MAC, I don't see any reason to pass it down as it's n really useful.

SuggestedRemedy

Remove FCS from that added text

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See resolution to comment 347.

Cl 09 SC 9.1.4 P0 L0 MyBallot # 56

Stephens, Adrian

Comment Type TR Comment Status D

The third paragraph in 9.1.4 only partly captures the normative requirements for fragmentation. It is possible to receive an MSDU + Header + FCS less than the fragmentation threshold, which, after encapsulation for privacy is longer than it.

SuggestedRemedy

This actually points out an architectural weakness. We don't have a really strong view of a transformational process that takes entities of type A and turns them into type B. We don't have good naming of the objects along these processes. If we did, we'd have names for things like "MSDU + optional integrity check" and MSDU+optional integrity check + optional encapsulation.

The alternative solution is to fix this para so that an MSDU is fragmented if the MSDU, plus optional MSDU integrity check, plus optional encapsulation, plus MPDU header and checksum is greater than the threshold.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See resolution to comment 347.

Cl 09 SC 9.1.4 P0 L0 MyBallot # 408

Edwards, Bruce

Comment Type ER Comment Status X

The text "When a directed MSDU plus MAC header and FCS is received from the LLC" is confusing. I don't think that the MAC header and FCS are received from the LLC. I think that the text is trying to say something about the length of the MPDU produced from an MSDU.

SuggestedRemedy

Fix up the text to be more explicit about talking about the length.

Proposed Response Response Status O

Cl 09 SC 9.1.4 P0 L0 MyBallot # 201

Mike, Moreton

Comment Type TR Comment Status D

"When a directed MSDU, plus MAC header and FCS, is received from the LLC or a directed MMPDU is received from the MLME with a length greater than adot11FragmentationThreshold," (1) LLC doesn't send "MSDU , plus MAC header and FCS" i just sends MSDU. (2) What about MSDUs received from the DS?

SuggestedRemedy

The reason why it's difficult to write good text to describe this is that it's trying to combine MMPDU and MSDU fragmentation when those things are at totally different levels of the architecture. If the whole of 9.1.4 was rewritten to talk in terms of MPDU fragmentation (as in fact the second paragraph already does) then it would flow much more easily.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See the resolution to comment 347.

Cl 09 SC 9.10 P0 L0 MyBallot # 300

Kruys, Jan

Comment Type E Comment Status X

"Protection Mechanism" is imprecise and

SuggestedRemedy

Change to "Protection mechanisms for non-ERP receivers".

Proposed Response Response Status O

Cl 09 SC 9.10 P0 L0 MyBallot # 65

Stephens, Adrian

Comment Type E Comment Status X

The heading is too generic as this is a concern only to ERP-OFDM phy usage.

SuggestedRemedy

Call it ERP OFDM Protection Mechanism

Proposed Response Response Status O

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

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Cl 09 SC 9.10

CI 09 SC 9.2 P0 L0 MyBallot # 57

Stephens, Adrian

Comment Type ER Comment Status X

"CS shall be performed by both physical and virtual mechanisms".

Sigh, Sigh, Sigh.

Shall is supposed to introduce a normative requirement, and it is as clear a mud what this is introducing. It sounds more like a normative requirement on the writers of the protocol to include details to support both physical and virtual mechanisms.

SuggestedRemedy

Turn this into an informative note.

This is also a general problem. I just happened to light on this and it exceeded my inertia threshold. I recommend scanning for "shall" and replacing with "is" where it clearly describes normative behaviour introduced elsewhere in the document. Ideally each use of the word sha (and there are 2000+) should relate to an entry in the PICS.

Proposed Response Response Status O

CI 09 SC 9.2 P0 L0 MyBallot # 597

Newton, Paul

Comment Type E Comment Status X

BasicRate is referred to as "aBasicRateSet" it seems the rest of the mib variables are now referenced with the prefix of dot11?

SuggestedRemedy

Change from "aBasicRateSet" to "dot11BasicRateSet"

Proposed Response Response Status O

CI 09 SC 9.2 P0 L0 MyBallot # 58

Stephens, Adrian

Comment Type TR Comment Status D

"à shall only cconsider the frame body as the basis of a possible indicationà"

This is utterly meaningless.

SuggestedRemedy

Remove containing sentence.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See resolution to comment 251.

CI 09 SC 9.2 P0 L0 MyBallot # 388

Watanabe, Fujio

Comment Type E Comment Status X

Thus a STA can be unable to receive from the originating STA, yet stillà. Object is missing.

SuggestedRemedy

Make a clear statement. Receive a data frame from the originating STA, à

Proposed Response Response Status O

CI 09 SC 9.2 P0 L0 MyBallot # 389

Watanabe, Fujio

Comment Type E Comment Status X

If the return CTS is not detected by the STA originatingà. more quickly than if the long dataà. This statement is not clear. It means that the retransmission of RTS will have a higher priority transmission.

SuggestedRemedy

Make a clear statement for understanding.

Proposed Response Response Status O

Cl 09 SC 9.2 P0 L0 MyBallot # 251

Tolpin, Alexander

Comment Type TR Comment Status D

"à shall only consider the frame body as the basis of a possible indicationà"

This is utterly meaningless.

SuggestedRemedy

Remove containing sentence.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Replace "only consider the frame body as the basis o a possible indication to LLC" with "not indicate a data frame to LLC when the frame body is nt

Cl 09 SC 9.2.1 P0 L0 MyBallot # 83

Oakes, Ivan

Comment Type E Comment Status X

bad reference "2089.2.5.4", also in 9.2.2 three times and elsewhere.

SuggestedRemedy

Fix cross references

Proposed Response Response Status O

Cl 09 SC 9.2.10 P0 L0 MyBallot # 328

Sanwalka, Anil

Comment Type TR Comment Status D

The new value of EIFS is not the same as the old value for legacy 11 and 11b MACs. Since tt use of EIFS is required (shall) the new equation must resolve to the old value for legacy radio

SuggestedRemedy

Remove the DIFS from the equation.

Proposed Response Response Status W

PROPOSED REJECT. The new equation for EIFS resolves to exactly the same value for the legacy .11 and the .11b PHYS as the original equation.

Cl 09 SC 9.2.3.4 P0 L0 MyBallot # 59

Stephens, Adrian

Comment Type ER Comment Status X

This single para is symptomatic of "specification by normative verbosity" (that's the PC versic of the expression).

The problem is we're trying to say something complex, and we heap normative sentence on normative sentence.

What we actually need is some diagrammatic representation (such as a state machine) that is normative. This makes life a lot easier for the non-native English speakers, and makes interpretation less error-prone.

SuggestedRemedy

Let's have a nice block diagram or state machine showing how the various counters and timer relate.

(The SDL in the Annexes is not adequate for this purpose, although SDL would be one valid representation of a state machine that could be used at this point (but It wouldn't be my first choice)).

Proposed Response Response Status O

Cl 09 SC 9.2.3.4 P0 L0 MyBallot # 601

Reuss, Edward

Comment Type E Comment Status X

Word choice error "later" versus "latter"

SuggestedRemedy

Change "later" to "latter".

Proposed Response Response Status O

CI 09 SC 9.2.3.4 P0 L0 MyBallot # 202

Mike, Moreton

Comment Type TR Comment Status D

It concerns me that 11e have made significant changes in the area of EIFS. Which will take precedence? In fact both seem to be attempting to solve different problems with EIFS (TGe tl slot reference point, TGm the NAV problem), so neither will be that desirable.

SuggestedRemedy

I think the big error in EIFS is triggering it at all when NAV is set. EIFS is really a mechanism reduce the chance of you trashing the ACK when you don't receive the data frame correctly. Well if you're going to keep quiet for that period anyway then there's no point in triggering it. § rule becomes: (1) On incorrect frame RX switch to EIFS if EIFS > NAV + DIFS (or the TGe equiv). (2) Then use EIFS just like you would DIFS, (3) correct frame RX always changes back to DIFS.

Proposed Response Response Status W

PROPOSED ACCEPT. The current text says exactly what you requested.

CI 09 SC 9.2.4 P0 L0 MyBallot # 203

Mike, Moreton

Comment Type TR Comment Status D

I seem to remember there was an interpretation that described the CW having a double peak with default values - maybe it would be a good idea for the diagram to show this?

SuggestedRemedy

See comment

Proposed Response Response Status W

PROPOSED REJECT. It is not at all clear what the commenter is requesting. If there is an interpretation request or response on this issue, please cite it.

CI 09 SC 9.2.4 P0 L0 MyBallot # 272

Karcz, Kevin

Comment Type E Comment Status X

page 205, line 3, "2269.7" should be "9.7"

SuggestedRemedy

edit

Proposed Response Response Status O

CI 09 SC 9.2.5.1 P0 L0 MyBallot # 634

Inoue, Yasuhiko

Comment Type E Comment Status X

Wrong reference:

"à when a STA desires to initiate the initial frame of one of the frame exchanges described in 2269.7"

"à the random backoff algorithm described in 2069.2.5.2 shall be followed."

"There are conditions, specified in 2069.2.5.2 and 2099.2.5.5, where the random backoff algorithm ..."

SuggestedRemedy

2269.7 --> 9.7

2069.2.5.2 --> 9.2.5.2

2099.2.5.5 --> 9.2.5.5

Proposed Response Response Status O

CI 09 SC 9.2.5.2 P0 L0 MyBallot # 635

Inoue, Yasuhiko

Comment Type E Comment Status X

Wong reference:

"The backoff procedure shall also be invoked when a transmitting STA infers a failed transmission as defined in 2119.2.5.7 or 2129.2.8."

Similar corrections will be necessary for the rest of this subclause.

SuggestedRemedy

2119.2.5.7 --> 9.2.5.7

2129.2.8 --> 9.2.8

Proposed Response Response Status O

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

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CI 09 SC 9.2.5.2

Cl 09 SC 9.2.5.3 P0 L0 MyBallot # 435

Raissinia, Ali

Comment Type E Comment Status X

There is a typo on the 3rd paragraph regarding the section 2119.2.5.7 This should be section 9.2.5.7. Similarly, in 4th paragraph the referred section is 2129.2.8 and it should be 9.2.8. It looks like this is a common problem in several more sections.

SuggestedRemedy

Make the corrections.

Proposed Response Response Status O

Cl 09 SC 9.2.5.3 P0 L0 MyBallot # 204

Mike, Moreton

Comment Type ER Comment Status X

"the STA shall perform the ACK procedure, as defined in 2129.2.8." - looks like an acrobat cut and paste error on the section number.

SuggestedRemedy

Correct section number. (There's also a 2189.3.2.2. later)

Proposed Response Response Status O

Cl 09 SC 9.2.5.4 P0 L0 MyBallot # 207

Mike, Moreton

Comment Type TR Comment Status D

While there are numeric definitions of PHY-RX-START-Delay there doesn't seem to be any textual description of it.

SuggestedRemedy

Refer to where it's described, or add a description.

Proposed Response Response Status W

PROPOSED ACCEPT. A description of the parameter will be placed in the PHY clauses.

Cl 09 SC 9.2.5.4 P0 L0 MyBallot # 252

Miki, Morgan

Comment Type TR Comment Status D

No reason to consider aPHY-RX-STARTDelay. See comments on section 9.2.5.7 and 9.2.8.

SuggestedRemedy

Remove aPHY-RX-START-Delay from the paragraph

Proposed Response Response Status W

PROPOSED REJECT. The equation is correct. The actual values for this parameter in some of the PHYs are not be correct. This parameter accounts for the length of the preamble and PLCP header.

Cl 09 SC 9.2.5.4 P0 L0 MyBallot # 636

Inoue, Yasuhiko

Comment Type E Comment Status X

Wong reference.

SuggestedRemedy

Please check the referred clause number.

Proposed Response Response Status O

Cl 09 SC 9.2.5.4 P0 L0 MyBallot # 21

Gohda, Wataru

Comment Type TR Comment Status D

No reason to keep aPHY-RX-STARTDelay. See my comments on section 9.2.5.7 and 9.2.8.

SuggestedRemedy

Remove aPHY-RX-START-Delay from the paragraph

Proposed Response Response Status W

PROPOSED REJECT. The equation is correct. The actual values for this parameter in some of the PHYs are not be correct. This parameter accounts for the length of the preamble and PLCP header.

Cl 09 SC 9.2.5.4 P0 L0 MyBallot # 249

Edney, Jon

Comment Type E Comment Status X

Could not find section 2189.3.2.2

SuggestedRemedy

Correct section reference

Proposed Response Response Status O

Cl 09 SC 9.2.5.4 P0 L0 MyBallot # 206

Mike, Moreton

Comment Type T Comment Status X PHY

I think the stuff allowing you to clear NAV if you don't get the CTS should be deleted. It was reasonable when the standard was first written, but with all the protection of different modulations floating around, I don't think it's sensible any more. And deleting it won't actually effect interoperability.

SuggestedRemedy

See comment

Proposed Response Response Status O

Cl 09 SC 9.2.5.4 P0 L0 MyBallot # 205

Mike, Moreton

Comment Type T Comment Status D

Why place the requirement on the MAC to know which PHYs can make use of PHY-CCARESET and which can't? Why not always send it, and leave it to the PHY what it does with it?

SuggestedRemedy

Delete "for those PHYs that provide a PHY-CCARESET.request primitive"

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 09 SC 9.2.5.4 P0 L0 MyBallot # 30

Ohtani, Yoshihiro

Comment Type TR Comment Status D

No reason to keep aPHY-RX-STARTDelay. See my comments on section 9.2.5.7 and 9.2.8.

SuggestedRemedy

Remove aPHY-RX-START-Delay from the paragraph

Proposed Response Response Status W

PROPOSED REJECT. The equation is correct. The actual values for this parameter in some of the PHYs are not be correct. This parameter accounts for the length of the preamble and PLCP header.

Cl 09 SC 9.2.5.4 P0 L0 MyBallot # 436

Raissinia, Ali

Comment Type TR Comment Status D

The added text includes aPHY-RX-START-Delay. Not sure why we need this addition.

SuggestedRemedy

Please clarify or Remove it.

Proposed Response Response Status W

PROPOSED ACCEPT. Definition of the term will be added to the PHY clauses.

Cl 09 SC 9.2.5.7 P0 L0 MyBallot # 326

Sanwalka, Anil

Comment Type TR Comment Status D

Specifying a required (shall) value for ctsTimeout is problematic now. There are a number of implementation in existence that probably wait longer. This would make them non-compliant

SuggestedRemedy

Change the sentence to state "with a value greater than à"

Proposed Response Response Status W

PROPOSED REJECT. If a STA has waited for a period as specified and then an additional length of time, the STA has waited for the initial specified time. It is compliant.

Cl 09 SC 9.2.5.7 P0 L0 MyBallot # 437

Raissinia, Ali

Comment Type TR Comment Status D

The added text includes aPHY-RX-START-Delay. Not sure why we need this addition.

SuggestedRemedy

Please clarify or Remove it.

Proposed Response Response Status W

PROPOSED ACCEPT. The parameter will be defined in the PHY clauses.

Cl 09 SC 9.2.5.7 P0 L0 MyBallot # 31

Ohtani, Yoshihiro

Comment Type TR Comment Status D

The paragraph starting with "After transmitting an RTS frame," is very problematic.

For example, in case of successful sequence of 11b, PHY-RXSTART.indication will occur after 202us (=10us:aSIFSTime + 144us:preamble + 48us:PLCPHeader) after PHY-TXEND.confirm while CTSTimeout = 30us. This means that CTSTimeout will be expired even for successful case and it makes no sense.

For OFDM PHYs, I don't understand where 24us comes from for aPHY-RX-START-Delay. It looks like CTSTimeout is too long (almost CTS frame length) and there could be the case that another STA rather than sending/receiving STA might interrupt this sequence.

After careful consideration based on above observation, the point of my suggestions are follow - CTSTimeout will be expired if a PHY-CCA.indication(busy) does not occur. - No reason to keep aPHY-RX-START-Delay. - aRXTXTurnaroundTime/aMACProcessingDelay should be taken into account for precise calculation.

SuggestedRemedy

Replace "a value of aSIFSTime + aSlotTime + aPHY-RX-START-Delay" with "a value of aSIFSTime + aSlotTime - aRXTXTurnaroundTime - aMACProcessingDelay"

Replace "If a PHY-RXSTART.indication does not occur" with "If a PHY-CCA.indication(busy) does not occur".

Replace "If a PHY-RXSTART.indication does occur" with "If a PHY-CCA.indication(busy) does occur"

Replace "the STA shall wait for the corresponding PHY-RXEND.indication to determine whether the RTS transmission was successful." with "the STA shall wait for the corresponding PHY-RXSTART.indication and PHY-RXEND.indication to determine whether the RTS transmission was successful."

Proposed Response Response Status W

PROPOSED REJECT. See resolution to comment 22.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

Cl 09 SC 9.2.5.7 P0 L0 MyBallot # 208

Mike, Moreton

Comment Type TR Comment Status D

PHY-RX-START-Delay seems to increase the chance of mis-aligned slots for OFDM phys, an hence will increase the number of collisions.

SuggestedRemedy

Require PHY-RX-START-Delay to rounded up to a whole number of slot times. (maybe simplest would be to change the units from time to slots)

Proposed Response Response Status W

PROPOSED REJECT. The values for the PHY-RXSTART-Delay are being corrected. Please renew this comment if you continue to believe this problem persists.

Cl 09 SC 9.2.5.7 P0 L0 MyBallot # 348

Black, Simon

Comment Type TR Comment Status D

I'm not sure how the revised text here for CTSTimeout here works. Consider the HRDSSS PHY. We are told in clause 18 that the value of aPHY-RX-START-Delay is 0us. So after the end of an RTS frame we wait for aSIFS (10us) and aSlot (20us) + aPHY-RX-START-Delay (0us). If the CTS had occurred, after SIFS correctly, we would (incorrectly) call a timeout 20us into the preamble. The MAC doesn't know about the CTS (ignoring a CCA indication) until PH RX-START.ind at the end of the PCLP header (this is what is used later in the clause to stop the timer). I thought maybe aPHY-RX-START-Delay was the length of time from the start of tl packet to the PHY-RX-START, but then that doesn't make sense with it being 0 for the HRDSSS PHY (a secondary point that doesn't help is that aPHY-RX-START-Delay is given a value in the PHY clauses but we never really learn what the start and end points of this period are).

SuggestedRemedy

Please review and at least define what the reference points for aPHY-RX-START-Delay are.

Proposed Response Response Status W

PROPOSED ACCEPT. PHY-RX_Start-Delay will be correctly defined and assigned a proper value in the PHY clauses.

Cl 09 SC 9.2.5.7 P0 L0 MyBallot # 253

Miki, Morgan

Comment Type TR Comment Status D

The modification "with a value of aSIFSTime + aSlotTime + aPHY-RX-START-Delay" made in this clause adds the following issues:

For 11b systems, PHY-RXSTART.indication will be 202us (=10us:aSIFSTime + 144us:preamble + 48us:PLCPHeader) after PHY-TXEND.confirm. However, CTSTimeout is 30us and CTSTimeout will be expired even for successful transmissions.

For OFDM PHYs, it is unclear why 24us (aPHY-RX-START-Delay) is necessary. It looks like CTSTimeout is too long (almost CTS frame length) and there could be a 3rd STA which is not sending/receiving, that might interrupt this sequence.

Thus, the suggestion is to consider aRXTXTurnaroundTime and aMACProcessingDelay instead.

SuggestedRemedy

Replace "a value of aSIFSTime + aSlotTime + aPHY-RX-START-Delay" with "a value of aSIFSTime + aSlotTime - aRXTXTurnaroundTime - aMACProcessingDelay"

Proposed Response Response Status W

PROPOSED REJECT. The PHY-RX-START-Delay term is correct, and for the 11b PHY will be defined and assigned a correct value.

Cl 09 SC 9.2.5.7 P0 L0 MyBallot # 22

Gohda, Wataru

Comment Type TR Comment Status D

The paragraph starting with "After transmitting an RTS frame," is very problematic.

For example, in case of successful sequence of 11b, PHY-RXSTART.indication will occur after 202us (=10us:aSIFSTime + 144us:preamble + 48us:PLCPHeader) after PHY-TXEND.confirm while CTSTimeout = 30us. This means that CTSTimeout will be expired even for successful case and it makes no sense.

For OFDM PHYs, I don't understand where 24us comes from for aPHY-RX-START-Delay. It looks like CTSTimeout is too long (almost CTS frame length) and there could be the case that another STA rather than sending/receiving STA might interrupt this sequence.

After careful consideration based on above observation, the point of my suggestions are follow - CTSTimeout will be expired if a PHY-CCA.indication(busy) does not occur. - No reason to keep aPHY-RX-START-Delay. - aRXTXTurnaroundTime/aMACProcessingDelay should be taken into account for precise calculation.

SuggestedRemedy

Replace "a value of aSIFSTime + aSlotTime + aPHY-RX-START-Delay" with "a value of aSIFSTime + aSlotTime - aRXTXTurnaroundTime - aMACProcessingDelay"

Replace "If a PHY-RXSTART.indication does not occur" with "If a PHY-CCA.indication(busy) does not occur".

Replace "If a PHY-RXSTART.indication does occur" with "If a PHY-CCA.indication(busy) does occur"

Replace "the STA shall wait for the corresponding PHY-RXEND.indication to determine whether the RTS transmission was successful." with "the STA shall wait for the corresponding PHY-RXSTART.indication and PHY-RXEND.indication to determine whether the RTS transmission was successful."

Proposed Response Response Status W

PROPOSED REJECT. The value for the PHY-RXSTART-Delay is not correct for the 11b PHY. It will be corrected.

Cl 09 SC 9.2.5.8 P0 L0 MyBallot # 438

Raissinia, Ali

Comment Type TR Comment Status D

The added text includes aPHY-RX-START-Delay. Not sure why we need this addition.

SuggestedRemedy

Please clarify or Remove it.

Proposed Response Response Status W

PROPOSED ACCEPT. See resolution to comment 437.

Cl 09 SC 9.2.8 P0 L0 MyBallot # 32

Ohtani, Yoshihiro

Comment Type TR Comment Status D

It seems that the definition of ACKTimeout is illegally provided. For example, if we consider the successful frame exchange sequence for 802.11b PHY, PHY-RXSTART.indication occurs 202us (= aSIFSTime + preamble + PLCPHeader) after PHY-TXEND.confirm, while ACKTimeout = 30us. This means that ACKTimeout will be expired even for successful case.

SuggestedRemedy

Fix it.

Proposed Response Response Status W

PROPOSED ACCEPT. See resolution to comment 22.

Cl 09 SC 9.2.8 P0 L0 MyBallot # 23

Gohda, Wataru

Comment Type TR Comment Status D

The paragraph starting with "After transmitting an MPDU that requires an ACK frame as a response" is very problematic.

For example, in case of successful sequence of 11b, PHY-RXSTART.indication will occur after 202us (=10us:aSIFSTime + 144us:preamble + 48us:PLCPHeader) after PHY-TXEND.confirm while ACKTimeout = 30us. This means that ACKTimeout will be expired even for successful case and it makes no sense.

For OFDM PHYs, I don't understand where 24us comes from for aPHY-RX-START-Delay. It looks like ACKTimeout is too long (almost ACK frame length) and there could be the case that another STA rather than sending/receiving STA might interrupt this sequence.

After careful consideration based on above observation, the point of my suggestions are follow:
 - ACKTimeout will be expired if a PHY-CCA.indication(busy) does not occur.
 - No reason to keep aPHY-RX-START-Delay.
 - aRXTXTurnaroundTime/aMACProcessingDelay should be taken into account for precise calculation.

SuggestedRemedy

Replace "a value of aSIFSTime + aSlotTime + aPHY-RX-START-Delay" with "a value of aSIFSTime + aSlotTime - aRXTXTurnaroundTime - aMACProcessingDelay"

Replace "If a PHY-RXSTART.indication does not occur" with "If a PHY-CCA.indication(busy) does not occur".

Replace "If a PHY-RXSTART.indication does occur" with "If a PHY-CCA.indication(busy) does occur"

Replace "the STA shall wait for the corresponding PHY-RXEND.indication to determine whether the MPDU transmission was successful." with "the STA shall wait for the corresponding PHY-RXSTART.indication and PHY-RXEND.indication to determine whether the MPDU transmission was successful."

Proposed Response Response Status W

PROPOSED ACCEPT. See resolution to comment 22.

Cl 09 SC 9.2.8 P0 L0 MyBallot # 327

Sanwalka, Anil

Comment Type TR Comment Status D

Specifying a required (shall) value for ackTimeout is problematic now. There are a number of implementations in existence that probably wait longer. This would make them non-compliant

SuggestedRemedy

Change the sentence to state "with a value greater than a"

Proposed Response Response Status W

PROPOSED REJECT. See resolution to comment 326.

Cl 09 SC 9.2.8 P0 L0 MyBallot # 209

Mike, Moreton

Comment Type TR Comment Status X PHY

PHY-RX-START-Delay seems to increase the chance of mis-aligned slots for OFDM phys, and hence will increase the number of collisions.

SuggestedRemedy

Require PHY-RX-START-Delay to rounded up to a whole number of slot times. (maybe simplest would be to change the units from time to slots)

Proposed Response Response Status O

Cl 09 SC 9.2.8 P0 L0 MyBallot # 254

Miki, Morgan

Comment Type TR Comment Status D

The modification "with a value of aSIFSTime + aSlotTime + aPHY-RX-START-Delay" made in this clause adds the following issues:

For 11b systems, PHY-RXSTART.indication will be 202us (=10us:aSIFSTime + 144us:preamble + 48us:PLCPHeader) after PHY-TXEND.confirm. However, ACKTimeout is 30us and ACKTimeout will be expired even for successful transmissions.

For OFDM PHYs, it is unclear why 24us (aPHY-RX-START-Delay) is necessary. It looks like ACKTimeout is too long (almost ACK frame length) and there could be a 3rd STA which is not sending/receiving, that might interrupt this sequence.

Thus, the suggestion is to consider aRXTXTurnaroundTime and aMACProcessingDelay instead.

SuggestedRemedy

Replace "a value of aSIFSTime + aSlotTime + aPHY-RX-START-Delay" with "a value of aSIFSTime + aSlotTime - aRXTXTurnaroundTime - aMACProcessingDelay"

Proposed Response Response Status W

PROPOSED REJECT. See resolution to comment 22.

Cl 09 SC 9.2.8 P0 L0 MyBallot # 210

Mike, Moreton

Comment Type TR Comment Status D

"without regard to the busy/idle state of the medium." Does this mean CS busy, or physical medium busy? The spec could do with being clearer on this in a lot of places.

SuggestedRemedy

replace with "without regard to the busy/idle state of the CS mechanism"

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 09 SC 9.2.8 P0 L0 MyBallot # 349

Black, Simon

Comment Type TR Comment Status D

See this authors comment on CTSTimeout (9.2.5.7). Same applies here for ACKTimeout.

SuggestedRemedy

See this authors comment on CTSTimeout (9.2.5.7). Same applies here for ACKTimeout.

Proposed Response Response Status W

PROPOSED ACCEPT. See resolution to comment 348.

Cl 09 SC 9.3 P0 L0 MyBallot # 462

McClellan, Kelly

Comment Type E Comment Status X

The reference " Figure 122 (in 1999.1)" should be changed to the correct reference.

SuggestedRemedy

Change to "Figure 122 (in Clause 9.1)".

Proposed Response Response Status O

Cl 09 SC 9.3 P0 L0 MyBallot # 60

Stephens, Adrian

Comment Type TR Comment Status D

"Frames sent during under the DCF .. Function". This is a normative specification for the DCF. It is present in the DCF. It is redundant (and ungrammatical).

SuggestedRemedy

Remove this sentence.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 09 SC 9.3.2.1 P0 L0 MyBallot # 329

Sanwalka, Anil

Comment Type T Comment Status D

This change again potentially make legacy compliant radios non-compliant. In this case I don't know that there are implementations that do not do this.

SuggestedRemedy

Change the shall to a should.

Proposed Response Response Status W

PROPOSED REJECT. The change does not make prior implementations noncompliant. An implementation built to the prior language would also wait for 1 SIFS period before transmission. The specification does not say that the transmission after this delay must occur immediately.

Cl 09 SC 9.3.2.1 P0 L0 MyBallot # 61

Stephens, Adrian

Comment Type TR Comment Status D

The third para: "If there are buffered multicast à frames." This addition is wrong because these frames can only be transmitted after a beacon with a zero DTIM count, if there are any power savers.

SuggestedRemedy

I think this may be partly redundant with 9.3.3.1 "if there are associated à the broadcasts and multicasts .. with a value of 0".

Either fix it in situ, or describe in 9.3.3.1 what happens if there are no associated STA in PS mode.

Proposed Response Response Status W

PROPOSED ACCEPT. Add a reference to 9.3.3.1 at the end of the last sentence in the second paragraph: ", as described in 9.3.3.1"

Cl 09 SC 9.3.3.2 P0 L0 MyBallot # 291

Kruys, Jan

Comment Type T Comment Status D

This section is advisory, there are other ways to achieve the required operational behavior

SuggestedRemedy

All "shall" must be changed to "should".

Proposed Response Response Status W

PROPOSED ACCEPT. The section is not advisory, but normative.

Cl 09 SC 9.3.3.3 P0 L0 MyBallot # 292

Kruys, Jan

Comment Type T Comment Status D

Same as preceding -

SuggestedRemedy

replace first "shall" with "should"

Proposed Response Response Status W

PROPOSED REJECT. Same as preceding, see resolution to comment 291.

Cl 09 SC 9.3.3.3 P0 L0 MyBallot # 62

Stephens, Adrian

Comment Type TR Comment Status D

"maximum-sized MAC frame, expanded by WEP" This ignores RSNA

SuggestedRemedy

Replace "expanded by WEP" with something non-specific to WEP.

Proposed Response Response Status W

PROPOSED ACCEPT. Replace "expanded by WEP" with "expanded by security mechanisms".

Cl 09 SC 9.3.3.4 P0 L0 MyBallot # 293

Kruys, Jan

Comment Type T Comment Status D

The last sentence does not specify a testable requirement

SuggestedRemedy

replace first "shall" with "should"

Proposed Response Response Status W

PROPOSED REJECT. The condition does appear to be testable.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

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Cl 09 SC 9.3.3.4

Cl 09 SC 9.3.4.2 P0 L0 MyBallot # 63

Stephens, Adrian

Comment Type TR Comment Status D

"CFP (because they have to be awake to receive the DTIM that initiated the CFP), but not requiring them to stay awake". This is misleading. It is true only if the device wants to receive broadcast traffic while powersaving. However, if it does not, the AP would attempt to send it unicast data.

SuggestedRemedy

Remove the enclosing sentence.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 09 SC 9.4 P0 L0 MyBallot # 330

Sanwalka, Anil

Comment Type TR Comment Status D

In the second paragraph the change from fragment to MPDU is incorrect and confusing.

SuggestedRemedy

Reject the changes from fragment to MPDU.

Proposed Response Response Status W

PROPOSED REJECT. The text is clear and accurate. The commenter is solicited to describe the ways in which the text is not correct.

Cl 09 SC 9.4 P0 L0 MyBallot # 567

Odman, Knut

Comment Type E Comment Status X

Page 223. Check all occurrences of "an MPDU". The changes will sometimes cause it to become "a MPDU", which is wrong.

SuggestedRemedy

correct typos

Proposed Response Response Status O

Cl 09 SC 9.4 P0 L0 MyBallot # 64

Stephens, Adrian

Comment Type TR Comment Status D

"before WEP processing". Again, some generic means to refer to expansion as a result of the security encapsulation operation is required.

SuggestedRemedy

Replace with a generic term.

Proposed Response Response Status W

PROPOSED ACCEPT. Replace "before WEP processing" with "before processing by the security mechanism"

Cl 09 SC 9.4 P0 L0 MyBallot # 211

Mike, Moreton

Comment Type TR Comment Status D

The whole MSDU/MPDU/MMPDU is a conceptual mess (a search for MMPDU will show that a huge number of cases it's preceded by "MPDU or" which alone is evidence that something has gone wrong) - it's not clear whether MMPDU is more like an MSDU or an MPDU which makes the whole thing very confused.

SuggestedRemedy

Given it's unlikely anyone has the time to really sort this out, I actually prefer the original text about fragmentation in this section, so back out the changes.

Proposed Response Response Status W

PROPOSED REJECT. The text is clear and accurate. The commenter is solicited to describe the ways in which the text is not correct.

Cl 09 SC 9.6 P0 L0 MyBallot # 296

Kruys, Jan

Comment Type T Comment Status D

Sixth para, middle: Class or Type? The table in 9.6.1 says "class"

SuggestedRemedy

0

Proposed Response Response Status W

PROPOSED ACCEPT. Class is correct. Delete "type" and replace with "class".

Cl 09 SC 9.6 P0 L0 MyBallot # 295

Kruys, Jan

Comment Type T Comment Status D

The fifth para refers to a disfunctional but not "illegal" choice of the implementation

SuggestedRemedy

replace "shall" with "should"

Proposed Response Response Status W

PROPOSED REJECT. The "shall" makes this an illegal choice for a STA. This is the intent.

Cl 09 SC 9.6 P0 L0 MyBallot # 294

Kruys, Jan

Comment Type T Comment Status D

The fourth para mentions "rate selection mechanism" the others para's do not. This is confusing.

SuggestedRemedy

First describe the conditions in which the rate selection mechanism determines the rate and then list the exceptions.

Proposed Response Response Status W

PROPOSED REJECT. The specification of the rate switching mechanism (algorithm) is out o scope and so stated in the clause. The conditions under which a STA can use the mechnism are stated as "some PHYs have multiple data rate capabilities".

Cl 09 SC 9.6 P0 L0 MyBallot # 297

Kruys, Jan

Comment Type T Comment Status D

The sith and 7th para set down a complex set of alternatives for a rate choice that in most implementations will be exceedingly simple - use the same rate and other PHY settings as th received message. The extra degrees of choice offered to the implementor by these two para' add complexity but do little or nothing to improve performance. In any case, the responding PI should be allowed to make the assumption that whatever rate it received at, is a valid rate.

SuggestedRemedy

Repace the two para's by a modified version of the last sentence of the sixth: The Control Response frame shall be sent using the same rate and PHY options as the received frame.

Proposed Response Response Status W

PROPOSED REJECT. The intent of the specification is to ensure that all STAs in a BSS are able to receive the control frames. Changing the multirate mechanism as requested, would eliminate this intent.

Cl 09 SC 9.6 P0 L0 MyBallot # 212

Mike, Moreton

Comment Type ER Comment Status X

The revision marking of the first occurence of "is of the same modulation type class" seems tc have got messed up.

SuggestedRemedy

"type" should be struck through, "class" underlined.

Proposed Response Response Status O

Cl 09 SC 9.6 P0 L0 MyBallot # 409

Edwards, Bruce

Comment Type ER Comment Status X

Modulation types are not explicitly defined in section 9.6.1. They are kind of defined the footnc at the bottom of the page.

SuggestedRemedy

Define what a modulation type is in section 9.6.1

Proposed Response Response Status O

Cl 09 SC 9.6.1 P0 L0 MyBallot # 127

Myles, Andrew

Comment Type TR Comment Status D

The text distinguishes between modulation type and class. It appears that multiple modulation types make up a modulation class.

However, modulation type is never explicitly defined

SuggestedRemedy

Define modulation type

Proposed Response Response Status W

PROPOSED ACCEPT. Modulation type is defined in the appropriate PHY clauses.

Cl 09 SC 9.6.1 P0 L0 MyBallot # 632
 Olson, Tim
 Comment Type E Comment Status X
 Clause reference 2249.6 does not look right.
 SuggestedRemedy
 Correct
 Proposed Response Response Status O

Cl 09 SC 9.6.1 P0 L0 MyBallot # 265
 Karcz, Kevin
 Comment Type E Comment Status X
 Page 225, "2249.6" should be "9.6"
 SuggestedRemedy
 edit
 Proposed Response Response Status O

Cl 09 SC 9.6.1 P0 L0 MyBallot # 213
 Mike, Moreton
 Comment Type E Comment Status X
 The revision marking seems a bit strange - only part of it is underlined, and only part has a sic bar.
 SuggestedRemedy
 Make it consistent.
 Proposed Response Response Status O

Cl 09 SC 9.6.1 P0 L0 MyBallot # 331
 Sanwalka, Anil
 Comment Type TR Comment Status D
 The new paragraph is very confusing, with an incorrect clause reference. The referece to row: in the table is also confusing as the left hand cell in "row" 3 actually has 2 rows without a line through them.
 SuggestedRemedy
 Please clarify
 Proposed Response Response Status W
 PROPOSED ACCEPT. The reference will be corrected. The table is correct and holds no rows without dividing lines. Change "Description" in the top row of Table 36 to "Modulation Type".

Cl 09 SC 9.6.1 P0 L0 MyBallot # 445
 Myles, Andrew
 Comment Type TR Comment Status D
 The text distinguishes between modulation type and class. It appears that multiple modulation types make up a modulation class.
 However, modulation type is never explicitly defined
 SuggestedRemedy
 Define modulation type
 Proposed Response Response Status W
 PROPOSED ACCEPT. Modulation type is defined in the appropriate PHY clauses.

Cl 09 SC 9.6.1.1 P0 L0 MyBallot # 350
 Black, Simon
 Comment Type E Comment Status X
 The reference in the first line of this clause is not meaningful
 SuggestedRemedy
 Correct
 Proposed Response Response Status O

Cl 09 SC 9.61. P0 L0 MyBallot # 128

Myles, Andrew

Comment Type ER Comment Status X

There is no need to have the material in 9.6.1 in a separate sub-section

SuggestedRemedy

Incorporate 9.6.1 into 9.6

Proposed Response Response Status O

Cl 09 SC 9.61. P0 L0 MyBallot # 446

Myles, Andrew

Comment Type ER Comment Status X

There is no need to have the material in 9.6.1 in a separate sub-section

SuggestedRemedy

Incorporate 9.6.1 into 9.6

Proposed Response Response Status O

Cl 09 SC 9.7 P0 L0 MyBallot # 129

Myles, Andrew

Comment Type TR Comment Status D

The "frames in sequence" is often incorrect in Table 37 and Table 38

eg the 4th row of Table 37 claims there are 2 frames in the sequence, when there are clearly ' or more"

SuggestedRemedy

Correct all instances in Table 37 and 38

Proposed Response Response Status W

PROPOSED ACCEPT. See resolution to comment 447.

Cl 09 SC 9.7 P0 L0 MyBallot # 332

Sanwalka, Anil

Comment Type TR Comment Status D

In Table 38, removing the indicated sequence disallows sending frames to third parties during the CFP. This was previously allowed and could make legacy equipment non-compliant. I dor see the need to do this.

SuggestedRemedy

Reject the change to table 38.

Proposed Response Response Status W

PROPOSED REJECT. This row in the table conflicted with other parts of the standard. The deletion from the table corrects this.

Cl 09 SC 9.7 P0 L0 MyBallot # 447

Myles, Andrew

Comment Type TR Comment Status D

The "frames in sequence" is often incorrect in Table 37 and Table 38

eg the 4th row of Table 37 claims there are 2 frames in the sequence, when there are clearly ' or more"

SuggestedRemedy

Correct all instances in Table 37 and 38

Proposed Response Response Status W

PROPOSED ACCEPT.

Table 37: Change "2" to "2 or more" in the row for {RTS – CTS –} [Frag – ACK –] Last – ACK. Change "3" to "3 or more" in the row for PS-Poll – [Frag – ACK –] Last – ACK

Table 38: Change "1 or 2" to "1" in the row for Mgmt(bc).

Cl 09 SC 9.9 P0 L0 MyBallot # 299

Kruys, Jan

Comment Type E Comment Status X

The text is wordy potentially confusing

SuggestedRemedy

The PHY of a WLAN is subject to regulations that can vary significantly from one regulatory domain to another. This clause provides the framework for operation across regulatory domain and describes mechanism that allows stations to support cross-domain mobility and operation in multiple regulatory domains. When this mechanism is active, the dot11MultiDomainCapabilityEnabled attribute should be set to true.

NOTE: This clause does not eliminate the need to obtain type acceptance, regulatory approval, equipment authorization, or equipment certification in each of the regulatory domains in which the equipment will operate. The mechanisms described in this clause provide the information the station to identify the regulatory domain in which it is located and to cease operation while those domains for which it does not have type approval. It is incumbent upon the implementer to provide proof of compliance to the requirements of individual regulatory agencies.

Note that the method for configuring individual stations is outside the scope of this standard. A station must be properly configured for operation in a particular regulatory domain prior to beginning normal operation. Particular care must be taken when operating in an IBSS configuration.

Proposed Response Response Status O

Cl 09 SC 9.9 P0 L0 MyBallot # 298

Kruys, Jan

Comment Type E Comment Status X

"Geo political" is the wrong word in this context

SuggestedRemedy

Replace with "regulatory domain"

Proposed Response Response Status O

Cl 09 SC 9.9.2.1 P0 L0 MyBallot # 481

Engwer, Darwin

Comment Type ER Comment Status X

Table 39, 40 and 41, the index column headings do not line up with the corresponding column

SuggestedRemedy

line up the columns

Proposed Response Response Status O

Cl 09 SC 9.9.2.1 P0 L0 MyBallot # 480

Engwer, Darwin

Comment Type ER Comment Status X

incorrect reference to another clause

SuggestedRemedy

reference to "described in 35214.6.8 or a hopping", should be "described in 14.6.8 or a hopping"

Proposed Response Response Status O

Cl 10 SC 10. P0 L0 MyBallot # 503

Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent amendments and more focused individual changes, there remain unresolved inconsistencies between the text in this clause and other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 10 SC 10. P0 L0 MyBallot # 301

Kruys, Jan

Comment Type TR Comment Status D

The opening sentence of 10.1 declares the subject matter to be conceptual whereas the last sentences require compliance - in this case with the management interfaces. It is a good idea keep a standard free of implementation descriptions/prescriptions and one would not expect to see formal testing of these interfaces.

SuggestedRemedy

The whole of this Clause should be labelled "informative" and moved to an annex.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Replace normative usage of "shall" or "may" in the service primitives with descriptive verbs.

Cl 10 SC 10.1 P0 L0 MyBallot # 66

Stephens, Adrian

Comment Type TR Comment Status D

"In order to provide correct MAC operation, an SME shall be present within each STA. The SME is a layerindependent entity that may be viewed as residing in a separate management plane or as residing off to the side. The exact functions of the SME are not specified in this standard"

Normative requirements relate to behaviour, not the presence of an entity with explicitly unspecified behaviour.

Moreover if correct operation of the MAC depends on this unspecified behaviour, we have a problem, Houston.

SuggestedRemedy

Replace first quoted sentence with: "An SME is present in each STA".

Alternatively, one of my other comments points out that we do actually (and wrongly) define quite a lot of normative behaviour for the SME (for example in the state machines that show authentication being performed before association, and some of the procedures in the security section). The harder (but better) solution is to identify that normative behaviour and move it to a subclause labelled "required SME behaviour". Then you can require it to be present, and reference it from the PICS.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. See resolution to comment 301.

Cl 10 SC 10.3 P0 L0 MyBallot # 633

Olson, Tim

Comment Type E Comment Status X

The vendor specific element is missing from all of the primitives.

SuggestedRemedy

Add in the vendor specific element to association, reassociation, ect. Primitives.

Proposed Response Response Status O

Cl 10 SC 10.3.10.2.2 P0 L0 MyBallot # 482

Engwer, Darwin

Comment Type TR Comment Status D

Need to add another result code to fully address all the error conditions cited in clause 10.3.10.1.3.

SuggestedRemedy

Add the result code RESET_REQUIRED_BEFORE_START.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 10 SC 10.3.16.2.2 P0 L0 MyBallot # 352

Black, Simon

Comment Type TR Comment Status D needs text

The description column of the Resultcode parameter doesn't match the remainder of the text in this section. It reports the outcome of the request to send the frame and not the actual TPC adaptation procedure as 10.3.16.2.4 suggests.

SuggestedRemedy

Correct Description column in table to match remainder of section.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. It is much more than the description column that needs fixing. The required service primitives (indicate and response) are not present to accurately reflect the handshake between peer entities. The service primitives will be added.

Cl 10 SC 10.3.2.1.2 P0 L0 MyBallot # 333
 Sanwalka, Anil
 Comment Type TR Comment Status D
 Wildcard SSID is not defined anywhere.
 SuggestedRemedy
 Define it.
 Proposed Response Response Status W
 PROPOSED ACCEPT. It is defined in clause 7.3.2.1

Cl 10 SC 10.3.2.2.2 P0 L0 MyBallot # 334
 Sanwalka, Anil
 Comment Type T Comment Status D
 Since Beacon and Probe Response frames are required to contain the PHY Parameter set, I don't see the need for the extra sentence indicating what to do if it is not preset.
 SuggestedRemedy
 Delete the sentence "If no PHY Parameter Set is à"
 Proposed Response Response Status W
 PROPOSED REJECT. The PHY Parameter Set in the BSSDescription is a parameter that can be filled with values from the PHY Parameter Set information element. The change describes how to fill the parameter when the information element is not present, as is the case with some PHYs.
 Add "information element" after "If no PHY Parameter Set" in the description column of table f the BSSDescription.

Cl 10 SC 10.3.4.3 P0 L0 MyBallot # 215
 Mike, Moreton
 Comment Type TR Comment Status D
 Note that the changes make this section inconsistent with 11.3.2 (at least). Same problem with 10.3.4.3. While I don't mind either way about this change, I doubt it's worth anyone going to the effort of changing the other sections it impacts.
 SuggestedRemedy
 Remove changes to 10.3.4.3 and 10.3.4.4
 Proposed Response Response Status W
 PROPOSED REJECT. The revised service primitives provide the indented and correct mechanism.

Cl 10 SC 10.3.4.4.2 P0 L0 MyBallot # 602
 Reuss, Edward
 Comment Type E Comment Status X
 Spelling error "ResultCole"
 SuggestedRemedy
 Change "ResultCole" to "ResultCode".
 Proposed Response Response Status O

Cl 10 SC 10.3.4.4.2 P0 L0 MyBallot # 410
 Edwards, Bruce
 Comment Type ER Comment Status X
 The table has an entry named "ResultCole"
 SuggestedRemedy
 Replace with "ResultCode"
 Proposed Response Response Status O

Cl 10 SC 10.3.4.6.2 P0 L0 MyBallot # 411
 Edwards, Bruce
 Comment Type ER Comment Status X
 PeerStaAddress should say "...from which the authentication request was received."
 SuggestedRemedy
 Make the change.
 Proposed Response Response Status O

Cl 10 SC 10.3.6.1.2 P0 L0 MyBallot # 335

Sanwalka, Anil

Comment Type T Comment Status D

The change here indicates that the capability field is a request, but in some cases it is really a "capability". In clause 10.3.6.3.2 this field is called a capability definition when it is passed up the AP. I am not sure of the impetus for these changes.

SuggestedRemedy

Please clarify

Proposed Response Response Status W

PROPOSED REJECT. The text is correct and clear. Please indicate in a future comment where ambiguity exists.

Cl 10 SC 10.3.6.2.2 P0 L0 MyBallot # 351

Black, Simon

Comment Type TR Comment Status D

The added Reasons to the ResultCode parameter in MLME-ASSOCIATE.cnf primitives are incomplete and in some cases have no obvious mapping to the returned status code. This is logical interface so why not do the simple thing and simply return the status code from the frame if you must expand.

SuggestedRemedy

Additions useful?

Proposed Response Response Status W

PROPOSED REJECT. The commenter is solicited to enumerate the status codes that are not represented in the clause.

Cl 10 SC 10.3.6.3 P0 L0 MyBallot # 216

Mike, Moreton

Comment Type E Comment Status X

It's very difficult to find the beginning of each service primitive description due to the similar formatting.

SuggestedRemedy

Any chance we could have each one starting on a new page?

Proposed Response Response Status O

Cl 10 SC 10.3.6.3.1, 10.3.6.4.1, 10 P0 L0 MyBallot # 110

Bagby, David

Comment Type TR Comment Status D

(search for the phrase) ù delete the trailing phrase ò which is acting as an AP ò ù the condition appears not to be relevant to the sentence and MACS don't ò act as APs ò, MACs are a component of a more complex thing called an AP. In general these sections all need some rethinking. The Mac protocol runs between two 802.11 mac instances. One of them may be a MAC that is part of an entity that people think of as an AP ù but APs are not = to a MAC. The wording in several places also involves the phrase ò assigned by the AP ò ù just how does this AP thing assign stuff and give it to the MAC (via what interface)? The choice of phrasing seen to raise more questions than it answers.

SuggestedRemedy

re-write impacted sections to be more precise to remove the objections noted.

Proposed Response Response Status W

PROPOSED ACCEPT. In all of clause 10: Replace all "acting as an AP" with "within an AP".

Cl 10 SC 10.3.6.3.2 P0 L0 MyBallot # 218

Mike, Moreton

Comment Type TR Comment Status D

Is only generated indirectly "as a result of an MLME-ASSOCIATE.request".

SuggestedRemedy

Change to "on completion of the association procedure" or something like that ò

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Add "or receipt of an association response frame from the peer MAC entity" after "MLME-ASSOCIATE.request".

Cl 10 SC 10.3.6.3.2 P0 L0 MyBallot # 603

Reuss, Edward

Comment Type E Comment Status X

The term "desired SSID" is redundant.

SuggestedRemedy

In SSID entry description, delete the word "desired".

Proposed Response Response Status O

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

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Cl 10 SC 10.3.6.3.2

Cl 10 SC 10.3.6.4.2 P0 L0 MyBallot # 219

Mike, Moreton

Comment Type TR Comment Status D

I don't think "REFUSED_NOT_AUTHENTICATED" should be a possible result code - the MAC should do this itself. Also 10.3.7.4.2

SuggestedRemedy

Remove "REFUSED_NOT_AUTHENTICATED" from 10.3.7.4.2 and 10.3.6.4.2

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 10 SC 10.3.6.4.2 P0 L0 MyBallot # 220

Mike, Moreton

Comment Type TR Comment Status D

I don't think "REFUSED_BASIC_RATES_MISMATCH" should be a possible result code - the MAC should do this itself. Also 10.3.7.4.2

SuggestedRemedy

Remove "REFUSED_BASIC_RATES_MISMATCH" from 10.3.7.4.2 and 10.3.6.4.2

Proposed Response Response Status W

PROPOSED REJECT. The SME will generate this result code when the appropriate condition applies. This is not generated in the MAC and no such specification exists in the standard.

Cl 10 SC 10.3.6.4.4 P0 L0 MyBallot # 221

Mike, Moreton

Comment Type ER Comment Status X

"transmission of a response" - what sort of response?

SuggestedRemedy

"transmission of an AssociationResponse"

Proposed Response Response Status O

Cl 10 SC 10.3.7.1.2 P0 L0 MyBallot # 336

Sanwalka, Anil

Comment Type T Comment Status D

The change here indicates that the capability field is a request, but in some cases it is really a "capability". In clause 10.3.7.3.2 this field is called a capability definition when it is passed up the AP. I am not sure of the impetus for these changes.

SuggestedRemedy

Please clarify

Proposed Response Response Status W

PROPOSED REJECT. The information is a real request and may not indicate all of the capabilities of the STA.

Cl 10 SC 10.3.7.3.2 P0 L0 MyBallot # 604

Reuss, Edward

Comment Type E Comment Status X

The term "desired SSID" is redundant.

SuggestedRemedy

In SSID entry description, delete the word "desired".

Proposed Response Response Status O

Cl 11 SC 11. P0 L0 MyBallot # 504

Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent amendments and more focused individual changes, there remain unresolved inconsistencies between the text in this clause and other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 11 SC 11.1.2 P0 L0 MyBallot # 303

Kruys, Jan

Comment Type TR Comment Status D

Section 11 contains many references to the internal interfaces of the MLME and SME in the sense of "shall do X". it should be clear that these "shall" do not define mandatory statements that require verification testing etc. Also, the sections on TPC And DFS are not correct and should better be moved to clause 9.

SuggestedRemedy

Ideally, the MLME related material should be removed or referenced to an Annex that deals w the MLME. It may be more efficient to add a note to the beginning of this Clause that states "where referecense is made to the MLME interfaces and interface primitives, it should be understood that these refer to the informative models presented in Annexes "was clause 10". None of the statements "shall....." are to be considered compliance criteria". Further, the sections on TPC and DFS should be moved to Clause 9 - and the reference to "ERC/DEC/(99)23" should be replaced by "Regulations that apply to the 5GHz band in most regulatory domains". The reference "(see ETSI EN 301 893)" should be replaced by "(see ET: EN 301 893, FCC R&O 03-287 and other regulatory requirements documents.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

There is insufficient detail in the comment to identify the specific occurrences of the use of MLME and SME to which the commenter objects. The commenter is solicited to supply this detail in a subsequent ballot. Note: compliance requirements are identified in Annex A.

The TPC and DFS functionality is a management function and should remain in clause 11.

In 11.5 and 11.6, replace "ERC/DEC/(99)23" with"Regulations that apply to the 5GHz band in most regulatory domains".

In 11.6.3, 11.6.4, and 11.6.5, delete "(see ETSI EN 301 893)".

Cl 11 SC 11.1.2 P0 L0 MyBallot # 448

Myles, Andrew

Comment Type TR Comment Status D

The text claims that the TSF in a BSS is always maintained to within 4 symbols.

It is still unclear how this is calculated

SuggestedRemedy

Explain

Proposed Response Response Status W

PROPOSED REJECT. The old value did not change with the introduction of the OFDM PHY and was, consequently, incorrect. This new value does accommodate the OFDM PHY and th clock offsets that may exist between MAC and PHY in a STA and between two or more STAs In addition, this is not a requirement to be met, but a description of what is obtained using the specified mechanism (which did not change).

Cl 11 SC 11.1.2 P0 L0 MyBallot # 449

Myles, Andrew

Comment Type E Comment Status X

"contining" should be "continuing"

SuggestedRemedy

Correct

Proposed Response Response Status O

Cl 11 SC 11.1.2 P0 L0 MyBallot # 131

Myles, Andrew

Comment Type E Comment Status X

"contining" should be "continuing"

SuggestedRemedy

Correct

Proposed Response Response Status O

Cl 11 SC 11.1.2 P0 L0 MyBallot # 439

Raissinia, Ali

Comment Type TR Comment Status D

The added text "data symbol containing the first bit of the timestamp" implies that MAC is aware of PHY data symbols. MAC only knows bits.

SuggestedRemedy

Revert to the original text.

Proposed Response Response Status W

PROPOSED REJECT. The MAC does know when it delivers the first bit over the MAC-PHY interface. It is also required to know the processing delay through the PHY for the symbol containing that bit to reach the antenna. Therefore, the MAC knows when the data symbol containing the first bit of the timestamp reaches the antenna.

Cl 11 SC 11.1.2 P0 L0 MyBallot # 130

Myles, Andrew

Comment Type TR Comment Status D

The text claims that the TSF in a BSS is always maintained to within 4 symbols.

It is still unclear how this is calculated

SuggestedRemedy

Explain

Proposed Response Response Status W

PROPOSED REJECT. See resolution to comment 448.

Cl 11 SC 11.1.2 P0 L0 MyBallot # 527

Jalfon, Marc

Comment Type TR Comment Status D

This indicates that synchronization is to within an accuracy of 4 symbols. For OFDM PHYs this is 16us, which is a lot different to the previous value of 4us.

Where does the additional 12us of uncertainty spring from?

SuggestedRemedy

Add a note justifying the new relaxed value, or restore it to the old value.

Proposed Response Response Status W

PROPOSED REJECT. The old value did not change with the introduction of the OFDM PHY and was, consequently, incorrect. This new value does accommodate the OFDM PHY and the clock offsets that may exist between MAC and PHY in a STA and between two or more STAs. In addition, this is not a requirement to be met, but a description of what is obtained using the specified mechanism (which did not change).

Cl 11 SC 11.1.2 P0 L0 MyBallot # 33

Stephens, Adrian

Comment Type T Comment Status D

This indicates that synchronization is to within an accuracy of 4 symbols. For OFDM PHYs this is 16us, which is a lot different to the previous value of 4us.

Where does the additional 12us of uncertainty spring from?

SuggestedRemedy

Add a note justifying the new relaxed value, or restore it to the old value.

Proposed Response Response Status W

PROPOSED REJECT. The old value did not change with the introduction of the OFDM PHY and was, consequently, incorrect. This new value does accommodate the OFDM PHY and the clock offsets that may exist between MAC and PHY in a STA and between two or more STAs. In addition, this is not a requirement to be met, but a description of what is obtained using the specified mechanism (which did not change).

Cl 11 SC 11.1.3 P0 L0 MyBallot # 222

Mike, Moreton

Comment Type E Comment Status X

Seem to have some small fonts in the middle of "Upon receipt of an MLME-SCAN.request with the broadcast SSID parameter set to the wildcard SSID, the STA shall passively scan for any Beacon frames, or actively transmit Probe frames containing the wildcard broadcast SSID, a"

SuggestedRemedy

Make them the same size.

Proposed Response Response Status O

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

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Cl 11 SC 11.1.3

Cl 11 SC 11.1.3 P0 L0 MyBallot # 67

Stephens, Adrian

Comment Type **TR** Comment Status **D**

"If a STA/E's scanning does not result in finding a BSS with the desired SSID and of the desired type, or does not result in finding any BSS, the STA may start an IBSS"

This behaviour is not performed in the MLME entity.

SuggestedRemedy

Move to the SME.

Proposed Response Response Status **W**

PROPOSED REJECT. The statement is correct and relevant in its current location.

Cl 11 SC 11.1.3.1 P0 L0 MyBallot # 354

Black, Simon

Comment Type **TR** Comment Status **D**

Don't understand the change that's been made here - what is aScanType - surely this should be the requested scan type, or ScanType parameter in MLME-SCAN.req.

SuggestedRemedy

Clarify.

Proposed Response Response Status **W**

PROPOSED ACCEPT. Replace "aScanType" with "ScanType".

Cl 11 SC 11.1.3.1 P0 L0 MyBallot # 353

Black, Simon

Comment Type **TR** Comment Status **D**

In passive scan 'the STA shall listen to each channel scanned for no longer than a maximum duration defined by the ChannelTime parameter.' I saw a MaxChannelTime and MinChannelTime in MLME-SCAN.req but no ChannelTime.

SuggestedRemedy

Clarify.

Proposed Response Response Status **W**

PROPOSED ACCEPT. Change "ChannelTime" to "MaxChannelTime".

Cl 11 SC 11.1.3.1 P0 L0 MyBallot # 223

Mike, Moreton

Comment Type **ER** Comment Status **X**

There is no "aScanType" attribute - just a "ScanType" parameter.

SuggestedRemedy

Change "If aScanType is passive," to "If the ScanType parameter indicates a passive scan"

Proposed Response Response Status **O**

Cl 11 SC 11.1.3.2 P0 L0 MyBallot # 483

Engwer, Darwin

Comment Type **TR** Comment Status **D**

incorrect primitive reference.

SuggestedRemedy

Change "PHY-CCARESET.request" to "PHY-CCARESET.confirm".

Proposed Response Response Status **W**

PROPOSED ACCEPT. Incorrect clause reference: change 12.3.5.9.2 "PHY-CCARESET.request" to "PHY-CCARESET.confirm".

In 11.1.3.2, change "Probe frames" to "Probe Request frames"

Cl 11 SC 11.1.3.2.2 P0 L0 MyBallot # 355

Black, Simon

Comment Type **ER** Comment Status **X**

There is a typo in bullet c - Request

SuggestedRemedy

Correct

Proposed Response Response Status **O**

Cl 11 SC 11.1.3.2.2 P0 L0 MyBallot # 356

Black, Simon

Comment Type TR Comment Status D

In the active scan procedure the ProbeTimer is started after the probe request is sent. It is the compared to MinChannelTime and MaxChannelTime. In clause 10.3.2.1.2 these times are defined as the minimum, or maximum time to spend on the channel when scanning (e.g. MinChannelTime minimum is ProbeDelay). There is an inconsistency here - one is a probe response timeout the other is an on channel time.

SuggestedRemedy

As clause 11 is the normative text and clause 10 describes a logical interface it is probably clause 10 that should be brought into line with clause 11.

Proposed Response Response Status W

PROPOSED REJECT. The use of the ChannelTime values is correct in this usage. The STA starts a ProbeTimer to measure the time after sending the probe request. If it has not detecte any activity by MinChannelTime, it assume there is no response coming. If it has detected activity, but not received a probe response by MaxChannelTime, it leaves to scan the next channel.

Cl 11 SC 11.1.3.2.2 P0 L0 MyBallot # 584

McCann, Stephen

Comment Type E Comment Status X

typo in point c)

SuggestedRemedy

change "reqeust" to "request"

Proposed Response Response Status O

Cl 11 SC 11.1.3.4 P0 L0 MyBallot # 579

McCann, Stephen

Comment Type E Comment Status X

Inconsistent use of "an" and "a" with abbreviations, e.g. "a STA".

SuggestedRemedy

Change to "an STA"

Proposed Response Response Status O

Cl 11 SC 11.1.3.4 P0 L0 MyBallot # 68

Stephens, Adrian

Comment Type TR Comment Status D

This section highlights that the state machine described in 5.5 is an over simplification. There should be states to reflect that it is not synchronized (i.e. cannot exchange class 1 frames), is synchronized (can exchange class 1 frames), authenticated (can exchange class 2 frames) and associated (can exchange class 3 frames).

SuggestedRemedy

Add a state to the state diagram to show the process of transitioning from idle to synchronized and related to the procedures of this section.

Proposed Response Response Status W

PROPOSED REJECT. The diagram in 5.5 is intended to be a very simple description and no to include all of the protocol complexity.

Cl 11 SC 11.1.3.4 P0 L0 MyBallot # 580

McCann, Stephen

Comment Type E Comment Status X

Badly phrased sentence "will adopt the same parameters except also excluding CF paramete set"

SuggestedRemedy

Not sure.

Proposed Response Response Status O

Cl 11 SC 11.1.3.4 P0 L0 MyBallot # 224

Mike, Moreton

Comment Type TR Comment Status D

The resulting clause is still a mess, and it would probably be better to leave it alone rather than just add to the confusion. For example, the service primitive implies you can use a probe request, but the description says you must wait for a beacon. How does data transfer apply to joined/not joined state? When does the state change to join during this process? Why are you no longer allowed to join based on parameters stored from the scan?

SuggestedRemedy

Either write a more complete, more structured definition, or leave it as it was.

Proposed Response Response Status W

PROPOSED REJECT. The original description is inadequate. The new text provides clarification and is a result of processing interpretation requests.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

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Cl 11 SC 11.1.3.4

Cl 11 SC 11.2.1 P0 L0 MyBallot # 358

Black, Simon

Comment Type TR Comment Status D

A deferred PS Poll response is allowed in the frame exchange sequences (i.e. responding with an ACK and then later sending the MSDU) and described in 11.2.1 (para 4), but not mentioned in 11.2.1.4 - it ought to be mentioned in point (f). Also 11.2.1.6 (c) probably ought to make clear that the response is a data frame

SuggestedRemedy

Consider clarification in 11.2.1.4 and 11.2.1.6.

Proposed Response Response Status W

PROPOSED ACCEPT. In 11.2.1.4 f) add after the first sentence: "The AP can respond with either an immediate Data frame or with an ACK, while delaying the responding Data frame."

In 11.2.1.6 c) change "receives the response" to "receives the Data frame in response".

Cl 11 SC 11.2.1 P0 L0 MyBallot # 357

Black, Simon

Comment Type E Comment Status X

Para 3 says: 'STAs operating in PS modes shall periodically listen for beacons, as determined by the STA's ListenInterval and ReceiveDTIMs parameters of the MLME-POWERMGT.request primitive.' ListenInterval is not in the primitive.

SuggestedRemedy

Reword. Add text in paren and delete text between //: 'STAs operating in PS modes shall periodically listen for beacons, as determined by the STA's ListenInterval and (the) ReceiveDTIMs parameter/s/ (in)/of/ the MLME-POWERMGT.request primitive.'

Proposed Response Response Status O

Cl 11 SC 11.2.1.1 P0 L0 MyBallot # 88

Oakes, Ivan

Comment Type TR Comment Status D

The additions underlined ("data" and "The Power Management bit shall not be set in any management frame") change the legacy behaviour which in my opinion was not broken or ambiguous. Firstly the PS bit should be set uniformly over all frames - this includes management, control, in fact every frame sent by a STA. This is also indicated by 11.2.1 "shall inform the AP of this fact using the Power Management bits within the Frame Control field of transmitted frames". Secondly management frames could be used to indicate PS change of state - why not? Of course this did not happen in the past as there were no management frames sent beyond auth and assoc, but now there is - e.g. "action".

SuggestedRemedy

Reverse the change to 11.2.1.1, removing the words "data" and "The Power Management bit shall not be set in any management frame."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Updated text to reflect the use of Action frames for power management. Also Delete the inserted word "Data".

Cl 11 SC 11.2.1.1 P0 L0 MyBallot # 337

Sanwalka, Anil

Comment Type TR Comment Status D

Changing the description to only allow power management information to be transferred to the AP via Data frames is not acceptable. There are a number of implementations that use the PS-Poll frame and Null frames to transfer this information. Forgetting about the issue of legacy devices, I haven't seen any justification for this change

SuggestedRemedy

Reject change

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. The limitation to Data frames is removed.

Cl 11 SC 11.2.1.1 P0 L0 MyBallot # 440

Raissinia, Ali

Comment Type **TR** Comment Status **D**

Not sure what is the reason for added text regarding new rule for PM bit "The Power Management bit shall not be set in any management frame"

SuggestedRemedy

Please clarify the reasons or remove it.

Proposed Response Response Status **W**

PROPOSED ACCEPT. There are no acceptable uses of setting the power management bit in the current standard. This was not clear without the added text.

Change "in any management frame." to "in any management frame, except the Action frame."

Cl 11 SC 11.2.1.4 P0 L0 MyBallot # 392

Jokela, Jari

Comment Type **TR** Comment Status **D**

Step f. Deferred and immediate responses shall be clarified

SuggestedRemedy

Clarify that in case of deferred mode AP shall respond to PS POLL with ACK and send actual MPDU later on. In case of immediate mode actual MPDU is in response to PS POLL.

Proposed Response Response Status **W**

PROPOSED ACCEPT. See resolution to comment 358.

Cl 11 SC 11.2.1.6 P0 L0 MyBallot # 359

Black, Simon

Comment Type **TR** Comment Status **D**

Why has point (b) been changed here. The randomization is not required if only one STA is sending a PS-Poll.

SuggestedRemedy

Why the change?

Proposed Response Response Status **W**

PROPOSED REJECT. The STA may collide with the AP, if randomization is not performed.

Cl 11 SC 11.2.1.6 P0 L0 MyBallot # 227

Mike, Moreton

Comment Type **TR** Comment Status **D**

bullet (b) The delay is given as a numeric value. What are the units?

SuggestedRemedy

Can't we just say that the basic access mechanisms are used?

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE. Add "slots following a DIFS" after aCWmin.

Cl 11 SC 11.2.1.6 P0 L0 MyBallot # 226

Mike, Moreton

Comment Type **TR** Comment Status **D**

bullet (a): Saying that something happens after a time corresponding to the end of an interval different to saying that it happens after the interval - it's the difference between an inclusive and exclusive limit. I doubt this change was deliberate! Overall I think the new text is at best no better than what it's replacing.

SuggestedRemedy

Revert to the old bullet (a).

Proposed Response Response Status **W**

PROPOSED REJECT. The text reflects the corresponding behavior of the AP discarding of frames due to being older than ListenInterval.

Cl 11 SC 11.2.1.6 P0 L0 MyBallot # 225

Mike, Moreton

Comment Type **ER** Comment Status **X**

It's conventional when giving a time of the form "absolute time plus delta" to give it that way round, not "delta plus absolute time".

SuggestedRemedy

Change "ListenInterval plus the last TBTT" to "the last TBTT plus the ListenInterval"

Proposed Response Response Status **O**

Cl 11 SC 11.2.2.1 P0 L0 MyBallot # 89

Oakes, Ivan

Comment Type TR Comment Status D

The underlined text in 11.2.2.1 does not add any useful information as it does not say when the STA needs to remain awake nor is it accurate to say on STA's PS-state should imply another. More accurate would be to indicate that when an ATIM window is present, then PS may be in use by STAs.

SuggestedRemedy

Replace paragraph 1 by the modified version: "The basic approach is similar to the infrastructure case in that the STAs are synchronized, and multicast MSDUs and those MSDUs that are to be transmitted to a power-conserving STA are first announced during a period when all STAs are awake. The announcement is done via an ad hoc ATIM sent in an ATIM Window. A STA in the PS mode shall listen for these announcements to determine if it needs to remain in the awake state. The presence of the ATIM window in the IBSS indicates the STA may use PS Mode. To maintain correct information on the power save state of other stations in an IBSS, a station needs to remain awake during the ATIM window. At other times the STA may enter the Doze state except as indicated in the following procedures."

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 11 SC 11.2.2.1 P0 L0 MyBallot # 69

Stephens, Adrian

Comment Type TR Comment Status D

"To maintain correct information on the power save state of other stations in an IBSS, a station needs to remain awake. If a station changes to the PS mode, it shall assume that all other stations are in the PS mode also

This is both unnecessary and inadequate. An IBSS STA has to be robust with respect to having perfect knowledge of the power-saving state of other STA, because power-saving state changes are communicated using unreliable broadcast transmissions. The added text mandates a delay of, on average, half a beacon interval on transmissions from a power-saver a non-power-saver, because the power-saver is required to assume the non-power-saver might become one while it is asleep.

The solution that an IBSS STA has to implement to cope with its imprecise knowledge is if there is a transmission failure to a STA that it thinks is a non-power-saver, it should retry that frame on the assumption it is now a power saver.

This heuristic is adequate, and the addition that I have cited (with its bad effect on transport delay) is unnecessary.

SuggestedRemedy

Remove the quoted text, and possibly add an informative note relating to the retry heuristic I mention.

Proposed Response Response Status W

PROPOSED REJECT. See the resolution to comment 89.

Cl 11 SC 11.2.2.1 P0 L0 MyBallot # 228

Mike, Moreton

Comment Type ER Comment Status X

A preposition is a word you shouldn't end a sentence with.

SuggestedRemedy

Change "If a station changes to the PS mode, it shall assume that all other stations are in the PS mode also." to "If a station changes to the PS mode, it shall assume that all other stations are also in the PS mode."

Proposed Response Response Status O

Cl 11 SC 11.3 P0 L0 MyBallot # 214

Mike, Moreton

Comment Type TR Comment Status D

The clause should be called "Authentication and Deauthentication".

SuggestedRemedy

See comment

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 11 SC 11.4.2 P0 L0 MyBallot # 217

Mike, Moreton

Comment Type TR Comment Status X

You can't just delete the name of the primitive used for communication between the SME and the MAC and hope that no-one notices that this section is now inconsistent with the primitive description! Same applies to 11.4.4

SuggestedRemedy

Change 11.4.4 and 11.4.2 to be consistent with the change to the (re)association primitives.

Proposed Response Response Status W

In 11.4.2 c) and 11.4.4 c) Insert "Upon receipt of an MLME-Associate.response service primitive," before the first sentence.

11.4.2 e) and 11.4.4 e) should be deleted.

Add a new service primitive corresponding to the actions in 11.4.2 d) and 11.4.4 d):

MLME-(RE)ASSOCIATE-ACK.indication that occurs when the ACK frame is received for the association response frame.

Cl 11 SC 11.5 P0 L0 MyBallot # 90

Oakes, Ivan

Comment Type TR Comment Status D

The first two paragraphs add nothing and may be incomplete given recent FCC rulings.

SuggestedRemedy

Remove first and second paragraphs of 11.5 starting "ERC/DEC/(99)23a", edit paragraph 2 to say "This subclause describes TPC procedures that may be used to satisfy regulatory requirements in Europe and similar elsewhere".

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Replace "ERC/DEC/(99)23" with "Some radio regulations".

In the second paragraph, replace "may be used" with "can be used" and delete "in Europe" and delete "in other regulatory domains and".

Cl 11 SC 11.5 P0 L0 MyBallot # 70

Stephens, Adrian

Comment Type TR Comment Status D

"dot11SpectrumManagementRequired shall be set to TRUE when regulatory authorities require TPC."

How is this normative requirement testable? All normative requirements should be testable.

SuggestedRemedy

Replace "shall be" with "is". Consider adding: "NOTE - the mechanisms to achieve this are beyond the scope of this standard."

Proposed Response Response Status W

PROPOSED REJECT. This is easily testable by examining the MIB of a product configured for a domain where TPC is required.

Cl 11 SC 11.6 P0 L0 MyBallot # 91
Oakes, Ivan

Comment Type TR Comment Status D

The first two paragraphs add nothing and may be incomplete given recent FCC rulings.

SuggestedRemedy

Remove first and second paragraphs of 11.6 starting "ERC/DEC/(99)23a", edit paragraph 2 to say "This subclause describes TPC procedures that may be used to satisfy regulatory requirements in Europe and similar elsewhere".

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Replace "ERC/DEC/(99)23" with "Some radio regulations".

In the second paragraph, replace "may be used" with "can be used" and delete "in Europe" or delete "in other regulatory domains and".

Cl 12 SC 12. P0 L0 MyBallot # 505
Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent amendments and more focused individual changes, there remain unresolved inconsistencies between the text in this clause and other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 13 SC 13. P0 L0 MyBallot # 506
Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent amendments and more focused individual changes, there remain unresolved inconsistencies between the text in this clause and other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 14 SC 14. P0 L0 MyBallot # 507
Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent amendments and more focused individual changes, there remain unresolved inconsistencies between the text in this clause and other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 14 SC 14. P0 L0 MyBallot # 183
Mike, Moreton

Comment Type T Comment Status D

With the ever growing length of the standard it seems reasonable to remove some of the stuff that is no longer used where this will not cause compatibility problems with existing equipment Surely it's acceptable to say that equipment that wishes to interoperate with other equipment using these obsolete procedures should follow the 1999 version of the standard?

SuggestedRemedy

Replace clauses 14 with a direction to the 1999 version of the standard.

Proposed Response Response Status W

PROPOSED REJECT. After adoption of this revision to the standard, the 1999 version will cease to exist.

Cl 14 SC 14.9 P0 L0 MyBallot # 255
Miki, Morgan

Comment Type TR Comment Status D

No reason to consider aPHY-RX-STARTDelay. See comments on section 9.2.5.7 and 9.2.8.

SuggestedRemedy

Remove aPHY-RX-START-Delay from table 79.

Proposed Response Response Status W

PROPOSED REJECT. Change the "0us" to "128us" for the value of aPHY-RX-START-Delay in Table 79. Also add the description to the same row: "The delay from the start of the preamble to the issuance of the RX-START.indicate by the PHY."

Cl 14 SC 14.9 P0 L0 MyBallot # 528
Jalfon, Marc

Comment Type TR Comment Status D

Table 79 declares aPHY-RX-START-Delay to be 0us. From figure 161, the PHY-RXSTART.ind occurs after the PLCP header has been received, which is 96+32 us from the start of the packet.

SuggestedRemedy

Replace value of 0 with value of 128

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 14 SC 14.9 P0 L0 MyBallot # 36
Stephens, Adrian

Comment Type TR Comment Status D

Table 79 declares aPHY-RX-START-Delay to be 0us. From figure 161, the PHY-RXSTART.ind occurs after the PLCP header has been received, which is 96+32 us from the start of the packet.

SuggestedRemedy

Replace value of 0 with value of 128

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 14 SC 14.9 P0 L0 MyBallot # 24
Gohda, Wataru

Comment Type TR Comment Status D

No reason to keep aPHY-RX-STARTDelay. See my comments on section 9.2.5.7 and 9.2.8.

SuggestedRemedy

Remove aPHY-RX-START-Delay from table 79.

Proposed Response Response Status W

PROPOSED REJECT. Change the "0us" to "128us" for the value of aPHY-RX-START-Delay in Table 79. Also add the description to the same row: "The delay from the start of the preamble to the issuance of the RX-START.indicate by the PHY." This value is required for certain MAC timeouts.

Cl 15 SC 15. P0 L0 MyBallot # 508
Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 15 SC 15.3.3 P0 L0 MyBallot # 25
Gohda, Wataru

Comment Type TR Comment Status D

No reason to keep aPHY-RX-STARTDelay. See my comments on section 9.2.5.7 and 9.2.8.

SuggestedRemedy

Remove aPHY-RX-START-Delay from table 81.

Proposed Response Response Status W

PROPOSED REJECT. Change the "0us" to "192us" for the value of aPHY-RX-START-Delay in Table 81."

Cl 15 SC 15.3.3 P0 L0 MyBallot # 37
Stephens, Adrian

Comment Type TR Comment Status D

Table 81 declares aPHY-RX-START-Delay to be 0us. From figure 173, the PHY-RXSTART.ind occurs after the PLCP header has been received (although curiously, figure 17 shows the indication during the middle of the received CRC).

SuggestedRemedy

Replace value of 0 with value of 144+48 = 192us.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 15 SC 15.3.3 P0 L0 MyBallot # 529

Jalfon, Marc

Comment Type **TR** Comment Status **D**

Table 81 declares aPHY-RX-START-Delay to be 0us. From figure 173, the PHY-RXSTART.ind occurs after the PLCP header has been received (although curiously, figure 17 shows the indication during the middle of the received CRC).

SuggestedRemedy

Replace value of 0 with value of 144+48 = 192us.

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl 15 SC 15.3.3 P0 L0 MyBallot # 256

Miki, Morgan

Comment Type **TR** Comment Status **D**

No reason to consider aPHY-RX-STARTDelay. See comments on section 9.2.5.7 and 9.2.8.

SuggestedRemedy

Remove aPHY-RX-START-Delay from table 81.

Proposed Response Response Status **W**

PROPOSED REJECT. Change the "0us" to "192us" for the value of aPHY-RX-START-Delay in Table 81.

Cl 15 SC 15.4.7.4; pg 393 P393 L0 MyBallot # 343

Hillman, Garth

Comment Type **TR** Comment Status **D**

We need to identify that channel 14 in the 2.4 band is 'different' and describe its transmit mask separately

SuggestedRemedy

Add a separate transmit mask for Channel 14 in the 2.4 GHz band.

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE. The commenter is solicited to provide the text and figure for the additional spectrum mask.

Cl 16 SC 16. P0 L0 MyBallot # 185

Mike, Moreton

Comment Type **T** Comment Status **D**

With the ever growing length of the standard it seems reasonable to remove some of the stuff that is no longer used where this will not cause compatibility problems with existing equipment Surely it's acceptable to say that equipment that wishes to interoperate with other equipment using these obsolete procedures should follow the 1999 version of the standard?

SuggestedRemedy

Replace clauses 16 with a direction to the 1999 version of the standard.

Proposed Response Response Status **W**

PROPOSED REJECT. With the approval of this revision to the standard, the 1999 version will cease to exist.

Cl 16 SC 16. P0 L0 MyBallot # 509

Engwer, Darwin

Comment Type **TR** Comment Status **D**

After the combination of the base standard, the subsequent amendments and more focused individual changes, there remain unresolved inconsistencies between the text in this clause and other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl 16 SC 16.4 P0 L0 MyBallot # 26

Gohda, Wataru

Comment Type **TR** Comment Status **D**

No reason to keep aPHY-RX-STARTDelay. See my comments on section 9.2.5.7 and 9.2.8.

SuggestedRemedy

Remove aPHY-RX-START-Delay from table 98.

Proposed Response Response Status **W**

PROPOSED REJECT. Change the "0us" to "57us" for the value of aPHY-RX-START-Delay in Table 98."

Cl 16 SC 16.4 P0 L0 MyBallot # 38

Stephens, Adrian

Comment Type **TR** Comment Status **D**

Table 98 declares aPHY-RX-START-Delay to be 0us.

SuggestedRemedy

It needs to be aPreambleLength+aPLCPHeaderLength. In the IR PHY, these depend also on the data rate. So you can take your pick - but it definitely isn't zero.

Alternatively mark clause 16 as deprecated with a note that it is not maintained, and remove the parameter.

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE. Change the "0us" to "57us" for the value of aPHY-RX-START-Delay in Table 98."

Cl 16 SC 16.4 P0 L0 MyBallot # 257

Miki, Morgan

Comment Type **TR** Comment Status **D**

No reason to consider aPHY-RX-STARTDelay. See comments on section 9.2.5.7 and 9.2.8.

SuggestedRemedy

Remove aPHY-RX-START-Delay from table 98.

Proposed Response Response Status **W**

PROPOSED REJECT. Change the "0us" to "57us" for the value of aPHY-RX-START-Delay in Table 98."

Cl 16 SC 16.4 P0 L0 MyBallot # 530

Jalfon, Marc

Comment Type **TR** Comment Status **D**

Table 98 declares aPHY-RX-START-Delay to be 0us.

SuggestedRemedy

It needs to be aPreambleLength+aPLCPHeaderLength. In the IR PHY, these depend also on the data rate. So you can take your pick - but it definitely isn't zero.

Alternatively mark clause 16 as deprecated with a note that it is not maintained, and remove the parameter.

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE. Change the "0us" to "57us" for the value of aPHY-RX-START-Delay in Table 98."

Cl 16 SC 16.4 P0 L0 MyBallot # 35

Stephens, Adrian

Comment Type **E** Comment Status **X**

It is nice to see table 98 being maintained. It is so useful, after all.

SuggestedRemedy

Or perhaps remove the IR PHY, or mark it deprecated and unmaintained.

Proposed Response Response Status **O**

Cl 17 SC 17. P0 L0 MyBallot # 510

Engwer, Darwin

Comment Type **TR** Comment Status **D**

After the combination of the base standard, the subsequent amendments and more focused individual changes, there remain unresolved inconsistencies between the text in this clause and other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl 17 SC 17.3.10.5 P0 L0 MyBallot # 304

Kruys, Jan

Comment Type TR Comment Status D

The CCA definition is ambiguous and unless more clearly defined may not be useful as tool to detect other spectrum users. This is becoming an issue with the possibility of 802.16 systems being deployed in the 5.8 GHz range. Therefore it is necessary to be able to differentiate between energy and a .11signal. Since deferring for other energy sources may be subject to a different threshold than deferring to .11 signals, a separate threshold is needed for each. (note this addition of the CS

SuggestedRemedy

The start of a valid OFDM transmission at a receive level equal to or greater than the minimum modulation and coding rate sensitivity (082 dBm for 20 MHz channel spacing and 085 dBm for 10 MHz channel spacing) shall cause CCA to indicate busy with a probability > 90% within 4 for 20 MHz channel spacing and 8 ?s for 10 MHz channel spacing. In addition and irrespective of preamble detection, the receiver shall hold the ED signal busy for any signal above the sensitivity levels given above. Note for the editor: this change requires consequent changes that have not been provided here. Internal Note1: the addition of the ED signal allows the MAC to interpret the RSSI value more precisely as belonging to a signal or just energy. Deciding to defer transmission for a given combination of ED, CCA and RSSI values is left to implementation.

Proposed Response Response Status W

PROPOSED REJECT. Adding this would make implementations previously compliant with clause 17 become noncompliant.

Cl 17 SC 17.3.9.2 P0 L0 MyBallot # 397

LEMBERGER, URIEL

Comment Type ER Comment Status X

Spectral mask is defined in figure 199 and again in I.2.3

SuggestedRemedy

Have one location in the document where the definition are written and reference to this point where necessary in other parts of the document.

Proposed Response Response Status O

Cl 17 SC 17.4.4 P0 L0 MyBallot # 258

Miki, Morgan

Comment Type TR Comment Status D

No reason to consider aPHY-RX-STARTDelay. See comments on section 9.2.5.7 and 9.2.8.

SuggestedRemedy

Remove aPHY-RX-START-Delay from table 113.

Proposed Response Response Status W

PROPOSED REJECT. This value is required for correct operation of certain MAC timeouts.

Cl 17 SC 17.4.4 P0 L0 MyBallot # 441

Raissinia, Ali

Comment Type TR Comment Status D

The added aPHY-RX-START-Delay in Table 113 is 24us.

SuggestedRemedy

What is the reason for selected 24us number.

Proposed Response Response Status W

PROPOSED ACCEPT. The parameter accounts for the PLCP header and preamble times, plus the Viterbi delay before PHY-RXSTART.indicate is generated.

The value in the 10MHz column is not correct. Change the value in the 10MHz column to "48us".

Cl 17 SC 17.4.4 P0 L0 MyBallot # 27

Gohda, Wataru

Comment Type TR Comment Status D

No reason to keep aPHY-RX-STARTDelay. See my comments on section 9.2.5.7 and 9.2.8.

SuggestedRemedy

Remove aPHY-RX-START-Delay from table 113.

Proposed Response Response Status W

PROPOSED REJECT. This value is required for correct operation of certain MAC timeouts.

Cl 18 SC 18. P0 L0 MyBallot # 511
Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 18 SC 18.3.3 P0 L0 MyBallot # 259
Miki, Morgan

Comment Type TR Comment Status D

No reason to consider aPHY-RX-STARTDelay. See comments on section 9.2.5.7 and 9.2.8.

SuggestedRemedy

Remove aPHY-RX-START-Delay from table 121.

Proposed Response Response Status W

PROPOSED REJECT. This value is required for correct operation of certain MAC timeouts.

Cl 18 SC 18.3.3 P0 L0 MyBallot # 39
Stephens, Adrian

Comment Type TR Comment Status D

Table 121 shows the aPHY-RX-START-Delay to be 0us. This is wrong.

SuggestedRemedy

Set to value of 192us.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 18 SC 18.3.3 P0 L0 MyBallot # 28
Gohda, Wataru

Comment Type TR Comment Status D

No reason to keep aPHY-RX-STARTDelay. See my comments on section 9.2.5.7 and 9.2.8.

SuggestedRemedy

Remove aPHY-RX-START-Delay from table 121.

Proposed Response Response Status W

PROPOSED REJECT. This value is required for correct operation of certain MAC timeouts.

Cl 18 SC 18.3.3 P0 L0 MyBallot # 31
Jalfon, Marc

Comment Type TR Comment Status D

Table 121 shows the aPHY-RX-START-Delay to be 0us. This is wrong.

SuggestedRemedy

Set to value of 192us.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 18 SC 18.4.6.2 P0 L0 MyBallot # 398
LEMBERGER, URIEL

Comment Type TR Comment Status D

Table 126 is incorrect.

SuggestedRemedy

Correct the table content, for example , FCC allows Ch 12,13 with mask restrictions, France is part of ETSI.

Proposed Response Response Status W

PROPOSED REJECT. This table does not show all the possible channels for each domain (as identified by the value at the head of each column), but only those specifically allowed by 802.11. Changing this table would result in making currently compliant implementations noncompliant.

Cl 18 SC 18.4.7.1 P0 L0 MyBallot # 399
LEMBERGER, URIEL

Comment Type ER Comment Status X

Transmit power level in subclause 17 refers to annex I and in subclause 18 it appears in table 136 137 , and again in table I.6

SuggestedRemedy

use consistant way to define Transmit power requirement in all sections.

Proposed Response Response Status O

Cl 19 SC 19. P0 L0 MyBallot # 512
Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 19 SC 19.3.2.1 P0 L0 MyBallot # 460
Myles, Andrew

Comment Type TR Comment Status D

The text in 19.3.2.1 specifies that all ERP systems shall set the Locked Clock Bit equal to 1, including 1 & 2Mb/s systems. The text in 15.2.3.4 specifies this bit is reserved for 1 & 2Mb/s systems, ie set equal to 0 on transmit.

Unfortunately, some test houses have interpreted the text in 19.3.2.1 to mean that all 1 & 2M systems shall set the Locked Clock Bit equal to 1.

SuggestedRemedy

Change 19.3.2.1 to make clear that the Locked Clock bit make be set equal to 0 for 1 & 2Mb/s systems

Proposed Response Response Status W

PROPOSED ACCEPT. In the fifth sentence of the paragraph above Table 140, change "the Locked Clock Bit shall be set to 1." to "the Locked Clock Bit shall be set to 1, when transmittin at an ERP-PBCC rate or at a data rate described in clause 18."

Cl 19 SC 19.3.2.4.1 P0 L0 MyBallot # 2
Adachi, Tomoko

Comment Type E Comment Status X

There is "à" in the expression but it is unclear what it means. There is a similar expression for calculating the LENGTH field in clause 19.8.3.3 but there is no "à" for this case.

SuggestedRemedy

Delete "à" in the expression.

Proposed Response Response Status O

Cl 19 SC 19.4.6 P0 L0 MyBallot # 3
Adachi, Tomoko

Comment Type E Comment Status X

There is a phrase "ERP PHY" but this will be Extended rate PHY PHY. PHY is redundant.

SuggestedRemedy

Express this as "ERP". (Delete "PHY".)

Proposed Response Response Status O

Cl 19 SC 19.7.2.6 P0 L0 MyBallot # 243
Palm, Stephen

Comment Type TR Comment Status D

The term "802.11g" is used without being defined or referenced.

SuggestedRemedy

Clearly provide references for all of the 802.11a through 802.11j amendments.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. In the first sentence below Figure 248, change "in the 802.11g header" to "in the header". All of the amendments (and their titles) cease to exist aft the approval of the revision to the standard.

Cl 19 SC 19.8.4 P0 L0 MyBallot # 260

Miki, Morgan

Comment Type TR Comment Status D

No reason to consider aPHY-RX-STARTDelay. See comments on section 9.2.5.7 and 9.2.8.

SuggestedRemedy

Remove aPHY-RX-START-Delay from table 144.

Proposed Response Response Status W

PROPOSED REJECT. This value is required for correct operation of certain MAC timeouts.

Cl 19 SC 19.8.4 P0 L0 MyBallot # 41

Stephens, Adrian

Comment Type TR Comment Status D

aPHY-RX-START-Delay is not zero for non-ERP-OFDM cases. However because this table is specific to the ERP-OFDM case the phrase "and 0us otherwise is unnecessary (and wrong).

SuggestedRemedy

Remove quoted phrase.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 19 SC 19.8.4 P0 L0 MyBallot # 29

Gohda, Wataru

Comment Type TR Comment Status D

No reason to keep aPHY-RX-STARTDelay. See my comments on section 9.2.5.7 and 9.2.8.

SuggestedRemedy

Remove aPHY-RX-START-Delay from table 144.

Proposed Response Response Status W

PROPOSED REJECT. This value is required for correct operation of certain MAC timeouts.

Cl A SC A. P0 L0 MyBallot # 513

Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl A SC A. P0 L0 MyBallot # 463

McClellan, Kelly

Comment Type TR Comment Status D

The conformance coverage of the PICS is stated as "IEEE Std 802.11, 1999". The scope of the PICS includes newer options that are not part of the 1999 revision.

SuggestedRemedy

Change to appropriate publication/revision date, and add an informative note relating the 199 revision to newer extensions to the standard.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl A SC A.4.10 P0 L0 MyBallot # 360

Black, Simon

Comment Type TR Comment Status D

Most of PICS Item MD1 concerns the country element and its fields. However the dot11MultiDomainCapabilityEnabled attribute dot11MultiDomainCapability Enabled attribute seem to have sneaked into the middle of the text (and are not in the references).

SuggestedRemedy

Clarify

Proposed Response Response Status W

PROPOSED ACCEPT. Delete the two occurrences of dot11MultiDomainCapabilityEnabled.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

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Cl A SC A.4.10

Cl **A** SC **A.4.3** P**0** L**0** MyBallot #

Ecclesine, Peter

Comment Type **E** Comment Status **X**

The tickmark boxes in the Support column are circles

SuggestedRemedy
change to boxes

Proposed Response Response Status **O**

Cl **A** SC **A.4.8** P**0** L**0** MyBallot #

Ecclesine, Peter

Comment Type **TR** Comment Status **D**

Item OF9.4.4 RATE 36 Mbit/s status shown as M, and should be O

SuggestedRemedy
change Status to O

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl **C** SC **C.** P**0** L**0** MyBallot #

Myles, Andrew

Comment Type **TR** Comment Status **D**

The SDL is mostly incorrect and has little connect to the current standard. It just wastes paper/bits

SuggestedRemedy
Remove entire annex

Proposed Response Response Status **W**

PROPOSED REJECT. There is still normative behavior described only in the SDL. Deleting the annex would also delete these normative behaviors.

Cl **C** SC **C.** P**0** L**0** MyBallot #

Jalfon, Marc

Comment Type **TR** Comment Status **D**

The SDL is a maintenance nightmare and is practically useless.

SuggestedRemedy
Remove Annex C.
Alternatively mark is as "Informative - historic interest only".

Proposed Response Response Status **W**

PROPOSED REJECT. There is still normative behavior described only in the SDL. Deleting the annex would also delete these normative behaviors.

Cl **C** SC **C.** P**0** L**0** MyBallot #

Engwer, Darwin

Comment Type **TR** Comment Status **D**

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy
Resolve the inconsistencies.

Proposed Response Response Status **W**

PROPOSED ACCEPT. The commenter is solicited to list these inconsistencies and to provid the suggested corrections. ;^)

Cl C SC C. P0 L0 MyBallot # 42

Stephens, Adrian

Comment Type TR Comment Status D

The SDL is a maintenance nightmare and is practically useless. Few task groups have the means to maintain this model. The model itself contains some very questionable use of SDL (such as extensive sharing of variables), structuring of the model does not match the architecture presented in the body text, and it has not been updated to reflect the changes approved in 802.11i. Those who have seriously tried to use the model (I have) discover that it has a very blinkered view of 802.11 - yet it is somehow "normative".

SuggestedRemedy

Firstly scan Annex C for normative behaviour not defined elsewhere and move to appropriate sections in the body text (there should be none).

Remove Annex C.
Alternatively mark is as "Informative - historic interest only".

Proposed Response Response Status W

PROPOSED REJECT. There is still normative behavior described only in the SDL. Deleting the annex would also delete these normative behaviors. The commenter is solicited to provide the text for the normative behaviors to add to the other clauses of the standard, so that the annex might then be removed.

Cl C SC C. P0 L0 MyBallot # 459

Myles, Andrew

Comment Type TR Comment Status D

The SDL is mostly incorrect and has little connect to the current standard. It just wastes paper/bits

SuggestedRemedy

Remove entire annex

Proposed Response Response Status W

PROPOSED REJECT. There is still normative behavior described only in the SDL. Deleting the annex would also delete these normative behaviors.

Cl C SC C. page 597 P0 L0 MyBallot # 344

Hillman, Garth

Comment Type T Comment Status D

I thought IEEE 802.11 had decided to deprecate the SDL description?

SuggestedRemedy

If we have then so state.

Proposed Response Response Status W

PROPOSED ACCEPT. Such a decision has not been made. No statement is required.

Cl D SC D. P0 L0 MyBallot # 173

Ecclesine, Peter

Comment Type TR Comment Status D

on page 854, the 802.11j dot11ChannelStartingFactor object is missing

SuggestedRemedy

insert object from Amendment 802.11j

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl D SC D. P0 L0 MyBallot # 164

Ecclesine, Peter

Comment Type TR Comment Status D

dot11RegulatoryClassesTable, dot11smt 13 missing on page 802

SuggestedRemedy

Insert after dot11RSNAStatsTable

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl **D** SC **D.** P**0** L**0** MyBallot # **165**
 Ecclesine, Peter
 Comment Type **TR** Comment Status **D**
 page 802, missing dot11RegulatoryClassesImplemented and dot11RegulatoryClassesRequired Truth Values
 SuggestedRemedy
 insert after dot11RSNAPreauthenticationImplemented
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl **D** SC **D.** P**0** L**0** MyBallot # **166**
 Ecclesine, Peter
 Comment Type **TR** Comment Status **D**
 page 810, missing attributes for dot11RegulatoryClassesImplemented and dot11RegulatoryClassesRequired
 SuggestedRemedy
 insert after dot11RSNAPreauthenticationImplemented
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl **D** SC **D.** P**0** L**0** MyBallot # **167**
 Ecclesine, Peter
 Comment Type **TR** Comment Status **D**
 on p820, dot11RegulatoryClasses TABLE is missing after dot11SpectrumManagement
 SuggestedRemedy
 Insert TABLE in proper place
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl **D** SC **D.** P**0** L**0** MyBallot # **168**
 Ecclesine, Peter
 Comment Type **TR** Comment Status **D**
 on page 840, The Japanese regulatory authority is no longer MKK, nor MPHPT. Suggest just using Japan, like France and Spain
 SuggestedRemedy
 Change dot11RegDomainsSupportedTable and dot11RegDomainsSupportedValue from MKK to Japan
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl **D** SC **D.** P**0** L**0** MyBallot # **169**
 Ecclesine, Peter
 Comment Type **TR** Comment Status **D**
 on page 844/5, dot11ChannelStartingFactor is missing
 SuggestedRemedy
 insert , dot11ChannelStartingFactor Integer 32 after entry for dot11FrequencyBandsSupported INTEGER
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl **D** SC **D.** P**0** L**0** MyBallot # **170**
 Ecclesine, Peter
 Comment Type **TR** Comment Status **D**
 on page 845, the 802.11j values and text is missing
 SuggestedRemedy
 insert corrections from Amendment 802.11j
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl **D** SC **D.** P**0** L**0** MyBallot # **593**
 Richard, Paine
 Comment Type **E** Comment Status **X**
 P876L5 Is the Editor's Note really necessary?
 SuggestedRemedy
 Drop the Editor's Note
 Proposed Response Response Status **O**

Cl **D** SC **D.** P**0** L**0** MyBallot # **361**
 Black, Simon
 Comment Type **TR** Comment Status **D**
 Additions to the .11 MIB for spectrum management don't seem to have made it into any conformance group.
 SuggestedRemedy
 Review conformance groups.
 Proposed Response Response Status **W**
 PROPOSED ACCEPT. The additions to the MIB from 802.11h will be incorporated.

Cl **D** SC **D.** P**0** L**0** MyBallot # **172**
 Ecclesine, Peter
 Comment Type **TR** Comment Status **D**
 on page 851, the 802.11j dot11RegulatoryClassesGroup is missing
 SuggestedRemedy
 insert reference from Amendment 802.11j
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl **D** SC **D.** P**0** L**0** MyBallot # **515**
 Engwer, Darwin
 Comment Type **TR** Comment Status **D**
 After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.
 SuggestedRemedy
 Resolve the inconsistencies.

Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl **D** SC **D.** P**0** L**0** MyBallot # **146**
 Visscher, Bert
 Comment Type **TR** Comment Status **D**
 dot11SpectrumManagementImplemented has MAX-ACCESS read-write. Adding/removing parts in the implementation of the device is a neat trick, but unfortunately not possible
 SuggestedRemedy
 Change MAX-ACCESS into read-only

Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl **D** SC **D.** P**0** L**0** MyBallot # **174**
 Ecclesine, Peter
 Comment Type **TR** Comment Status **D**
 on page 855, 802.11j deprecated SMT base 3, and added dot11RegulatoryClasses Implemented and dot11RegulatoryClassesRequired to SMT base 5. Both SMT base 3 and SMT base 4 are shown as current
 SuggestedRemedy
 insert SMTbase5 from Amendment 802.11j and deprecate SMTbase3 and SMTbase4

Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl **D** SC **D.** P**0** L**0** MyBallot # |145

Visscher, Bert

Comment Type **TR** Comment Status **D**

dot11MultiDomainCapabilityImplemented has MAX-ACCESS read-write. Adding/removing pa in the implementation of the device is a neat trick, but unfortunately not possible

SuggestedRemedy

Change MAX-ACCESS into read-only

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl **D** SC **D.** P**0** L**0** MyBallot # |171

Ecclesine, Peter

Comment Type **TR** Comment Status **D**

on page 845, the 802.11j dot11ChannelStartingFactor object is missing

SuggestedRemedy

insert object from Amendment 802.11j

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl **E** SC **E.** P**0** L**0** MyBallot # |516

Engwer, Darwin

Comment Type **TR** Comment Status **D**

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl **E** SC **E.** P**0** L**0** MyBallot # |493

Engwer, Darwin

Comment Type **TR** Comment Status **D** Ask Darwin

Missing a citation to an ISO standard per Message Sequence Charts used in the draft (first reference is in clause 5.9.2.1).

SuggestedRemedy

Add a reference to the corresponding ISO standard. add a reference to an ISO standard that describes Message Sequence Charts (MSC) per multiple uses throughout the 2005 draft

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl **E** SC **E.** P**0** L**0** MyBallot # |526

Engwer, Darwin

Comment Type **TR** Comment Status **D**

Missing a reference to the Unified Modeling Language Reference manual per the editor's instructions in doc 11-05-0120-09, see page 10 in that submission.

SuggestedRemedy

Add the reference to the UML reference manual.

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl **E** SC **E.** P**0** L**0** MyBallot # |494

Engwer, Darwin

Comment Type **TR** Comment Status **D**

Missing a citation for 802.11F per references in Annex M.

SuggestedRemedy

Add a reference to 802.11F in Annex E.

Proposed Response Response Status **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

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Cl **E** SC **E.**

Cl E SC E. P0 L0 MyBallot # 568

Odman, Knut

Comment Type E Comment Status X

The bibliography clause shall be the first or last clause in a standard. Ref. IEEE standards sty guide, clause 19: "Complete and current information for bibliographic entries shall be supplied by the working group. The bibliography always shall be an informative numbered annex that appears as either the first or last annex of the standard (see Annex B for an example bibliography)."

SuggestedRemedy

Reorder with the new annexes so that the bibliography clause becomes Annex N

Proposed Response Response Status O

Cl F SC F. P0 L0 MyBallot # 517

Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl G SC G. P0 L0 MyBallot # 518

Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl H SC H. P0 L0 MyBallot # 519

Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl H SC H.3.2 P0 L0 MyBallot # 43

Stephens, Adrian

Comment Type E Comment Status X

The phrase "what do ya wantà" is not gramatically correct. Also in table H.10.

SuggestedRemedy

Replace "ya" with "you", and recalculate the PRF-512.

Proposed Response Response Status O

CI H SC H.4.1 P0 L0 MyBallot # 412
Chaplin, Clint

Comment Type TR Comment Status D

The following sentence "A pass-phrase typically has about 2.5 bits of security per character, s the pass-phrase mapping converts an n octet password into a key with about 2.5n + 12 bits of security." is not technically correct. It is mixing two different types of measurements of security, and the two types are not comparable. I look at this as comparable to trying to compare and add together measurements of pound force and pound mass. The measurement of pass phrase security of 2.5 bits per character is really a measurement of cryptographic entropy, which is a precisely defined measurement in the crypto world. The measurement of 12 bits of security is, on the other hand, really a measurement of the computational complexity of the task of the hash. It is unclear that a bit of the pass phrase security measurement is equal to a bit of the computational effort (the ratio is probably differer with different processor architectures), so simple addition of these two measurements cannot be done.

SuggestedRemedy

Delete the sentence. Alternatively, change the sentence to, "A pass-phrase typically has abou 2.5 bits of cryptographic entropy per character, while the pass-phrase mapping converts the pass-phrase into a key requiring quite a bit of computational effort"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE. Delete the sentence "A pass-phrase typically has about 2.5 bits of security per character, so the pass-phrase mapping converts an n octet password into a key with about 2.5n + 12 bits of security." Replace the sentence immediately following this with "Keys derived from the pass phrase provide relatively low levels of security, especially with keys generated form short passwords, since they are subject to dictionary attack."

CI H SC H.6 P0 L0 MyBallot # 400
LEMBERGER, URIEL

Comment Type E Comment Status X

Table H.3 is confusing Does the 04 05 in second raw belongs to description #1?

SuggestedRemedy

Clarify the table, combine raw 1,2 in column 2.

Proposed Response Response Status O

CI H SC H.7.1 P0 L0 MyBallot # 587
Cam-Winget, Nancy

Comment Type T Comment Status D

The test vectors use the incorrect nonce lengths (20 whereas they should be 23).

SuggestedRemedy

Stretch the nonces to be as required for 802.11i (e.g. 32 octets).

For the Anonce, use: {0xe0, 0xe1, 0xe2, 0xe3, 0xe4, 0xe5, 0xe6, 0xe7, \ 0xe8, 0xe9, 0xf0, 0xf1, 0xf2, 0xf3, 0xf4, 0xf5, \ 0xf6, 0xf7, 0xf8, 0xf9, 0xfa, 0xfb, 0xfc, 0xfd, \ 0xfe, 0xff, 0x00, 0x01, 0x02, 0x03, 0x04, 0x05}
For the SNonce, use: {0xc0, 0xc1, 0xc2, 0xc3, 0xc4, 0xc5, 0xc6, 0xc7, \ 0xc8, 0xc9, 0xd0, 0xd1, 0xd2, 0xd3, 0xd4, 0xd5, \ 0xd6, 0xd7, 0xd8, 0xd9, 0xda, 0xdb, 0xdc, 0xdd, \ 0xde, 0xdf, 0xe0, 0xe1, 0xe2, 0xe3, 0xe4, 0xe5}

Proposed Response Response Status W

PROPOSED ACCEPT.

CI H SC H.7.1.1 P0 L0 MyBallot # 588
Cam-Winget, Nancy

Comment Type T Comment Status D

Using the correct test vectors, the TK needs to be updated.

SuggestedRemedy

The TK is now: b2 36 0c 79 e9 71 0f dd
58 be a9 3d ea f0 65 99

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl H SC H.7.1.2 P0 L0 MyBallot # 589

Cam-Winget, Nancy

Comment Type T Comment Status D

Using the correct test vectors, the Keys need to be updated.

SuggestedRemedy

KCK = 37 9f 98 52 d0 19 92 36
b9 4e 40 7c e4 c0 0e c8
KEK = 47 c9 ed c0 1c 2c 6e 5b
49 10 ca dd fb 3e 51 a7
TK = b2 36 0c 79 e9 71 0f dd
58 be a9 3d ea f0 65 99
db 98 0a fb c2 9c 15 28
55 74 0a 6c e5 ae 38 27

Authenticator Tx Key = db 98 0a fb c2 9c 15 28
Supplicant Tx Key = 55 74 0a 6c e5 ae 38 27

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl I SC I. P0 L0 MyBallot # 520

Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl I SC I. P0 L0 MyBallot # 637

Inoue, Yasuhiko

Comment Type E Comment Status X

MPHPT (Ministry of Public Management, Home, Post and Telecommunication) has changed i English name to MIC (Ministry of Internal Affairs and Communications)

SuggestedRemedy

Please change "MPHPT" to "MIC"

Proposed Response Response Status O

Cl J SC J. P0 L0 MyBallot # 521

Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl J SC J. P0 L0 MyBallot # 401

LEMBERGER, URIEL

Comment Type ER Comment Status X

The document is inconsistant, for a,b,g ammendments the informative information regarding regulatory requirement is part of the subclauses 15,18,19 while j ammendmend is only an anr and the regulatory requiments are seperated as informative and put in annex I.

SuggestedRemedy

Move relative regulatory references to annex J

Proposed Response Response Status O

Cl J SC J. P0 L0 MyBallot # 638

Inoue, Yasuhiko

Comment Type E Comment Status X

MPHPT (Ministry of Public Management, Home, Post and Telecommunication) has changed i English name to MIC (Ministry of Internal Affairs and Communications)

SuggestedRemedy

Please change "MPHPT" to "MIC"

Proposed Response Response Status O

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

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Cl J SC J.

Cl J SC J.1 P0 L0 MyBallot # 402
 LEMBERGER, URIEL
 Comment Type TR Comment Status X ask Jan
 To which regulatory class belongs Ch 165 in the US?
 SuggestedRemedy
 Add this channel to the table
 Proposed Response Response Status O

Cl J SC J.1 P0 L0 MyBallot # 403
 LEMBERGER, URIEL
 Comment Type TR Comment Status X ask Jan
 To which regulatory class belongs Ch 100-140 in the US?
 SuggestedRemedy
 Add these channels to the table
 Proposed Response Response Status O

Cl K SC K. P0 L0 MyBallot # 522
 Engwer, Darwin
 Comment Type TR Comment Status D
 After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.
 SuggestedRemedy
 Resolve the inconsistencies.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl K SC K. P0 L0 MyBallot # 486
 Engwer, Darwin
 Comment Type TR Comment Status D
 Figure K2 is wrong, should not show AID 0 pointing to two bits, only one. In general, figure K: should be made to agree with the example 2 figure in doc 11-05-0069-02
 SuggestedRemedy
 Delete the angled AID 0 notation line.
 Proposed Response Response Status O

Cl K SC K. P0 L0 MyBallot # 485
 Engwer, Darwin
 Comment Type TR Comment Status D
 Figure K1 is wrong, should not show AID 0 pointing to two bits, only one. In general, figure K: should be made to agree with the example 1 figure in doc 11-05-0069-02
 SuggestedRemedy
 Delete the angled AID 0 notation line.
 Proposed Response Response Status O

Cl K SC K. P0 L0 MyBallot # 487
 Engwer, Darwin
 Comment Type TR Comment Status D
 Sample code: Build_TIM (): The first for() loop has an initial statement of "i = 0"; this is wrong the loop should start at one, since AID 0 is never used.
 SuggestedRemedy
 Change "for (i = 0;" to "for (i = 1;".
 Proposed Response Response Status O

CI K SC K. P0 L0 MyBallot # 488
 Engwer, Darwin
 Comment Type TR Comment Status D
 Sample code: Build_TIM (): The second for() loop has a test condition "i > 0"; this is wrong the loop should terminate at one, since AID 0 is never used.
 SuggestedRemedy
 Change "(i > 0)" to "(i > 1)".
 Proposed Response Response Status O

CI K SC K. P0 L0 MyBallot # 484
 Engwer, Darwin
 Comment Type ER Comment Status X
 use spaces rather than tabs to make the source code indents line up correctly
 SuggestedRemedy
 see new submission 11-05-0069-03, which inclues all my requested changes to the source code that are cited in my letter ballot comments.
 Proposed Response Response Status O

CI K SC K. P0 L0 MyBallot # 489
 Engwer, Darwin
 Comment Type TR Comment Status D
 Sample code: Update_VirtualBitMap(): It is illegal to try to set AID 0 since that value is never used. The function should validate the incoming paramters to ensure this condition.
 SuggestedRemedy
 Place the bulk of the operational lines of the function within a conditional block as follows: "if ((aid > 0) && (aid < AID_SIZE))".
 Proposed Response Response Status O

CI K SC K.; clause K.1; page 94 P0 L0 MyBallot # 345
 Hillman, Garth
 Comment Type E Comment Status X
 typo
 SuggestedRemedy
 a the -> a
 Proposed Response Response Status O

CI K SC K.1 P0 L0 MyBallot # 267
 Karcz, Kevin
 Comment Type E Comment Status X
 extra "a" in "encoding a the Partial"
 SuggestedRemedy
 edit
 Proposed Response Response Status O

CI K SC K.2 P0 L0 MyBallot # 606
 Reuss, Edward
 Comment Type E Comment Status X
 Poor syntax - "in AP"
 SuggestedRemedy
 Change all instances of "in AP" to "in the AP".
 Proposed Response Response Status O

CI K SC K.2 P0 L0 MyBallot # 266
 Karcz, Kevin
 Comment Type E Comment Status X
 "inforamtion" is misspelled
 SuggestedRemedy
 edit
 Proposed Response Response Status O

Cl K SC K.2 P0 L0 MyBallot # 605

Reuss, Edward

Comment Type E Comment Status X

The term "broadcasts and multicasts" is too colloquial. Elsewhere, the term "broadcast" was changed to "wildcard"

SuggestedRemedy

Change all instances of "broadcasts and multicasts" to "broadcast and multicast packets".

Proposed Response Response Status O

Cl K SC K.2 P0 L0 MyBallot # 585

McCann, Stephen

Comment Type E Comment Status X

typo in second paragraph

SuggestedRemedy

change "inforamtion" to "information"

Proposed Response Response Status O

Cl K SC K.3 P0 L0 MyBallot # 230

Mike, Moreton

Comment Type TR Comment Status D

"#if 0", "#if 1" - these just look silly in example code.

SuggestedRemedy

Pass a parameter to the program indicating which test you want to run.

Proposed Response Response Status O

Commenting out test code is a common practice and serves to increase the conciseness of t code.

Cl K SC K.3 P0 L0 MyBallot # 268

Karcz, Kevin

Comment Type E Comment Status X

misspellings in "no efficiency or appropriateness"

SuggestedRemedy

edit

Proposed Response Response Status O

Cl K SC K.3 P0 L0 MyBallot # 608

Reuss, Edward

Comment Type E Comment Status X

The C language #define statements are not formatted correctly.

SuggestedRemedy

Change "ADD_TIM_BIT0" to "ADD_TIM_BIT 0", "REMOVE_TIM_BIT1" to REMOVE_TIM_BIT 1", "TIM_ELEMENT_ID5" to "TIM_ELEMENT_ID 5", "TIM_BASE_SIZE3" to "TIM_BASE_SIZE 3", "AID_SIZE2008" to "AID_SIZE 2008", "VBM_SIZE251" to "VBM_SIZE 251".

Proposed Response Response Status O

Cl K SC K.3 P0 L0 MyBallot # 607

Reuss, Edward

Comment Type E Comment Status X

Multiple spelling and syntax errors

SuggestedRemedy

Change "efficiency or appropriateness for actual implementation" to "efficiency or appropriateness of the actual implementation".

Proposed Response Response Status O

CI K SC K.3 P0 L0 MyBallot # 229

Mike, Moreton

Comment Type TR Comment Status D

If you must define new names for standard C constructs, it would be wise to use ones that aren't as vague as "BYTE" and "WORD" - after all we don't use byte elsewhere in the docume for that reason.

SuggestedRemedy

"uint8" and "uint16" seem to be fairly common.

Proposed Response Response Status O

CI L SC L. P0 L0 MyBallot # 101

Oakes, Ivan

Comment Type TR Comment Status D

Annex L uses the term "Portal integration" and "integration function" when it should use "Integration Service" as defined previously (see 3.57, 5.2)

SuggestedRemedy

Replace the text "Portal integration" and "integration function" in Annex L by "Integration Service"

Proposed Response Response Status W

PROPOSED ACCEPT. Changes are in document 11-05-0257-04-0apf.

CI L SC L. P0 L0 MyBallot # 147

Visscher, Bert

Comment Type TR Comment Status D

The translation of Ethernet type encoded and LLC encoded tagged frames is often the source of interoperability issues but is unfortunately not spelled out in the tables L.2 and L.3

SuggestedRemedy

Add tagged frame translation in tables L.2 and L.3

Proposed Response Response Status W

PROPOSED ACCEPT. Added examples to both tables that clarify the expected encapsulation. See document 11-05-0257-04-0apf.

CI L SC L. P0 L0 MyBallot # 231

Mike, Moreton

Comment Type TR Comment Status D

The title and introduction to this annex are incorrect. It does not describe the integration function or portal - it describes the 802.1H selective translation. While a portal may include a 802.1H translation function there is no need for it to do so, and 802.1H selective translations may also take place in STAs.

SuggestedRemedy

Replace all references to integration and portal in this annex with "IEEE Std. 802.1H-1997 (ISO/IECTR11802-5:1997) translation function"

Proposed Response Response Status W

PROPOSED REJECT. The commenter is mistaken. The purpose of the annex is to recommend the behavior of a Portal. A STA need not translate MSDUs at all. It would be advisable to represent their format in the same way as a Portal would, but this is not a requirement. Moreover, this Recommended Practice does not simply recommend 802.1H, as most vendors use an 802.11-specific STT, rather than the one suggested in Annex A of 802.1

CI L SC L. P0 L0 MyBallot # 523

Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI L SC L.; clause L.1; page 947 P0 L0 MyBallot # 346

Hillman, Garth

Comment Type E Comment Status X

typo

SuggestedRemedy

of of -> of

Proposed Response Response Status O

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

Cl L SC L.1 P0 L0 MyBallot # 111

Bagby, David

Comment Type TR Comment Status D

missing word u should be oportal integration of the WLANo

SuggestedRemedy

correct

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl L SC L.1 P0 L0 MyBallot # 269

Karcz, Kevin

Comment Type E Comment Status X

"of a WLAN system that includes a portal integration the WLAN" should be "of a WLAN system that includes a portal integration of the WLAN"

SuggestedRemedy

edit

Proposed Response Response Status O

Cl L SC L.2 P0 L0 MyBallot # 232

Mike, Moreton

Comment Type TR Comment Status D

These changes are not specific to 802.11 - they are generally applicable to all 802.1H implementations. If the changes are left in this document readers will not know which document to select for details of 802.1H - 802.1H itself or (bizarrely) 802.11. These changes are an infringement of TGma's PAR.

SuggestedRemedy

Delete clause L.2 and forward it as a liaison to 802.1.

Proposed Response Response Status W

PROPOSED REJECT. This recommended practice differs from 802.1H because it uses a different STT. This Annex recommends a widespread practice already implemented by many 802.11 implementations. The use of a different STT, together with the translation rules for usi that table defined in 802.1H is completely unambiguous in the format presented here.

Cl L SC L.2 P0 L0 MyBallot # 112

Bagby, David

Comment Type TR Comment Status D

foot note 30 is interesting historically but not useful to the content of the annex

SuggestedRemedy

remove footnote

Proposed Response Response Status W

PROPOSED ACCEPT. Changed "NTI STT" to "802.11 Integration Service STT" to clarify its role.

Cl L SC L.2 P0 L0 MyBallot # 413

Chaplin, Clint

Comment Type E Comment Status X

"It is recommended that any WLAN system that logically incorporates a portal integrating the WLAN system with an Ethernet V2.0/IEEE 802.3 LAN use the procedures defined in IEEE Std 802.1H-1997 (ISO/IEC TR11802-5:1997), with the 2-entry Selective Translation Table shown Table L.1, to perform the Integration Function.." Note the two periods at the end of this sentence.

SuggestedRemedy

Delete one of the periods.

Proposed Response Response Status O

Cl L SC L.3 P0 L0 MyBallot # 414

Chaplin, Clint

Comment Type E Comment Status X

"Table L.2 shows the encapsulation example, and Table L.3 shows the decapsulation example..." Do we really want three periods (or an elipse) at th eend of this sentence?

SuggestedRemedy

Use a single period.

Proposed Response Response Status O

Cl L SC L.3 P0 L0 MyBallot # 233

Mike, Moreton

Comment Type TR Comment Status D

There is no 802.11 specific information in this clause - it is purely an example of how to implement 802.1H and so should be in that document.

SuggestedRemedy

Delete clause L.3 and forward it as a liaison to 802.1.

Proposed Response Response Status W

PROPOSED REJECT. A Portal is not an 802.1D bridge, because (a) the DS is not itself an 802 LAN, (b) it is permissible for a conformant 802.11 ESS to be transparent to Bridge PDUs, and (c) the portal abstraction deliberately hides the details of reassociation from a bridge. Requiring a Portal to be a bridge would render many systems non-compliant for no readily-evident reason.

Cl M SC M. P0 L0 MyBallot # 362

Black, Simon

Comment Type E Comment Status X

Editorial on the basis that this is informative text. In the text above figure M2 I would say that provision of connectivity between MUs is not a secondary function. Also in this annex care is required when using 'LAN'. I read this as non-IEEE802.11 LAN - if this is the case it might be useful to define it as so.

SuggestedRemedy

Consider rewording for the first point. For the second: throughout this section I would suggest looking for all occurrences of LAN and clarifying (by perhaps defining the term to mean nonIEEE802.11 LAN). Sometimes LAN is used, others 'external LAN'.

Proposed Response Response Status O

Cl M SC M. P0 L0 MyBallot # 121

Bagby, David

Comment Type ER Comment Status X

Edit 5: System Configuration the system <also change term in figures>

SuggestedRemedy

change as suggested

Proposed Response Response Status O

Cl M SC M. P0 L0 MyBallot # 617

Turner, Sandra

Comment Type E Comment Status X

05-120r9 Diagram Syntax notes are missing

SuggestedRemedy

Include 05/120r9 Diagram Syntax notes.

Proposed Response Response Status O

Cl M SC M. P0 L0 MyBallot # 454

Myles, Andrew

Comment Type TR Comment Status D

This annex provides very limited value given the large number of new terms and the semi-formal specification language

SuggestedRemedy

Remove entire annex

Proposed Response Response Status W

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

Cl M SC M. P0 L0 MyBallot # 524

Engwer, Darwin

Comment Type TR Comment Status D

After the combination of the base standard, the subsequent amendments and more focused individual changes, there remain unresolved inconsistencies between the text in this clause and other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response Response Status W

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

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Cl M SC M.

Cl M **SC M.** **P0** **L0** MyBallot #

Engwer, Darwin

Comment Type **ER** **Comment Status** **X**
 The proportions are wrong on figure M3

SuggestedRemedy
 Repaste the figure from the source document (11-05-0120-09)

Proposed Response *Response Status* **O**

Cl M **SC M.** **P0** **L0** MyBallot #

Bagby, David

Comment Type **ER** **Comment Status** **X**
 edit 4: Footer spelling problem: Corrections, Clarifications & Enhancements P802.11ma/D1.0

SuggestedRemedy
 Correct

Proposed Response *Response Status* **O**

Cl M **SC M.** **P0** **L0** MyBallot #

Bagby, David

Comment Type **ER** **Comment Status** **X**
 Edit 1: The core IEEE 802.11 conceptual definitions that surround the AP (refer to Clause 5) are abstract (and can sometimes also cause some confusion), but they are crafted to do so while maintaining the stated goal of flexibility and hence serve to allow the adaptation an extension of the standard in a wide variety of ways.

SuggestedRemedy
 Change as suggested

Proposed Response *Response Status* **O**

Cl M **SC M.** **P0** **L0** MyBallot #

Engwer, Darwin

Comment Type **TR** **Comment Status** **D**
 In compiling the 802.11REV-m-aD1.0 draft the Annex M page footnotes from source documer 11-05-0120-09 were omitted. These notes need to be included because they are crucial to th effective communication of the diagrams and the material within to the reader.

SuggestedRemedy
 Add the missing footnotes, or add descriptive in-line text to explain/ introduce the UML diagram syntax to the reader.

Proposed Response *Response Status* **W**
 PROPOSED ACCEPT.

Cl M **SC M.** **P0** **L0** MyBallot #

Bagby, David

Comment Type **ER** **Comment Status** **X**
 Edit 3: The primary functions of the WLAN System can be further characterized as a) Provide LAN access 1) includes MU validation 2) includes moving data (between the MUs and the LA including with a special data movement function called filtering data

SuggestedRemedy
 Change as suggested for wording - replacve formatting that had to be lost to paste edits into this broken spread sheet.

Proposed Response *Response Status* **O**

Cl M **SC M.** **P0** **L0** MyBallot #

Chaplin, Clint

Comment Type **E** **Comment Status** **X**
 This annex mixes the use of "ACM STA" and "ACM_STA".

SuggestedRemedy
 Please pick one or the other, and stick with it.

Proposed Response *Response Status* **O**

Cl M SC M. P0 L0 MyBallot # 122

Bagby, David

Comment Type ER Comment Status X

Section M needs a spell check = example ôxtendesô and ôEnhancmentsô û spell check & correct as necessary.

SuggestedRemedy

run spell check & correct errors

Proposed Response Response Status O

Cl M SC M. P0 L0 MyBallot # 234

Mike, Moreton

Comment Type TR Comment Status D

While I appreciate a lot of hard work went into this annex, I don't really understand the point. seems to be saying "For those of you who didn't understand section 5, how about we invent a whole new set of terminology and explain it again." and all that's likely to do is to increase the confusion.

SuggestedRemedy

If there are valuable new concepts in this annex then incorporate them into clause 5, and dele the rest of this annex.

Proposed Response Response Status W

PROPOSED REJECT.

Annex M is completely informative material.

The APF description is intended (only) as an abstract model to help in "systems" level work when thinking of or working with 802.11 technology.

The value is helping people to formulate and hold in their mind a clear and consistent model of the functions of an 802.11 device (in general) and esp. an AP, including the entities usually found in typical device implementations.

Annex M is the primary result of the work of the AP Functionality (APF) chair's ad hoc cmtee. The APF cmtee was formed as a result of requests from several others groups (both within 8C and outside 802) to clarify the AP functionality. Refer to submissions 11-04-0544-00-0wng-ap-functional-needs-capwap.ppt and 11-04-0481-03-0wng-thoughts-on-ap-functional-descriptions.ppt and 11-04-0540-01-0wng-need-ap-functional-descriptions.ppt and 11-04-0600-00-0wng-ap-functional-descriptions-update.ppt which articulate the need for the APF group ar the results it will generate.

Anticipated users of the new descriptive material are: IETF CAPWAP, 802.1X, 802.11 TGs ar 802.21.

The purpose of Annex M is to add clarity to the standard in the form of addition informative descriptions. In reviewing the APF output document (11-05-0120-09) with various parties everyone's understanding of the 802.11 architecture was improved. Annex M thus succeeds providing a clearer mental mode for people to better understand 802.11. Note that due to an editorial compilation error, Annex M does not reflect the actual and full contents of the approve submission 11-05-0120-09.

All of the terms used in annex M except for ACM_STA, MU, and AU are terms that are define in the existing standard. The usage of those terms is completely consisten with their definitior and meaning. What Annex M does is to clarify those terms with respect to each other. Even though ACM_STA and MU are new terms they do not define anything new. They just give a name to existing modes of STA operation that then allow those modes to be easily and concisely referenced. The new term AU is cited only in passing as an example product instantiation, only in order to provide a basis for the abstract descriptions.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

Cl M SC M. P0 L0 MyBallot # 123

Bagby, David

Comment Type ER Comment Status X

Edit 7: The term "filtering data" would read better in most places as "data filtering".

SuggestedRemedy

change as suggested

Proposed Response Response Status O

Cl M SC M. P0 L0 MyBallot # 598

Newton, Paul

Comment Type E Comment Status X

In submission 11-05-0120 the diagrams referenced in Annex M had footnotes explaining in detail the UML terminology giving a clearer understanding of each UML diagram.

SuggestedRemedy

Add the footnotes from submission 11-05-0120 to annex M.

Proposed Response Response Status O

Cl M SC M. P0 L0 MyBallot # 491

Engwer, Darwin

Comment Type ER Comment Status X

Annex M makes reference to some terms from 802.11F, this requires a corresponding annotation in Annex E.

SuggestedRemedy

Add a reference to 802.11F in Annex E.

Proposed Response Response Status O

Cl M SC M. P0 L0 MyBallot # 136

Myles, Andrew

Comment Type TR Comment Status D

This annex provides very limited value given the large number of new terms and the semi-formal specification language

SuggestedRemedy

Remove entire annex

Proposed Response Response Status W

PROPOSED REJECT.

Annex M is completely informative material.

The APF description is intended (only) as an abstract model to help in "systems" level work when thinking of or working with 802.11 technology.

The value is helping people to formulate and hold in their mind a clear and consistent model of the functions of an 802.11 device (in general) and esp. an AP, including the entities usually found in typical device implementations.

Annex M is the primary result of the work of the AP Functionality (APF) chair's ad hoc cmtee. The APF cmtee was formed as a result of requests from several others groups (both within 802 and outside 802) to clarify the AP functionality. Refer to submissions

11-04-0544-00-0wng-ap-functional-needs-capwap.ppt and 11-04-0481-03-0wng-thoughts-on-ap-functional-descriptions.ppt and

11-04-0540-01-0wng-need-ap-functional-descriptions.ppt and 11-04-0604-00-0wng-ap-functional-descriptions-update.ppt

which articulate the need for the APF group and the results it will generate.

Anticipated users of the new descriptive material are: IETF CAPWAP, 802.1X, 802.11 TGs and 802.21.

The purpose of Annex M is to add clarity to the standard in the form of additional informative descriptions. In reviewing the APF output document (11-05-0120-09) with various parties, everyone's understanding of the 802.11 architecture was improved. Annex M thus succeeds

providing a clearer mental model for people to better understand 802.11. Note that due to an editorial compilation error, Annex M does not reflect the actual and full contents of the approved

submission 11-05-0120-09. The commenter is solicited to provide more detail as to the changes (other than complete removal) that would be acceptable to the annex.

Cl M SC M. P0 L0 MyBallot # 94

Oakes, Ivan

Comment Type TR Comment Status D

This section does not add clarity. Whilst perhaps useful in a book on 802.11, it is better left or of here. It also replicates section 5 and is debatable in its accuracy.

SuggestedRemedy

The definition in 3.2 is sufficient to define an AP, remove the new Annex M.

Proposed Response Response Status W

PROPOSED REJECT.

Annex M is completely informative material.

The APF description is intended (only) as an abstract model to help in "systems" level work when thinking of or working with 802.11 technology.

The value is helping people to formulate and hold in their mind a clear and consistent model of the functions of an 802.11 device (in general) and esp. an AP, including the entities usually found in typical device implementations.

Annex M is the primary result of the work of the AP Functionality (APF) chair's ad hoc cmtee. The APF cmtee was formed as a result of requests from several others groups (both within 802 and outside 802) to clarify the AP functionality. Refer to submissions 11-04-0544-00-0wng-ap-functional-needs-capwap.ppt and 11-04-0481-03-0wng-thoughts-on-ap-functional-descriptions.ppt and 11-04-0540-01-0wng-need-ap-functional-descriptions.ppt and 11-04-0600-00-0wng-ap-functional-descriptions-update.ppt which articulate the need for the APF group ar the results it will generate.

Anticipated users of the new descriptive material are: IETF CAPWAP, 802.1X, 802.11 TGs ar 802.21.

The purpose of Annex M is to add clarity to the standard in the form of addition informative descriptions. In reviewing the APF output document (11-05-0120-09) with various parties everyone's understanding of the 802.11 architecture was improved. Annex M thus succeeds providing a clearer mental mode for people to better understand 802.11. Note that due to an editorial compilation error, Annex M does not reflect the actual and full contents of the approve submission 11-05-0120-09.

Cl M SC M. P0 L0 MyBallot # 118

Bagby, David

Comment Type TR Comment Status X

Edit 2: <just before figure M2> An infrastructure WLAN system contains one or more APs and zero or more portals in addition to the DS.

SuggestedRemedy

Change as suggested

Proposed Response Response Status O

Cl M SC M. page 949 P0 L0 MyBallot # 339

Hillman, Garth

Comment Type E Comment Status X

Thank you. I recommend that a first time reader start here and then go back to the beginning.

SuggestedRemedy

In Chapter 1 add a Clause entitled Organization. In that clause 'briefly' describe how and why the standard is organized as it is (i.e., a tiny bit of history) and suggest that a good place to st might be Annex M and then proceed with Chapter 2 etc.

Proposed Response Response Status O

Cl M SC M.1 P0 L0 MyBallot # 113

Bagby, David

Comment Type TR Comment Status X

amusing language û I suspect the phrase ôbut they do soã was intended to refer to the definitions being abstract and not to the definitions being confusing û right?

SuggestedRemedy

Reword to eliminate the ambiguity of reference.

Proposed Response Response Status O

Cl M SC M.1 P0 L0 MyBallot # 415

Chaplin, Clint

Comment Type E Comment Status X

"At times there is some confusion surrounding the term AP and the relation of that term to the AP functions and common implementations of AP devices." I think the sentence would be more precise if the first use of AP is surrounded by quotes.

SuggestedRemedy

Change to: At times there is some confusion surrounding the term "AP" and the relation of the term to the AP functions and common implementations of AP devices.

Proposed Response Response Status O

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

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Cl M SC M.1

Cl M SC M.2 P0 L0 MyBallot # 115

Bagby, David

Comment Type TR Comment Status D

ôThe connection lines in a use case diagramô û what/Es a connection line? The red horizont
lines?

SuggestedRemedy

change language or label the lines or ?

Proposed Response Response Status W

PROPOSED REJECT.

The syntax used in the diagrams is not arbitrary.

The diagrams are UML-style Use Case and Object Model Diagrams.

That said, not all readers will recognize or know the syntax of the diagram so diagram syntax
notes were included.

The submission from which Annex M was created included footnotes describing the diagram
syntax.

Due to an editorial compilation error Annex M does not reflect the actual and full contents of th
approved submission 11-05-0120-09.

The commenter is requested to review the original submission 11-05-0120-09 paying close
attention to the page footnotes that describe the diagram syntax.

Cl M SC M.2 P0 L0 MyBallot # 469

Yang, Lily

Comment Type E Comment Status X

"Infrastructure mobile STAs operate in infrastructure BSS mode. I.e. they are the users of an
AP.": use "Infrastructure mobile STAs operate in infrastructure BSS mode, i.e. they are the
users of an AP."

SuggestedRemedy

use the suggested text.

Proposed Response Response Status O

Cl M SC M.2 P0 L0 MyBallot # 95

Oakes, Ivan

Comment Type TR Comment Status X

The use of "mobile" just adds confusion

SuggestedRemedy

Remove the word "mobile" from within M.2 and references to it, e.g. paragraph after c) in m.2.

Proposed Response Response Status O

Cl M SC M.2 P0 L0 MyBallot # 450

Myles, Andrew

Comment Type E Comment Status X

"I.e." should be "i.e"

SuggestedRemedy

Correct

Proposed Response Response Status O

Cl M SC M.2 P0 L0 MyBallot # 116

Bagby, David

Comment Type TR Comment Status D

I find the use of the people symbols distracting as none of the entities shown are commonly
peopleà

SuggestedRemedy

just use the terms (STA, DS) with out the people outline in the picture.

Proposed Response Response Status W

PROPOSED REJECT.

The syntax used in the diagrams is not arbitrary.

The diagrams are UML-style Use Case and Object Model Diagrams. In such diagrams the
proper syntax is to show entities that are outside the system boundary box as stick people.

The reason is that these external entities represent the actors (formal term), or users, of the
system. Since they are outside the system boundary, their internal behavior is not described.
Instead, references to the external entities are limited to descriptions of their interactions with,
and expectations of, the system, which is accomplished by describing the use cases and
scenarios (i.e. functions)

of the system along with a decomposition of the entities (objects and behaviors) that provide
that functionality.

That said, not all readers will recognize or know the syntax of the diagram so diagram syntax
notes were included.

The submission from which Annex M was created included footnotes describing the diagram
syntax.

Due to an editorial compilation error Annex M does not reflect the actual and full contents of th
approved submission 11-05-0120-09.

The commenter is requested to review the original submission 11-05-0120-09 paying close
attention to the page footnotes that describe the diagram syntax.

Cl M SC M.2 P0 L0 MyBallot # 114

Bagby, David

Comment Type TR Comment Status D

The reintroduction of the term Ad-hic is confusing. This is an example of the reason the standard uses the term IBSS because an infrastructure networks can also be ad-hoc witness the sale of small travel devices. It would be better not to attempt to redefine ad-hoc from its english meaning into the equivalent of infrastructure.

SuggestedRemedy

Rewrite as needed to avoid this problem.

Proposed Response Response Status W

PROPOSED REJECT.

The term "ad hoc" is (and has been for some time) defined elsewhere in the standard and referenced as needed. See clauses 1.2, 3.4, 5.2.1, 5.2.3.1 among many others.

Cl M SC M.2 P0 L0 MyBallot # 92

Oakes, Ivan

Comment Type TR Comment Status X

STA can also act in a WDS mode, and although not clearly defined by 802.11-1999 it is implied by the existence of the A4 frame format. It could be argued that such a WDS STA can act in an ad-hoc-like way (i.e. no association, no security), an infrastructure-like way and an AP-like way (e.g. using WEP or RSN).

SuggestedRemedy

Add WDS modes to list and describe.

Proposed Response Response Status O

Cl M SC M.2 P0 L0 MyBallot # 470

Yang, Lily

Comment Type TR Comment Status D

Figure M2: So WLAN system is not the same as ESS. WLAN system might be a superset of ESS. Correct?

SuggestedRemedy

A bit more clarification of the terminologies used in Annex M in relation of the terminologies used in clause 5 would be helpful.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

"WLAN system" is defined in clause 3.122

This is a long standing definition present in the 802.11 standard since the 1997 edition.

The previous name assigned to this definition was "infrastructure", which was deemed to be too general and difficult to differentiate from other uses of the word "infrastructure".

Hence the term was renamed to "WLAN system". The actual definition was unchanged.

Annex M then uses the "WLAN system" term in conjunction with corresponding diagrams to accurately convey the same information.

An ESS does not include all the items in a WLAN system, for example it does not include the DS, which is hierarchically above the BSSs. See the response to your other comment on that same subject.

Change "it is helpful to refer to a more general case" to "it is helpful to discuss the abstract case".

Also, make identical change to definition of WLAN System, as is done in 3.122.

Cl M SC M.2 P0 L0 MyBallot # 132

Myles, Andrew

Comment Type E Comment Status X

"I.e." should be "i.e"

SuggestedRemedy

Correct

Proposed Response Response Status O

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

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Cl M SC M.2

Cl M SC M.2 P0 L0 MyBallot # 96

Oakes, Ivan

Comment Type TR Comment Status D

11e uses the term "Non-AP STA" rather than MU, introduction of the term "MU" is just going to confuse.

SuggestedRemedy

Replace MU by "Non-AP STA" in Annex M.

Proposed Response Response Status W

PROPOSED REJECT.

The Venn diagram grouping of "non-AP STA" is different from what is desired here, since non AP STA includes IBSS (or ad hoc mode) STAs. The specific terms used in Annex M are designed to be very specific and clear.

Cl M SC M.2 P0 L0 MyBallot # 98

Oakes, Ivan

Comment Type T Comment Status X

Figure M.4, The definition of a portal is the interworkign unit between the 802.11 and non-802.11 LAN segments. As The DS may or may not be 802.11, it may not even be a 802 network, then I think the position of the "Portal" in this figure is inaccurate, it is more accurate place it between the AP and DS. Further the definition of an AP "An entity that has STA functionality and provides access to the distribution services" (3.2), means the AP logically contains both the STA and portal components and it not a connector between the two.

SuggestedRemedy

Remove Annex M as it is inaccurate.

Proposed Response Response Status O

Cl M SC M.2 P0 L0 MyBallot # 97

Oakes, Ivan

Comment Type TR Comment Status X

There is no "Access Control Mode" just a STA that accepts association.

SuggestedRemedy

Remove use of Access control mode STAs and replace it by text that says "STAs that accept association".

Proposed Response Response Status O

Cl M SC M.2 P0 L0 MyBallot # 416

Chaplin, Clint

Comment Type TR Comment Status D

I forsee problems with this definition: "The mobile STAs are the STA entities that are ordinarily moving around, but may also be in a fixed location. The mobile adjective prefix often helps in visualizing the type of STA under discussion." There are already APs that move, and with active meshing, the mobility of APs is going to increase.

SuggestedRemedy

0

Proposed Response Response Status W

PROPOSED REJECT.

That is why the term description specification specifically identifies an MU as an "infrastructur mode mobile STA".

Cl M SC M.3 P0 L0 MyBallot # 418

Chaplin, Clint

Comment Type E Comment Status X

The sentence "Move data (between the MUs and the AP)" does not need the parenthesis.

SuggestedRemedy

Get rid of the parenthesis.

Proposed Response Response Status O

Cl M SC M.4 P0 L0 MyBallot # 135

Myles, Andrew

Comment Type TR Comment Status X

The text refers to IAPP-ADD and IAPP-MOVE indications

However, these concepts are from 802.11F, which has very poor acceptance and may never become a non-trial recommended practice

SuggestedRemedy

Remove references to 802.11F concepts

Proposed Response Response Status O

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

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Cl M SC M.4

CI M SC M.4 P0 L0 MyBallot # 452
 Myles, Andrew
 Comment Type E Comment Status X
 "notyfing" should be "notifying"
 SuggestedRemedy
 Correct
 Proposed Response Response Status O

CI M SC M.4 P0 L0 MyBallot # 451
 Myles, Andrew
 Comment Type E Comment Status X
 "extendes" should be "extends"
 SuggestedRemedy
 Correct
 Proposed Response Response Status O

CI M SC M.4 P0 L0 MyBallot # 453
 Myles, Andrew
 Comment Type TR Comment Status D
 The text refers to IAPP-ADD and IAPP-MOVE indications
 However, these concepts are from 802.11F, which has very poor acceptance and may never become a non-trial recommended practice
 SuggestedRemedy
 Remove references to 802.11F concepts
 Proposed Response Response Status W
 PROPOSED REJECT.
 This comment was WITHDRAWN by the commenter.

CI M SC M.4 P0 L0 MyBallot # 609
 Reuss, Edward
 Comment Type E Comment Status X
 Multiple spelling errors
 SuggestedRemedy
 Change "extendes" to "extends" and "notyfing" to notifying".
 Proposed Response Response Status O

CI M SC M.4 P0 L0 MyBallot # 618
 Turner, Sandra
 Comment Type E Comment Status X
 The word "extends" is spelled incorrectly in M.4 a1
 SuggestedRemedy
 Replace "extendes" with "extends"
 Proposed Response Response Status O

CI M SC M.4 P0 L0 MyBallot # 134
 Myles, Andrew
 Comment Type E Comment Status X
 "notyfing" should be "notifying"
 SuggestedRemedy
 Correct
 Proposed Response Response Status O

CI M SC M.4 P0 L0 MyBallot # 133
 Myles, Andrew
 Comment Type E Comment Status X
 "extendes" should be "extends"
 SuggestedRemedy
 Correct
 Proposed Response Response Status O

Cl M **SC M.4** **P0** **L0** MyBallot #

Reuss, Edward

Comment Type **E** Comment Status **X**
 This sentence is difficult to read.

SuggestedRemedy

Change "adjustments based on notification from the APs of changes" to "adjustments, based on notification from the APs, of changes".

Proposed Response Response Status **O**

Cl M **SC M.4** **P0** **L0** MyBallot #

Reuss, Edward

Comment Type **E** Comment Status **X**
 Poor syntax - "to/ from"

SuggestedRemedy

Change "to/ from" to "to and from".

Proposed Response Response Status **O**

Cl M **SC M.6** **P0** **L0** MyBallot #

Montemurro, Michael

Comment Type **T** Comment Status **D**
 M.6 or another section must address Broadcast/Multicast traffic as well as unicast traffic. L2/L protocols such as ARP, DHCP are critical to operations in an IP network. Transmission of broadcast/multicast MSDUs are critical to AP functions.

SuggestedRemedy

Expand the description on portal and DS functions to address transmission of Broadcast/Multicast traffic.

Proposed Response Response Status **W**
 PROPOSED REJECT.
 Those are secondary functinocs driven by specific use case scenarios, i.e., more refined or specialized, or extended capabilities, that only apply in some situations. Annex N is a better place to address this comment.

Cl M **SC M.6** **P0** **L0** MyBallot #

Reuss, Edward

Comment Type **E** Comment Status **X**
 Poor syntax - "to/from"

SuggestedRemedy

Change "to/from" to "to and from".

Proposed Response Response Status **O**

Cl M **SC M.7** **P0** **L0** MyBallot #

Chaplin, Clint

Comment Type **E** Comment Status **X**
 The sentence fragment "Since transiting from a DS through a portal onto an integrated LAN, and then subsequently via another portal onto its DS is transparent," I am having problems parsing, because of comma placement.

SuggestedRemedy

Change to: "Since transiting from a DS through a portal onto an integrated LAN and then subsequently via another portal onto its DS is transparent,"

Proposed Response Response Status **O**

Cl N **SC N.** **P0** **L0** MyBallot #

Myles, Andrew

Comment Type **TR** Comment Status **X**
 There is little obvious value in this annex

SuggestedRemedy

Remove entire annex

Proposed Response Response Status **O**

Cl N **SC N.** **P0** **L0** *MyBallot #*

Mike, Moreton

Comment Type **TR** *Comment Status* **X**

This interface can perfectly well be described in terms of the standard 802.1 M-UNITDATA primitives and the 802.11 MLME primitives. Why pick an incompatible API for no reason?

SuggestedRemedy

Change the text in this annex to re-use the indicated interfaces, or delete it entirely.

Proposed Response *Response Status* **O**

Cl N **SC N.** **P0** **L0** *MyBallot #*

Engwer, Darwin

Comment Type **TR** *Comment Status* **D**

After the combination of the base standard, the subsequent ammendments and more focusec individual changes, there remain unresolved inconsistencies between the text in this clause a other clauses. This applies to this clause and all subclauses thereof.

SuggestedRemedy

Resolve the inconsistencies.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl N **SC N.** **P0** **L0** *MyBallot #*

Mike, Moreton

Comment Type **TR** *Comment Status* **X**

This annex should be part of section 6 (just like the interface to LLC)

SuggestedRemedy

See comment

Proposed Response *Response Status* **O**

Cl N **SC N.** **P0** **L0** *MyBallot #*

Myles, Andrew

Comment Type **TR** *Comment Status* **X**

There is little obvious value in this annex

SuggestedRemedy

Remove entire annex

Proposed Response *Response Status* **O**

Cl N **SC N.** **P0** **L0** *MyBallot #*

Mike, Moreton

Comment Type **TR** *Comment Status* **X**

It's not clear how this SAP fits into the architecture.

SuggestedRemedy

Please supply an architecture diagram showing where it fits in.

Proposed Response *Response Status* **O**

Cl N **SC N.1** **P0** **L0** *MyBallot #*

Oakes, Ivan

Comment Type **TR** *Comment Status* **X**

The definition of an AP (3.2) "An entity that has STA functionality and provides access to the distribution services" means an AP contrains the portal and the integration service. The AP does not interface to the portal. A portal is a SAP between the MAC and the Integration Service, it is not a module or unit. There is no AP-SAP, there is a MAC-SAP. Finally, the interface to the DS may be the SAP to some other MAC, this is not in scope, nor should it be. is the job of the Integration Service, an "interworking unit" in classic protocol terminology, is to map and convert the MAC-SAP to the DS-SAP, how it does this is also out of scope except a: guidelines (e.g. Annex L). e.g. what if the DS is a GPRS network, there is no STA-NOTIFY.request in GPRS. The 802.11 spec should define the MAC-SAP no the DS-SAP, thus this Annex is not required.

SuggestedRemedy

Remove Annex N.

Proposed Response *Response Status* **O**

Cl N **SC N.1** **P0** **L0** *MyBallot #*

Mike, Moreton

Comment Type **TR** *Comment Status* **X**

 This clause is written in a very conversational style.

SuggestedRemedy

 Please reword to be more consistent with the style used in other sections of the document.

Proposed Response *Response Status* **O**

Cl N **SC N.1** **P0** **L0** *MyBallot #*

Reuss, Edward

Comment Type **E** *Comment Status* **X**

 Poor syntax - "in/out"

SuggestedRemedy

 Change "in/out" to "in or out".

Proposed Response *Response Status* **O**

Cl N **SC N.1** **P0** **L0** *MyBallot #*

Reuss, Edward

Comment Type **E** *Comment Status* **X**

 Poor syntax - "and/or"

SuggestedRemedy

 Change "and/or" to "and".

Proposed Response *Response Status* **O**

Cl N **SC N.2.1.1** **P0** **L0** *MyBallot #*

Mike, Moreton

Comment Type **TR** *Comment Status* **X**

 As described, a received MSDU can be routed to LLC (via the MA-UNITDATA.indication primitive) or to the DS (via the DS-UNITDATA.request primitive). I think having "request" for one and "indication" for the other is inconsistent.

SuggestedRemedy

 Swap the request and indication.

Proposed Response *Response Status* **O**

Cl N **SC N.2.1.1.2** **P0** **L0** *MyBallot #*

Mike, Moreton

Comment Type **TR** *Comment Status* **X**

 Something of type "802.11 MSDU" does not contain (almost by definition) the parameters that accompany an MSDU when passed over another interface.

SuggestedRemedy

 List all the parameters.

Proposed Response *Response Status* **O**

Cl N **SC N.2.1.1.2** **P0** **L0** *MyBallot #*

Myles, Andrew

Comment Type **TR** *Comment Status* **X**

 It is not clear why the Source Type is useful

SuggestedRemedy

 Explain function of Source Type

Proposed Response *Response Status* **O**

CI N SC N.2.1.1.2 P0 L0 MyBallot # 137
 Myles, Andrew
 Comment Type TR Comment Status X
 It is not clear why the Source Type is useful
 SuggestedRemedy
 Explain function of Source Type
 Proposed Response Response Status O

CI N SC N.2.1.2.2 P0 L0 MyBallot # 456
 Myles, Andrew
 Comment Type TR Comment Status X
 It is not clear why the Destination Type is useful
 SuggestedRemedy
 Explain function of Destination Type
 Proposed Response Response Status O

CI N SC N.2.1.1.2 P0 L0 MyBallot # 240
 Mike, Moreton
 Comment Type TR Comment Status X
 I don't believe the DS behaves any differently for an AP than it does for a portal. This view is supported by the lack of any described use of the "DestinationType" parameter. In any case, this sort of information should be provided by a management interface, not with every MSDU.
 SuggestedRemedy
 Delete the "SourceType" parameter.
 Proposed Response Response Status O

CI N SC N.2.1.2.2 P0 L0 MyBallot # 241
 Mike, Moreton
 Comment Type TR Comment Status X
 The DS tells the recipient whether it's an AP or Portal??? Surely the recipient must already know this!
 SuggestedRemedy
 Delete the "DestinationType" parameter.
 Proposed Response Response Status O

CI N SC N.2.1.2.2 P0 L0 MyBallot # 138
 Myles, Andrew
 Comment Type TR Comment Status X
 It is not clear why the Destination Type is useful
 SuggestedRemedy
 Explain function of Destination Type
 Proposed Response Response Status O

CI N SC N.2.2.1.2 P0 L0 MyBallot # 139
 Myles, Andrew
 Comment Type TR Comment Status X
 If the Enumeration is MOVE then it appears a "move to à" parameter is missing
 SuggestedRemedy
 Add another parameter
 Proposed Response Response Status O

Cl **N** SC **N.2.2.1.2** P**0** L**0** MyBallot #

Myles, Andrew

Comment Type **TR** Comment Status **X**

If the Enumeration is MOVE then it appears a "move to à" parameter is missing

SuggestedRemedy

Add another parameter

Proposed Response Response Status

Cl SC P**0** L**0** MyBallot #

Aboba, Bernard

Comment Type **TR** Comment Status **X**

Add Appendix O on "EAP Method Requirements for WLAN".

SuggestedRemedy

Add Appendix O containing material from RFC 4017.

Proposed Response Response Status

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line