

P802.15.3 Draft 09 Comments

CI 00 SC P L # 1840

Rasor, Gregg Motorola

Comment Type E Comment Status X

3.
8 bit address names are confusing and inconsistent. AD-AD sounds like

SuggestedRemedy

Proposed Response Response Status O

CI 00 SC P L # 1441

Shvodian, William XtremeSpectrum

Comment Type E Comment Status A

Half the time we use "an MLME..." and half the time we use "a MLME..." Should be "an MLME." This comment applies to ALL acronyms in the draft.

SuggestedRemedy

Change to "an MLME." Also, change all other uses of "an" and "a" before acronyms to follow the rules based on the first sound, not whether the first letter is a vowel or a consonant. From <http://webster.comnet.edu/grammar/abbreviations.htm> Using articles with abbreviations and acronyms: One of the most often asked questions about grammar has to do with the choice of articles — a, an, the — to precede an abbreviation or acronym. Do we say an FBI agent or a FBI agent?

Although "F" is obviously a consonant and we would precede any word that begins with "F" with "a," we precede FBI with "an" because the first sound we make when we say FBI is not an "f-sound," it is an "eff-sound." Thus we say we're going to a PTO meeting where an NCO will address us. We say we saw a UFO because, although the abbreviation begins with a 'U,' we pronounce the "U" as if it were spelled "yoo." Whether we say a URL or an URL depends on whether we pronounce it as "earl" or as "u*r*I."

Proposed Response Response Status C

PROPOSED ACCEPT.

CI 00 SC P L # 1367

Shvodian, William XtremeSpectrum

Comment Type E Comment Status X

Source Address and Destination Address order is inconsistent. 6.8.1
MAC_DATA.request(DA, SA) 7.2 Header: [... DA, SA] 7.4.10 CTA [SA, DA]

SuggestedRemedy

Always use Destination Address followed by Source Address Change CTA to Destination Address followed by Source Address

Proposed Response Response Status O

CI 00 SC P L # 1366

Shvodian, William XtremeSpectrum

Comment Type E Comment Status D

(E) Page 184, line 27: replace 're-initialization' by 're-initialization of the device'. 48 bit and

something that kids take Ritalin for. Address is usually reserved in 802 standards for 48 bit MAC address.

SuggestedRemedy

Change AD-AD to AID - Association ID. Use "MAC Address" or "Address" for 48 bit 802 address. Get rid of DEVAddress, AssociDEVAddress, DevID Use AID for all 8 bit addresses - Source AID, Destination AID, etc. Also, SA8, and DA8 would be the AIDs, and SA48 or DA48 would be the 48 bit MAC addresses. Make this change throughout

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

CI 00 SC P L # 1358

CI 00 SC P L # 1358

Shellhammer, Steve Symbol Technologies

Comment Type TR Comment Status X

The terms piconet and WPAN both seem to mean the same thing. The term piconet is not defined in clause 3 and wireless personal area network is also not defined, so it is difficult to be sure if this is the case.

SuggestedRemedy

If the two terms mean the same thing then use only one throughout the standard. I would recommend WPAN since it is the one most often used within the IEEE. Drop the term piconet with the standard and use only WPAN.

Proposed Response Response Status O

CI 00 SC P L # 1356

Shellhammer, Steve Symbol Technologies

Comment Type TR Comment Status X

The standard does not address the issue of wireless coexistence sufficiently.

SuggestedRemedy

A clause on coexistence needs to be added to the 802.15.3 standard. The clause should include, at a minimum, the following sub-clauses: 1. A sub-clause listing which wireless 802 networks are approved for operation in the same location as an 802.15.3 WPAN, and which are not approved for operation in the same location as an 802.15.3 WPAN. 2. A sub-clause quantifying the performance of an 802.15.3 WPAN that a user can expect, in the presence of the various approved wireless 802 networks. 3. A sub-clause quantifying the performance of the various approved wireless 802 networks that a user can expect, in the presence of an 802.15.3 network.

Proposed Response Response Status O

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CI 00 SC P L # 1327
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
"Only the DEV that is receiving a unicast stream addressed to it shall send a delayed-ACK command." This should specify that the stream must be on with ACK Policy of Delayed ACK.

SuggestedRemedy
Change sentence to: "Only the DEV that is receiving a unicast stream addressed to it with ACK Policy set to delayed ACK shall send a delayed-ACK command."

Proposed Response Response Status O

CI 00 SC P L # 798
Kinney, Patrick Invensys

Comment Type E Comment Status X
Many points in the MAC sections refer to 2.4 GHz. These would need to be changed if another PHY is implemented

SuggestedRemedy
remove all references to 2.4 GHz

Proposed Response Response Status O

CI 00 SC P L # 768
Huckabee, Laura Time Domain

Comment Type T Comment Status X
It is not clear that <= 1 second connect time is achievable (especially with existing security clauses).

SuggestedRemedy
Clarify in Clause 5 all connection time issues. Review impact of security to see if connect time is attainable.

Proposed Response Response Status O

CI 00 SC P L # 489
GUBBI, RAJUGOPAL Broadcom, corp

Comment Type E Comment Status X
The use of term "contention access period": There is already a term "contention period" for the same concept that is well known in 802-wireless community term.

SuggestedRemedy
Replace all occurrences of "contention access period" with "contention period"

Proposed Response Response Status O

CI 00 SC P L # 1844
Razor, Gregg Motorola

Comment Type TR Comment Status X
7. (TR) Page 185, line 6: in front of the sentence 'To facilitate...' insert the following sentence: 'It will accept any commands from an authenticated device.' Comment: the current text does not cover the consequences of a successful authentication.

SuggestedRemedy

Proposed Response Response Status O

CI 00 SC P L # 1843
Razor, Gregg Motorola

Comment Type E Comment Status X
6. (E) Page 185, line 2: replace 'part of hereof' by 'part hereof'.

SuggestedRemedy

Proposed Response Response Status O

CI 00 SC P L # 1482
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status A
We agreed to change Kus to ms throughout the document. Looks like only half of the instances got update. Half still have Kus.

SuggestedRemedy
Change all values of Kus to ms.

Proposed Response Response Status C

P802.15.3 Draft 09 Comments

CI 00 SC P L # 1841

Rasor, Gregg Motorola

Comment Type E Comment Status X
4.

device Id with the IEEE MAC address gives rise to anonymity

SuggestedRemedy

Proposed Response Response Status O

CI 00 SC P L # 520

GUBBI, RAJUGOPAL Broadcom, corp

Comment Type E Comment Status X
use of "what" and "how many" in colloquial sense

SuggestedRemedy
this draft has about 6 use of "what" and a couple of "how many" used in colloquial sense. Please change those sentences appropriately. an example is line 16, page 151.

Proposed Response Response Status O

CI 00 SC P L # 1836

Rasor, Gregg Motorola

Comment Type TR Comment Status X
(E) Page 185, line 44: replace 'provided' by 'indeed provided' Statically identifying the

concerns, since then the device Id identifies the device in a static and traceable way. One distinguishes a number of issues, including (1) Tracking of devices and thereby their users; (2) trace-ability of the manufacturer of the WPAN-chip, which might lead to passively monitoring which devices are owned by whom (e.g., for device theft). (Note: lack of anonymity was a major criticism of the original Bluetooth specification. It led to a change requirement by Ericsson, after this privacy issue had been advertised on the front cover of the NY Times).

SuggestedRemedy

Do not statically identify the device Id with the IEEE MAC address. Instead, add a separate section on how the device Id should be interpreted. Add a separate section on how the device Id should be interpreted, thus leaving room for dynamic linkage of the device Id to a (pseudonym) of the IEEE MAC address of the device. As for now, this section would just describe that the device Id equals the IEEE MAC address (so, we have compliance with the current draft and formats). If anonymity concerns give rise to a change requirement, one only needs to change this added section to cater for the anonymity requirement, not all occurrences of the device Id throughout the whole standard (i.e., it is acts as an abstract module). Of course, we should give the proper format and, in particular, the required length of the device Id proper consideration. The current 48-bit device Id might not be enough to provide anonymity guarantees (if these are required).

Proposed Response Response Status O

CI 00 SC P L # 1822

Rasor, Gregg Motorola

Comment Type E Comment Status X
The list of editorial attributions must be changed to include the following contributors as follows: __Gregg Rasor, Security and Privacy Committee Chair __Ari Singer, Security and Privacy Assistant Editor _Rene Struik, Security and Privacy Assistant Editor

SuggestedRemedy

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 00 SC P L # 1772
Maa, Yeong-Chang InProComm, Inc.

Comment Type TR Comment Status X
The backward compatibility or relationship with 802.15.1 devices is not addressed

SuggestedRemedy
Please address the compatibility/relationship issue clearly.

Proposed Response Response Status O

CI 00 SC P L # 1755
Chen, Hung-Kun InProComm, Inc.

Comment Type TR Comment Status X
The backward compatibility or relationship with 802.15.1 devices is not addressed

SuggestedRemedy
Please address the compatibility/relationship issue clearly.

Proposed Response Response Status O

CI 00 SC P L # 1746
Chen, Kwang-Cheng InProComm, Inc.

Comment Type TR Comment Status X
The backward compatibility or relationship with 802.15.1 devices is not addressed

SuggestedRemedy
Please address the compatibility/relationship issue clearly.

Proposed Response Response Status O

CI 00 SC P L # 1739

Golmie, Nada NIST

Comment Type T Comment Status X
The current TG3 draft does not address the issue of coexistence between 802.15.3 devices and other devices in the band such as 802.11b and Bluetooth.

SuggestedRemedy
1) Add a clause or subclause that describes the interference problem resulting from having 802.15.3 devices co-located with 802.11b, Bluetooth devices. Performance results quantifying the impact of interference can be added as well. 2) Include solutions to remedy the problem.

Proposed Response Response Status O

CI 00 SC P L # 1730
Lansford, Jim Mobilian

Comment Type T Comment Status X
Despite the fact that 802.15.3 is described as a WPAN under the umbrella of the WPAN working group (802.15), there is no mention of interference, interoperability, or coexistence with the only other WPAN standard to go through letter ballot, 802.15.1. This specification has no mention of how it will maintain QoS in the presence of significant other interference in the same band: Bluetooth, microwave ovens, etc. Even in the "802.11b coexistence" mode, there is no method described that says how the 802.15.3 system will be placed in this channel plan. While older specifications such as 802.11b could have been developed without recognition of other users of the band, IEEE would do the industry a disservice by publishing specifications whose ability to coexist with other IEEE wireless standards was unknown (at best) or poor (at worst).

SuggestedRemedy
The specification needs a coexistence section that describes: a) mechanisms for QoS maintenance in the presence of interference (with informative sections that quantify the problem), b) coexistence mechanisms for 802.15.1/Bluetooth, and c) channel selection algorithms that not only address 802.11b coexistence in an automatic way, but also describe avoidance mechanisms for microwave ovens and other types of interference (both periodic and non-periodic).

Proposed Response Response Status O

CI 00 SC P L # 1728
Liang, Jie Texas Instruments

Comment Type T Comment Status X
There are no coexistence study so far regarding the coexistence property of a device implementing this specification. It is well known problem that 2.4GHz ISM band is already crowded with WLAN and BT devices. It is important to show that devices implementing this draft can coexist with the incumbent.

SuggestedRemedy
1. Get TG2 involved in evaluating the coexistence property of the draft. 2. Add sections in the draft to explain what are the tools that can be used to have better coexistence properties. For instance, channel assessment and selection, power control, etc.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 00 SC P L # 485
 Gilb, James Appairnt

Comment Type E Comment Status X
 R_ALFVIN-NOTE: THIS COMMENT WAS SUBMITTED INCOMPLETE/BLANK AS SHOWN.
 R_ALFVIN-NOTE: THE COMMENT TYPE WAS NOT SELECTED BY THE SUBMITTER.

SuggestedRemedy
 R_ALFVIN-NOTE: NO REMEDY WAS SUBMITTED WITH THIS COMMENT.

Proposed Response Response Status O

CI 00 SC P L # 94
 CYPHER, DAVID NIST

Comment Type E Comment Status X
 Clause heading do not follow IEEE Standards Sytle Manual. Only the first word is to be capitalized.

SuggestedRemedy
 Follow the IEEE Standards Style Manual for Clause headings. Partial list of where corrections need to be made (5.3.7, 5.3.8, 6.3.8, 6.3.9, 6.3.16, 6.5.3, 10.3.2, 11.2-11.2.6, 11.2.8, 11.3.2-11.3.4, 11.4, 11.5.2, 11.5.3, A.1.1, B.3.1, B.3.2)

Proposed Response Response Status O

CI 00 SC P L # 95
 CYPHER, DAVID NIST

Comment Type E Comment Status X
 Multiple clause headings with the same name. For example Overview, Scope, Child piconet, and Neighbor piconet.

SuggestedRemedy
 Modify the clause heading with adjectives that are more appropriate or merge the clauses together, if they are the same.

Proposed Response Response Status O

CI 00 SC P L # 97
 DuVal, Mary Texas Instruments

Comment Type TR Comment Status X
 Where are the requirements for coexistence with 802.15.1, 802.15.4, and 802.11 a/b? I have not seen any discussion on solutions for this issue.bb

SuggestedRemedy
 Requirements needed to meet the intent of the PAR.

Proposed Response Response Status O

CI 00 SC P L # 1842
 Rasor, Gregg Motorola

Comment Type E Comment Status X
 5. (E) Page 185, line 52: replace 'life cycle' by 'life time'.

SuggestedRemedy

Proposed Response Response Status O

CI 00 SC P L # 1577
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status A
 "group addressed frame" should be changed globally to "broadcast or multicast frame" since we never define group addressed frame.

SuggestedRemedy
 Do a global change from "group addressed frame" to "broadcast or multicast frame"

Proposed Response Response Status C
 PROPOSED ACCEPT.

CI 00 SC P L # 1695
 Siwiak, Kazimierz Time Domain

Comment Type E Comment Status X
 I have concentrated on tech issues in clauses 6, 7, 8, and 11, plus general "typo patrol" throughout the document.

SuggestedRemedy

Proposed Response Response Status O

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CI 00 SC P L # 1720
 Young, Song-Lin Sharp Labs. of

Comment Type TR *Comment Status* X
 No mechanism to deal with the possible overlap of two or more piconets on the same physical channel. This would cause self interference among WPAN devices. Following scenario should be considered: 1. Two piconet initially established on the same channel when they are far away from each other. 2. How will devices detect presence of other piconet if piconets come within proximity of each other. 3. If it's possible to detect another piconet, there are several options: a. One piconet switches to another channel if available. b. Two piconets merge and become one c. Both piconet want to keep operating independently, however device in one piconet is able to communnccate with device in another piconet

SuggestedRemedy
 MAC clauses add functions for piconets becoming overlap, considering piconets will be moving

Proposed Response *Response Status* O

CI 00 SC P L # 1790
 Liu, Shawn InProComm, Inc.

Comment Type TR *Comment Status* X
 The backward compatibilty or relationship with 802.15.1 devices is not addressed

SuggestedRemedy
 Please address the compatibility/relationship issue clearly.

Proposed Response *Response Status* O

CI 00 SC P 0 L # 4
 Bain, Jay Time Domain

Comment Type E *Comment Status* X
 Abstract lacks mention that the standard is extensible to include alternate physical

SuggestedRemedy
 add after data types. "and is designed to support additional physical layers as might be specified at a later time."

Proposed Response *Response Status* O

CI 00 SC P 107 L 36 # 1768
 Maa, Yeong-Chang InProComm, Inc.

Comment Type TR *Comment Status* X
 There are TBDs.

SuggestedRemedy
 Please fill in the appropriate values.

Proposed Response *Response Status* O

CI 00 SC P 107 L 36 # 1742
 Chen, Kwang-Cheng InProComm, Inc.

Comment Type TR *Comment Status* X
 There are TBDs.

SuggestedRemedy
 Please fill in the appropriate values.

Proposed Response *Response Status* O

CI 00 SC P 107 L 36 # 1751
 Chen, Hung-Kun InProComm, Inc.

Comment Type TR *Comment Status* X
 There are TBDs.

SuggestedRemedy
 Please fill in the appropriate values.

Proposed Response *Response Status* O

CI 00 SC P 107 L 36 # 1786
 Liu, Shawn InProComm, Inc.

Comment Type TR *Comment Status* X
 There are TBDs.
 There are TBDs.

SuggestedRemedy
 Please fill in the appropriate values.

Proposed Response *Response Status* O

b

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CI 00 SC P 133 L 39 # 1743
 Chen, Kwang-Cheng InProComm, Inc.
 Comment Type TR Comment Status X
 There are TBDs.
 SuggestedRemedy
 Please fill in the appropriate values.
 Proposed Response Response Status O

CI 00 SC P 175 L 31 # 1744
 Chen, Kwang-Cheng InProComm, Inc.
 Comment Type TR Comment Status X
 There are TBDs.
 SuggestedRemedy
 Please fill in the appropriate values.
 Proposed Response Response Status O

CI 00 SC P 133 L 39 # 1752
 Chen, Hung-Kun InProComm, Inc.
 Comment Type TR Comment Status X
 There are TBDs.
 SuggestedRemedy
 Please fill in the appropriate values.
 Proposed Response Response Status O

CI 00 SC P 175 L 31 # 1770
 Maa, Yeong-Chang InProComm, Inc.
 Comment Type TR Comment Status X
 There are TBDs.
 SuggestedRemedy
 Please fill in the appropriate values.
 Proposed Response Response Status O

CI 00 SC P 133 L 39 # 1769
 Maa, Yeong-Chang InProComm, Inc.
 Comment Type TR Comment Status X
 There are TBDs.
 SuggestedRemedy
 Please fill in the appropriate values.
 Proposed Response Response Status O

CI 00 SC P 175 L 31 # 1753
 Chen, Hung-Kun InProComm, Inc.
 Comment Type TR Comment Status X
 There are TBDs.
 SuggestedRemedy
 Please fill in the appropriate values.
 Proposed Response Response Status O

CI 00 SC P 133 L 39 # 1787
 Liu, Shawn InProComm, Inc.
 Comment Type TR Comment Status X
 There are TBDs.
 SuggestedRemedy
 Please fill in the appropriate values.
 Proposed Response Response Status O

CI 00 SC P 175 L 31 # 1788
 Liu, Shawn InProComm, Inc.
 Comment Type TR Comment Status X
 There are TBDs.
 SuggestedRemedy
 Please fill in the appropriate values.
 Proposed Response Response Status O

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CI 00 SC P 24 L 40 # 1773
 Maa, Yeong-Chang InProComm, Inc.
 Comment Type E Comment Status X
 Type of ReasonCode is octet (should be Enumeration for consistency's sake).
 SuggestedRemedy
 Change type of ReasonCode to Enumeration
 Proposed Response Response Status O

CI 00 SC P 29 L 37 # 1774
 Maa, Yeong-Chang InProComm, Inc.
 Comment Type E Comment Status X
 Type of ReasonCode is octet (should be Enumeration for consistency's sake).
 SuggestedRemedy
 Change type of ReasonCode to Enumeration
 Proposed Response Response Status O

CI 00 SC P 32 L 18 # 1775
 Maa, Yeong-Chang InProComm, Inc.
 Comment Type E Comment Status X
 Type of ReasonCode is octet (should be Enumeration for consistency's sake).
 SuggestedRemedy
 Change type of ReasonCode to Enumeration
 Proposed Response Response Status O

CI 00 SC P 39 L 32 # 1780
 Maa, Yeong-Chang InProComm, Inc.
 Comment Type E Comment Status X
 ReasonCode undefined (for corresponding MLME primitives)
 SuggestedRemedy
 Define ReasonCode in Table 14;15;15;16
 Proposed Response Response Status O

CI 00 SC P 4 L 35 # 1781
 Maa, Yeong-Chang InProComm, Inc.
 Comment Type E Comment Status X
 ReasonCode undefined (for corresponding MLME primitives)
 SuggestedRemedy
 Define ReasonCode in Table 14;15;15;16
 Proposed Response Response Status O

CI 00 SC P 42 L 10 # 1782
 Maa, Yeong-Chang InProComm, Inc.
 Comment Type E Comment Status X
 ReasonCode undefined (for corresponding MLME primitives)
 SuggestedRemedy
 Define ReasonCode in Table 14;15;15;16
 Proposed Response Response Status O

CI 00 SC P 44 L 8 # 1783
 Maa, Yeong-Chang InProComm, Inc.
 Comment Type E Comment Status X
 ReasonCode undefined (for corresponding MLME primitives)
 SuggestedRemedy
 Define ReasonCode in Table 14;15;15;16
 Proposed Response Response Status O

CI 00 SC P 49 L 22 # 1776
 Maa, Yeong-Chang InProComm, Inc.
 Comment Type E Comment Status X
 Type of ReasonCode is octet (should be Enumeration for consistency's sake).
 SuggestedRemedy
 Change type of ReasonCode to Enumeration
 Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 00 SC P 55 L 20 # 1777
Maa, Yeong-Chang InProComm, Inc.

Comment Type E Comment Status X
Type of ReasonCode is octet (should be Enumeration for consistency's sake).

SuggestedRemedy
Change type of ReasonCode to Enumeration

Proposed Response Response Status O

CI 00 SC P 59 L 7 # 1778

Maa, Yeong-Chang InProComm, Inc.

Comment Type E Comment Status X
Type of ReasonCode is octet (should be Enumeration for consistency's sake).

SuggestedRemedy
Change type of ReasonCode to Enumeration

Proposed Response Response Status O

CI 00 SC P 68 L 50 # 1779

Maa, Yeong-Chang InProComm, Inc.

Comment Type E Comment Status X
Type of ReasonCode is octet (should be Enumeration for consistency's sake).

SuggestedRemedy
Change type of ReasonCode to Enumeration

Proposed Response Response Status O

CI 00 SC - P 1 L 26 # 1697

Siwiak, Kazimierz Time Domain

Comment Type E Comment Status X
"TM" is not needed in "WPAN(TM)s" as the first use in the title.

SuggestedRemedy
use just "WPAN"

Proposed Response Response Status O

CI 00 SC 00 P L 2 # 191
Gifford, Ian Self

Comment Type E Comment Status X
The editor comment "ED Note: The standard description of the 802 family of networking protocols will go here." brings up the question how will the 802.15 WG depict the 802 Family as they introduce a 2nd (and 3rd) MAC sublayer to the traditional figure (see 802.15.1/D1.0.1 Figure 1)? It is important that the WG communicate their Projects and their distinct identities, one solution per problem, etc. This frontmatter subclause should be short but concise such that the 802.15.xx designations are clear to the public. The titles are clear now the figure 1 and resultant description of Fig 1 should be modified to communicate our mutiplicity of projects.

SuggestedRemedy
I suggest that the Editor add the 'standard description' and submit a modified Figure 1 so that the WG can review and comment. If the Project 802.15.3 Editors need help e.g., Fig1.eps, etc. please advise.

Proposed Response Response Status O

CI 00 SC 00 P L 48 # 192
Gifford, Ian Self

Comment Type E Comment Status X
The Table of Contents and Bookmark Annex Titles are incorrectly used. E.g., "(normative)Service Specific Convergence Sub layer." should read "Annex A (normative) Service Specific Convergence Sub layer."

SuggestedRemedy
The Editor needs to review the PDF creation function while in FrameMaker.

Proposed Response Response Status O

CI 00 SC 00 P 0 L 0 # 291
Gifford, Ian Self

Comment Type T Comment Status X
Are the use of shall/should/may/can/will/must throughout the document in accordance with IEEE's style?

SuggestedRemedy
Review the use of shall/should/may/can/will/must throughout the document to be sure they are used in accordance with IEEE's style.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 00 SC 00 P 0 L 0 # 284
 Gifford, Ian Self

Comment Type E Comment Status X
 Add the current date to the runningheads by the draft number for additional clarity.

SuggestedRemedy
 Please produce D10 with the current date. Note that this commenter can provide a frontmatter and body template to TG3 that uses the PC System Clock automatically date stamping the draft when the PDF is produced.

Proposed Response Response Status O

CI 00 SC 00 P 0 L 0 # 281
 Gifford, Ian Self

Comment Type E Comment Status X
 The 802.15.3 D09 does not uses uniformity of structure or of style when it comes to lists. For example subclause 5.1.1. has a dashed list, 6.1 uses a alphabetical listing, and 7.2.8 uses a numeric listing, etc.

SuggestedRemedy
 I suggest the Editor-in-Chief review the IEEE Standards Style Manual and then entire document should be edited for uniformity. Also, note that a colon is used to introduce a list only when the words "following" or "follows" are used in the introductory sentence, or if the sentence is complete grammatically. If the introduction is an incomplete sentence, then a colon is not used.

Proposed Response Response Status O

CI 00 SC 00 P 0 L 0 # 235
 Gifford, Ian Self

Comment Type E Comment Status X
 The terms "sub-layer" and/or "sub-clause", used throughout 802.15.3/D09, are spelled wrong.

SuggestedRemedy
 Change to "sublayer" and/or "subclause" throughout 802.15.3/D09, dropping the hyphen.

Proposed Response Response Status O

CI 00 SC 00 P 0 L 0 # 285
 Gifford, Ian Self

Comment Type E Comment Status X
 It was very hard to determine exactly what text changed from D08 to D09 based on the Editor-in-Chief's usage of the FrameMaker change bar feature inside the draft i.e., Format/Document/Change Bars.

SuggestedRemedy
 When the D10 is produced I require that when all edits are applied and the *.book file is open the FM File/Utilities/Compare Books feature be used to compare the D09 Book to the D10 Book (all the *.fm files should be open too). The D10 should be released in a clean and compared version; a change bar version can also be released too but again it is hard for this Balloter, and maybe others, to determine exactly what text changes were made. The default for the FM compare utility is that editing marks are shown in color and with a change bar on the left side of the page. The color editing marks are used to indicate delete and insert actions to the draft. The editing marks specifies the location of the change and describes what is being changed either by using red strikethrough (to remove old material) or green underscore (to add new material)." More info: <http://ieee802.org/15/pub/SB2/SB2-info.html>

Proposed Response Response Status O

CI 00 SC 00 P 0 L 0 # 286
 Gifford, Ian Self

Comment Type E Comment Status X
 The the term "IEEE" is reserved for approved standards only.

SuggestedRemedy
 Remove "IEEE" from the designation "IEEE Draft P802.15.3/D09" in the runningheads.

Proposed Response Response Status O

CI 00 SC 2 P L # 1793
 Rasor, Gregg Motorola

Comment Type E Comment Status X
 One distinguishes communication behavior and security associations within a piconet (ordinary devices, security managers, and piconet controller), between different piconets (piconet, child piconet, neighbor piconet), and between devices and the external trusted party. The term 'DEV' could therefore be occasionally used to denote things that are not a device, but, e.g., a neighbor piconet, thus causing confusion. Moreover, devices can have different roles. Adopting a more general term avoids this confusion.

SuggestedRemedy
 Replace the concept 'DEV' by 'entity' or a similarly appropriate term throughout the

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 00 SC 3.4.2.2 P 186 L # 1828
 Rasor, Gregg Motorola

Comment Type TR Comment Status X
 If disassociation request by a particular device would be automatically honored without evidence regarding the authenticity of this request, one can launch a simple denial of service attack on each device in the piconet.

SuggestedRemedy
 The details of the disassociation request initiated by the device itself should be specified. Specify the disassociation request protocol in such a way that honoring this request is subject to positive evidence as to the identity of the originator of that request (data origin authentication).

Proposed Response Response Status O

CI 00 SC 7.5.7.1 P 124 L 31 # 1318
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 What language is this in? "The current beacon number when that primitive is received by the SME is used to calculate the beacon number for the next EPSTime event and inserts that beacon number as EPSNext when building the EPS action request

SuggestedRemedy
 First of all, the referred to primitive, MLME-POWERMANAGEMENT.request, is sent by the SME, it is not received by the SME. Next, Please translate this to English. It is

Proposed Response Response Status O

CI 00 SC 8.2.7 P 143 L 36 # 721
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 The text between lines 36 and 41 is an incorrect description of the PNC information broadcasting function.

SuggestedRemedy
 See detailed resolution in doc 02/037r0

Proposed Response Response Status O

CI 00 SC 8.4 P 146 L 5 # 1541
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 Slots have both fixed start time and duration

SuggestedRemedy
 Change to "During the CFP, the PNC controls the channel access by assigning time slots to individual DEVs with each time slot having a fixed start time and duration."

Proposed Response Response Status O

CI 00 SC 8.4.2.1 P 147 L 16 # 1548
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 "The method for choosing the random integer should be unique for each DEV and use the random number generator resident on the DEV." What does this mean? We need to choose a unique random number generator for each DEEV? Or do we just need to choose an unique seed.

SuggestedRemedy
 Specify that a unique seed is required, not a unique random number algorithm.

Proposed Response Response Status O

CI 00 SC Abstract P L 0 # 61
 Barr, John Motorola

Comment Type E Comment Status X
 The type of equipment 802.15.3 supports is more than "voice and data".

SuggestedRemedy
 Replace "voice and data" in Abstract with "multi-media and data" or just "multimedia".

Proposed Response Response Status O

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CI 00 **SC multiple** **P** **L** **# 78**
 Barr, John Motorola

Comment Type **TR** *Comment Status* **X**

The repeater service implements an overly complex scheme to increase the number of devices that are allowed to communicate in a piconet. This service does not seem to be necessary nor desired for personal operating space devices that can be repositioned to provide communication capability. In addition, the inclusion of the 11Mbps data rate ensures that any DEV that can communicate with the PNC using the default 22Mbps data rate should also be able to communicate with any other devices that can also communicate with the PNC. The ability to communicate between all devices in a piconet with the POS of the PNC can be provided without the complex repeater service.

SuggestedRemedy

Remove all references to repeater service: 7.2.1.10 Repeater field section on page 96 lines 12-16. Remove repeater field in Figure 12 on page 94. In section 7.2.1, change "...SECurity and repeater." to "...and SECurity." on page 94 line 26. Remove Repeater lines from Tables 61 and 62 on page 99. Remove three repeater service commands from Table 65 on page 110. Change "... SEC and Repeater ..." to "... and SEC ..." in line 50 on page 111. Remove Repeater memory from Figure 37 on page 112. Remove lines 22-23 on page 112 describing repeater memory. Change "...SEC and Repeater ..." to "...SEC ..." in line 42 on page 113. Change "...SEC and Repeater ..." to "...SEC ..." in line 38 on page 114. Change "...SEC and Repeater ..." to "...SEC ..." in lines 1-2 on page 116. Remove all of section 7.5.6, 7.5.6.1, 7.5.6.2, 7.5.6.3, Figure 55 and Figure 56 on pages 122 and 123. Remove first two sentences of the fourth paragraph of section 8.1 on page 137, lines 27-28 describing when repeater service can be used. Remove Repeater Memory line from Table 68 on page 139. Remove "including those additional streams needed to support the repeater service" from lines 2-3 on page 153 in section 8.6. Remove last two sentences in section 8.8.6 on page 159, lines 10-12. Remove all of section 8.11 and Figure 92. Remove section 8.13.3.12 on page 171 lines 20-28.

Proposed Response *Response Status* **O**

CI 01 **SC 00** **P 1** **L 1** **# 193**
 Gifford, Ian Self

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

The Editor used the wrong FrameMaker Template i.e., framemaker6_frontmatter.fm vs. framemaker6_body.fm therefore causing the running title to be omitted.

SuggestedRemedy

Please use the framemaker6_body.fm template and force the running title to be used.

Proposed Response *Response Status* **O**

CI 01 **SC 1** **P 1** **L 35** **# 1**
 Alfvín, Rick Appairnt

Comment Type **T** *Comment Status* **A**

The Scope section of the Draft should reflect essentially the same wording as the Scope section of the PAR.

SuggestedRemedy

Change the Scope section of the Draft to reflect the wording of the Scope section of the PAR.

Proposed Response *Response Status* **C**
 PROPOSED ACCEPT.

CI 01 **SC 1.0** **P 1** **L 41** **# 283**
 Gifford, Ian Self

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

The 802.15.1 D09 uses words inconsistently e.g., here "10 meters" and subclause 3.39, page 7, line 4 "10 m", etc. Also, TX, transmit or transmitter, (RX receive or receiver too) are used inconsistently too.

SuggestedRemedy

The later is found in Clause 4 but I suggest the Editor-in-Chief use words consistently. Also, the find and replace feature in FrameMaker makes it easy to do and more importantly it will be easier for the reader in the end.

Proposed Response *Response Status* **O**

CI 01 **SC 1.1** **P 1** **L 37** **# 92**
 CYPHER, DAVID NIST

Comment Type **TR** *Comment Status* **A**

The scope does not match the one listed in the PAR

SuggestedRemedy

Match the scope text with the text of the original PAR

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

P802.15.3 Draft 09 Comments

CI 01 SC 1.1 P 1 L 38 # 484
 Gilb, James Appairnt

Comment Type T Comment Status A
 The Scope sub-clause is required to be essentially the wording that is found in the PAR.
 The wording in this clause was carried over from 802.15.1 and never updated.

SuggestedRemedy
 Change the wording to be essentially the same as what is found in the PAR.

Proposed Response Response Status C
 PROPOSED ACCEPT.

CI 01 SC 1.1 P 1 L 40 # 1368
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 POS has bad connotations and should be avoided.

SuggestedRemedy
 Find an new acronym. Maybe Personal Access Space (PAS) Do a global change.

Proposed Response Response Status O

CI 01 SC 1.1 P 1 L 44 # 90
 CYPHER, DAVID NIST

Comment Type TR Comment Status A
 The term interoperability is defined, yet it is not the one defined in IEEE 100, nor is this definition include in clause 3 (definitions). Clause 1.1 is not an appropriate place to define terms.

SuggestedRemedy
 Remove this statement from the document.

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 01 SC 1.1 P 1 L 4648 # 765
 Huang, Bob Sony Electronics

Comment Type TR Comment Status X
 In this text, co-existence is a stated goal of 802.15.3. However, further text can not be found to guide designers in anyway.

SuggestedRemedy
 Co-existance has, in recent years, moved from a nice to have item to a must have item. Co-existance is even more important in unlicensed bands, as consumer electronics manufacturers have learned through the years, any defect in performance (for what ever reason) will result in a returned product. A returned product is worse than 'no sale' because there are cost involved plus a negative product image established in the consumer's mind.

Proposed Response Response Status O

CI 01 SC 1.1 P 1 L 47 # 91
 CYPHER, DAVID NIST

Comment Type TR Comment Status A
 The term coexistence is defined, yet is is not listed in clause 3. Clause 1.1 is not an appropriate place to define terms, nor is this an appropriate document to define the term coexistence.

SuggestedRemedy
 Remove this statement from the document.
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 PROPOSED ACCEPT.

CI 01 SC 1.2 P 2 L 10 # 856
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 Missing the word "as" at the end of line 10

SuggestedRemedy
 networked, such as comput-
 Proposed Response Response Status O

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CI 01 SC 1.2 P 2 L 10 # 1658
 Shvodian, William XtremeSpectrum
 Comment Type E Comment Status X
 "such" should be "such as"
 SuggestedRemedy
 Comment via Ari Singer.
 Proposed Response Response Status O

CI 01 SC 1.2 P 2 L 11 # 59
 Barr, John Motorola
 Comment Type E Comment Status X
 The list of example devices do not include some of the key devices targeted for 802.15.3 applications: TVs, imaging kiosks, and set top boxes.
 SuggestedRemedy
 Add the following in place of "and printers" "printers, kiosks, set top boxes, TVs and other stationary items that mobile devices may wish to use."
 Proposed Response Response Status O

CI 01 SC 1.2 P 2 L 13 # 282
 Gifford, Ian Self
 Comment Type E Comment Status X
 I recommend not using "&" in the standard.
 SuggestedRemedy
 Change "&" to "and".
 Proposed Response Response Status O

CI 01 SC 1.2 P 2 L 3 # 58
 Barr, John Motorola
 Comment Type E Comment Status X
 Bad Grammar
 SuggestedRemedy
 Change "for a low complexity" to for low complexity"
 Proposed Response Response Status O

CI 01 SC 1.2 P 2 L 3 # 93
 CYPHER, DAVID NIST
 Comment Type TR Comment Status A
 The Purpose does not match the purpose in the PAR
 SuggestedRemedy
 Replace the current purpose with the text from the original PAR
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 01 SC 2 P 2 L 9 # 96
 DuVal, Mary Texas Instruments
 Comment Type T Comment Status A
 "Devices included in the definition are those that are carried, worn or located near the body." This description is not consistent with the definition on page 7, which states that objects within 10 m of device or person.
 SuggestedRemedy
 This current description would exclude stationary objects that are not located on a person, such as a projector. Make this definition the same as the previous definition.

Proposed Response Response Status C
 PROPOSED ACCEPT IN PRINCIPLE. Replace text with the wording from the definition 3.39.

CI 02 SC P 34 L # 854
 Kleindl, Guenter Siemens
 Comment Type T Comment Status A
 Subclause 7.4.7 refers to IEEE P1363
 SuggestedRemedy
 Include reference to IEEE P1363

Proposed Response Response Status C
 PROPOSED ACCEPT.

CI 02 SC 2 P 3 L 16 # 483
 Gilb, James Appairant
 Comment Type T Comment Status A
 The ASN.1 references are not relevant to this standard.
 SuggestedRemedy
 Delete the references beginning with ISO/IEC 8824-1:1995(E) on line 16 through ISO/IEC 8825-2:1996(E) on line 37. Also delete ITU-T Recommendation Z.105 on page
 Proposed Response Response Status C
 PROPOSED ACCEPT.

P802.15.3 Draft 09 Comments

CI 03 SC P L # 486
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type E Comment Status X
 Add the definition of Super frame

SuggestedRemedy
 Add the definition of Super frame

Proposed Response Response Status O

CI 03 SC P 5 L 50 # 858
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status A
 missing a definition

SuggestedRemedy
 add definition for device-ID: Specifies the MAC address of the DEV under

Proposed Response Response Status C
 PROPOSED ACCEPT. Device ID: The MAC address of a device in an 802.15.3 piconet.

CI 03 SC 00 P 10 L 14 # 287
 Gifford, Ian Self

Comment Type E Comment Status X
 The acronym "MLME MAC layer management entity" uses incorrect definition. The Medium Access Control refers to a sublayer of the Data Link Layer and is not a layer.

SuggestedRemedy
 I suggest the term "sublayer" be used or "MLME MAC sublayer management entity".

Proposed Response Response Status O

CI 03 SC 00 P 5 L 34 # 292
 Gifford, Ian Self

Comment Type E Comment Status X
 The sentence "For the purposes of this standard, the following terms and definitions apply. IEEE 100, The Authoritative Dictionary of Standards Terms should be referenced for terms not defined in this clause." needs to be italicized.

SuggestedRemedy
 I suggest you apply italics as indicated: "For the purposes of this standard, the following terms and definitions apply. <italicize>IEEE 100, The Authoritative Dictionary of Standards Terms should be referenced for terms</italicize> not defined in this

Proposed Response Response Status O

CI 03 SC 3.11 P 5 L 33 # 7
 Bain, Jay Time Domain

Comment Type E Comment Status X
 It might be a bit confusing using the term "alternate coordinator." Although it is perhaps technically an AC, we should avoid confusion on naming

SuggestedRemedy
 change from "alternate" to "child piconet"

Proposed Response Response Status O

CI 03 SC 3.13 P 5 L 40 # 8
 CI 03 SC 3.13 P 5 L 40 # 8
 Bain, Jay Time Domain

Comment Type E Comment Status X
 use of the term units is not consistent with terminology for the standard

SuggestedRemedy
 change "units" to "devices"

Proposed Response Response Status O

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CI 03 SC 3.15 P 5 L 45 # 1369
 Shvodian, William XtremeSpectrum
 Comment Type E Comment Status X
 "device" should not be used in the definition of "device"
 SuggestedRemedy
 change definition to "Any entity that..."
 Proposed Response Response Status O

CI 03 SC 3.16 P 5 L 48 # 9
 Bain, Jay Time Domain
 Comment Type E Comment Status X
 the word "and" is a typo
 SuggestedRemedy
 change "and" to "an"
 Proposed Response Response Status O

CI 03 SC 3.17 P 5 L 52 # 195
 Gifford, Ian Self
 Comment Type E Comment Status X
 The definition sentence does not end in a period: in order to provide data integrity and source authentication
 SuggestedRemedy
 Add the period.
 Proposed Response Response Status O

CI 03 SC 3.19 P 6 L 1 # 859
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 definition for enhanced power save seems incomplete. Does differentiate EPS from
 SuggestedRemedy
 have power management sub-group clarify the definition.
 Proposed Response Response Status O

CI 03 SC 3.19 P 6 L 1 # 1791
 Liu, Shawn InProComm, Inc.
 Comment Type E Comment Status X
 A the power management ...
 SuggestedRemedy
 The power management ...
 Proposed Response Response Status O

CI 03 SC 3.19 P 6 L 1 # 1758
 Carmeli, Boaz IBM
 Comment Type E Comment Status X
 A the
 SuggestedRemedy
 The ...
 Proposed Response Response Status O

CI 03 SC 3.2 P 5 L 8 # 5
 Bain, Jay Time Domain
 Comment Type E Comment Status X
 since active is used in power management, there should be additional text to mention this connection.
 SuggestedRemedy
 after "an enhanced power save" device joints the piconet.
 Proposed Response Response Status O

CI 03 SC 3.20 P 6 L 4 # 860
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status A
 Too wordy ...
 SuggestedRemedy
 remove all text in the definition except the following: the nominal time value for the inter-wake periods for enhanced power save devices.
 Proposed Response Response Status C
 PROPOSED ACCEPT.

P802.15.3 Draft 09 Comments

CI 03 SC 3.20 P 6 L 4-5 # 1759
 Carmeli, Boaz IBM
 Comment Type E Comment Status X
 save mode-mode.
 SuggestedRemedy
 save mode.
 Proposed Response Response Status O

CI 03 SC 3.21 P 6 L 8 # 861
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 too wordy
 SuggestedRemedy
 remove the word "very"
 Proposed Response Response Status O

CI 03 SC 3.22 P 6 L 12 # 862
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 Remove second sentence
 SuggestedRemedy
 Remove sentence that starts with "A single enhanced ..."
 Proposed Response Response Status O

CI 03 SC 3.25 P 6 L 20 # 1760
 Carmeli, Boaz IBM
 Comment Type E Comment Status X
 an entity is who they calim to be.
 SuggestedRemedy
 an entity is who it calim to be.
 Proposed Response Response Status O

CI 03 SC 3.28 P 6 L 27 # 196
 Gifford, Ian Self
 Comment Type E Comment Status X
 The definition sentence does not end in a period: is known only by the participating
 SuggestedRemedy
 Add the period.
 Proposed Response Response Status O

CI 03 SC 3.29 P 6 L 29 # 197
 Gifford, Ian Self
 Comment Type E Comment Status X
 The definition sentence does not end in a period: 3.29 key transport: a process by which
 an entity sends a key to another entity
 SuggestedRemedy
 Add the period.
 Proposed Response Response Status O

CI 03 SC 3.36 P 6 L 47 # 198
 Gifford, Ian Self
 Comment Type E Comment Status X
 The definition sentence does not end in a period: 3.36 mutual entity authentication: a
 process by which two entities authenticate each other
 SuggestedRemedy
 Add the period.
 Proposed Response Response Status O

CI 03 SC 3.37 P 6 L 50 # 10
 Bain, Jay Time Domain
 Comment Type E Comment Status X
 the term "alternate coordinator" might be confusing
 SuggestedRemedy
 change "alternate" to "neighbor piconet"
 Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 03 SC 3.41 P 7 L 11 # 199
Gifford, Ian Self

Comment Type E Comment Status X
The definition sentence does not end in a period: decryption or key establishment procedures depending on the type of key pair

SuggestedRemedy
Add the period.

Proposed Response Response Status O

CI 03 SC 3.42 P 7 L 14 # 200
Gifford, Ian Self

Comment Type E Comment Status X
The definition sentence does not end in a period: given seed that has the statistical properties of a random sequence of bits when the seed is not known

SuggestedRemedy
Add the period.

Proposed Response Response Status O

CI 03 SC 3.44 P 7 L 20 # 201
Gifford, Ian Self

Comment Type E Comment Status X
The definition sentence does not end in a period: encryption or key establishment procedures depending on the type of key pair

SuggestedRemedy
Add the period.

Proposed Response Response Status O

CI 03 SC 3.45 P 7 L 22 # 202
Gifford, Ian Self

Comment Type E Comment Status X
The definition sentence does not end in a period: 3.45 public-key pair: a related pair of data elements including a public key and a private key

SuggestedRemedy
Add the period.

Proposed Response Response Status O

CI 03 SC 3.46 P 7 L 26 # 203
Gifford, Ian Self

Comment Type E Comment Status X
The definition sentence does not end in a period: the integrity of the data being

SuggestedRemedy
Add the period.

Proposed Response Response Status O

CI 03 SC 3.47 P L # 1370
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
Q in Quality of service is capitalized, but not S

SuggestedRemedy
Change to Quality of Service

Proposed Response Response Status O

CI 03 SC 3.49 P 7 L 37 # 1371
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
Didn't we change random number generator to pseudorandom number generator?

SuggestedRemedy
change random number generator to pseudorandom number generator

Proposed Response Response Status O

CI 03 SC 3.49 P 7 L 37 # 204
Gifford, Ian Self

Comment Type E Comment Status X
The definition sentence does not end in a period: 3.49 random number generator: a device that provides a sequence of bits that is unpredictable

SuggestedRemedy
Add the period.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 03 SC 3.50 P 7 L 39 # 11
 Bain, Jay Time Domain
 Comment Type T Comment Status A
 the wording that mentions "excluding the beacon" should be changed as noted below since in reduced power save, most elements (beacon, CAP, MTS) shall be listened to.
 SuggestedRemedy
 change "excluding the beacon" to "when contention free period slots are not allocated to the device"
 Proposed Response Response Status C
 PROPOSED ACCEPT.

CI 03 SC 3.50 P 7 L 39 # 1372
 Shvodian, William XtremeSpectrum
 Comment Type E Comment Status X
 reduced power save - sounds like it saves less power
 SuggestedRemedy
 eliminate all references to rps because it is normal operation and not a special mode
 Proposed Response Response Status O

CI 03 SC 3.50 P 7 L 39 # 730
 Huang, Bob Sony Electronics
 Comment Type E Comment Status X
 Not clear when referencing mto a radio transmitter.
 SuggestedRemedy
 Change the word 'level' to consumption'. Change from 'reduces its power level for part' to 'reduces its power consumption for part'.
 Proposed Response Response Status O

CI 03 SC 3.51 P 7 L 43 # 205
 Gifford, Ian Self
 Comment Type E Comment Status X
 The definition sentence does not end in a period: and key distribution
 SuggestedRemedy
 Add the period.
 Proposed Response Response Status O

CI 03 SC 3.53 P 7 L 49 # 206
 Gifford, Ian Self
 Comment Type E Comment Status X
 The definition sentence does not end in a period: been modified and that the owner of the private key signed the data
 SuggestedRemedy
 Add the period.
 Proposed Response Response Status O

CI 03 SC 3.54 P 7 L 52 # 207
 Gifford, Ian Self
 Comment Type E Comment Status X
 The definition sentence does not end in a period: and the source of the signer
 SuggestedRemedy
 Add the period.
 Proposed Response Response Status O

CI 03 SC 3.55 P 7 L 54 # 208
 Gifford, Ian Self
 Comment Type E Comment Status X
 The definition sentence does not end in a period: 3.55 source authentication: authentication of the sender of the data
 SuggestedRemedy
 Add the period.
 Proposed Response Response Status O

CI 03 SC 3.56 P L # 1373
 Shvodian, William XtremeSpectrum
 Comment Type E Comment Status X
 The first version of SDL was issued in 1976. Anything 25 years old should not be called modern.
 SuggestedRemedy
 Remove "modern" from the definition of SDL
 Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 03 SC 3.58 P 8 L 9 # 209
Gifford, Ian Self

Comment Type E Comment Status X
The definition sentence does not end in a period: tion/decryption and/or integrity protection/integrity verification depending on its intended use

SuggestedRemedy
Add the period.

Proposed Response Response Status O

CI 03 SC 3.61 P 8 L 18 # 12
Bain, Jay Time Domain

Comment Type T Comment Status A
an eps dev will only look past the beacon on a wake superframe if there is indication in the beacon that it transmit or receive operations are to be performed.

SuggestedRemedy
also be available for sending or receiving operations "based on beacon information."

Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. Change "and also" to be "and based on beacon information also"

CI 03 SC 3.8 P 5 L 24 # 857
Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
unclear sentence structure ... not sure what is the correct definition

SuggestedRemedy
have power management sub-group rewrite this sentence

Proposed Response Response Status O

CI 03 SC 3.8 P 5 L 25 # 729
Huang, Bob Sony Electronics

Comment Type E Comment Status X
The word 'enhances' should be singular.

SuggestedRemedy
Make singular.

Proposed Response Response Status O

CI 03 SC 3.8 P 5 L 25 # 6
Bain, Jay Time Domain

Comment Type E Comment Status X
enhanced is correct

SuggestedRemedy
change from "enhances" to "enhanced"

Proposed Response Response Status O

CI 03 SC 3.9 P 5 L 28 # 194
Gifford, Ian Self

Comment Type E Comment Status X
The definition sentence does not end in a period: additional information through the creation of a public-key certificate

SuggestedRemedy
Add the period.

Proposed Response Response Status O

CI 03 SC 40 P 7 L 7 # 98
DuVal, Mary Texas Instruments

Comment Type T Comment Status A
"other services" - this description does not provide any information about how the piconet coordinator is different from other devices in the piconet.

SuggestedRemedy
Need to provide categories of services that are provided by the coordinator.

Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. Change the word services to "services, e.g. quality of service, synchronization, association, "

CI 03 SC 48 P 7 L 30 # 99
DuVal, Mary Texas Instruments

Comment Type E Comment Status X
"in a wireless personal area network" - does this definition of quality of service strictness apply to all WPAN systems or just 802.15.3.

SuggestedRemedy
Clarify that this is true for only .15.3 systems

Proposed Response Response Status O

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CI 04 SC P L # 1549
 Shvodian, William XtremeSpectrum
 Comment Type E Comment Status X
 Why do we have RNG specified? Should be PRNG.
 SuggestedRemedy
 Delete RNG and replace with PRNG
 Proposed Response Response Status O

CI 04 SC P L # 105
 DuVal, Mary Texas Instruments
 Comment Type E Comment Status X
 Add SFNext to the acronym list.
 SuggestedRemedy
 Define
 Proposed Response Response Status O

CI 04 SC P 10 L # 804
 Kleindl, Guenter Siemens
 Comment Type E Comment Status X
 missing: OID, PSRC, SFNext
 SuggestedRemedy
 add OID, PSRC, SFNext
 Proposed Response Response Status O

CI 04 SC P 10 L 23 # 103
 DuVal, Mary Texas Instruments
 Comment Type E Comment Status X
 PCS - common term used in the wireless telecom arena.
 SuggestedRemedy
 Find another TLA. Maybe PCSL.
 Proposed Response Response Status O

CI 04 SC P 10 L 41 # 863
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 Add term "OID"
 SuggestedRemedy
 OID = object identifier
 Proposed Response Response Status O

CI 04 SC P 10 L 49 # 104
 DuVal, Mary Texas Instruments
 Comment Type E Comment Status X
 RPS - too similar to revolutions per sec.
 SuggestedRemedy
 Find another TLA.
 Proposed Response Response Status O

CI 04 SC P 9 L 31 # 101
 DuVal, Mary Texas Instruments
 Comment Type E Comment Status X
 Del-ACK - 802.11e had used DlyAck for this term. To allow new readers to easily determine functionality similarities between different standards, like terms should be the same.
 SuggestedRemedy
 Use DlyAck.
 Proposed Response Response Status O

CI 04 SC P 9 L 4 # 100
 DuVal, Mary Texas Instruments
 Comment Type E Comment Status X
 AD-AD is a strange acronym
 SuggestedRemedy
 I suggest making it AD-ADDR to indicate more clearly that this is a type of address.
 Proposed Response Response Status O

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CI 04 SC P 9 L 42 # 1761
 Carmeli, Boaz IBM
 Comment Type E Comment Status X
 EPS set
 SuggestedRemedy
 EPSSet (Consistency with previous acros)
 Proposed Response Response Status O

CI 04 SC P 9 L 43 # 803
 Kleindl, Guenter Siemens
 Comment Type E Comment Status X
 Remove 'EPS CTA', because 'EPS' and 'CTA' are already there. Otherwise you need to include also other combinations like 'EPS CTR' that can be found in the document.
 SuggestedRemedy
 Remove 'EPS CTA'
 Proposed Response Response Status O

CI 04 SC P 9 L 54 # 102
 DuVal, Mary Texas Instruments
 Comment Type E Comment Status X
 Imm-ACK - to provide a short term try using ImAck. This would make it consistent with my suggestion in comment 7 (DlyAck).
 SuggestedRemedy
 Use ImAck
 Proposed Response Response Status O

CI 04 SC P 910 L # 1357
 Shellhammer, Steve Symbol Technologies
 Comment Type TR Comment Status A
 There are acroynms for both FER and PER. I do not see a distiction between a frame and a packet, so FER and PER seem to be the same.
 SuggestedRemedy
 Use either the term Frame or the term Packet. Then drop the other term throughout the standard. Also, drop either FER or PER from this clause.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE. Delete PER from acronyms, and change occurrence of PER in 11.6.1 to FER and at all other locaitons in the draft.

CI 04 SC 00 P 10 L 23 # 212
 Gifford, Ian Self
 Comment Type E Comment Status X
 The term "sub-layer", used in PCS packet convergence sub-layer, is spelled wrong.
 SuggestedRemedy
 Change to "sublayer", dropping the hyphen.
 Proposed Response Response Status O

CI 04 SC 00 P 11 L 9 # 213
 Gifford, Ian Self
 Comment Type E Comment Status X
 The term "sub-layer", used in SSCS service specific convergence sub-layer, is spelled wrong.
 SuggestedRemedy
 Change to "sublayer", dropping the hyphen.
 Proposed Response Response Status O

CI 04 SC 00 P 9 L 21 # 211
 Gifford, Ian Self
 Comment Type E Comment Status X
 The term "sub-layer", used in CPS common part sub-layer, is spelled wrong.
 SuggestedRemedy
 Change to "sublayer", dropping the hyphen.
 Proposed Response Response Status O

CI 04 SC 00 P 9 L 8 # 210
 Gifford, Ian Self
 Comment Type E Comment Status X
 The "ACTIVE CTA" entry is to long (10char) for the standard tab setting for the acronym list clause entry.
 SuggestedRemedy
 Change tab setting so that "ACTIVE CTA" become the new tab (plus some spaces for readability of "active mode channel time allocation") setting for the clause.
 Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 04 SC 4 P 10 L 21 # 756
 Huang, Bob Sony Electronics
Comment Type E *Comment Status* X
 Need definition of OID
SuggestedRemedy
 OID object identifier
Proposed Response *Response Status* O

CI 05 SC P L # 136
 DuVal, Mary Texas Instruments
Comment Type E *Comment Status* X
 The flow of this section needs to be revisited. It does not read easily.
SuggestedRemedy
Proposed Response *Response Status* O

CI 05 SC P 13 L # 1765
 Callaway, Ed Motorola
Comment Type E *Comment Status* X
 Coexistence features of 15.3 are not clearly stated, in a single location.
SuggestedRemedy
 I suggest that a subclause be added to Clause 5, explicitly describing how paragraph 6 of the PAR ("A goal of the WPAN-HR Task Group will be to achieve a level of interoperability or coexistence with other 802.15 Task Groups . . . it is also the intent of this project to work toward a level of coexistence with other wireless devices . . .") is
Proposed Response *Response Status* O

CI 05 SC P 17 L 54 # 871
 Roberts, Richard XtremeSpectrum
Comment Type TR *Comment Status* X
 Need to add a clause 5.6
SuggestedRemedy
 5.6 Coexistence with other IEEE802 devices - Overview PHY subcommittee members need to add "overview" text that indicates how 802.15.3 2.4 GHz PHY is going to coexist with 802.11, 802.11b and 802.15.1 devices.
Proposed Response *Response Status* O

CI 05 SC .1.1 P 13 L 33 # 107
 DuVal, Mary Texas Instruments
Comment Type E *Comment Status* X
 This paragraph describes a potential implementation. Unless this point drives a specific requirement to come, it should be excluded.
SuggestedRemedy
 Remove the paragraph or drive a point.
Proposed Response *Response Status* O

CI 05 SC .1.2 P 13 L 42 # 108
 DuVal, Mary Texas Instruments
Comment Type E *Comment Status* X
 "For technical reasons, ..." - what technical reasons?
SuggestedRemedy
 Please explain what the point being driven in this paragraph.
Proposed Response *Response Status* O

CI 05 SC 1 P 13 L 16 # 106
 DuVal, Mary Texas Instruments
Comment Type E *Comment Status* X
 This paragraph does not add anything to the text.
SuggestedRemedy
 Delete the paragraph or add some content.
Proposed Response *Response Status* O

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CI 05 SC 1.2 P 13 L 42 # 109
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 "Propogation effects ..." - The message of this sentence is unclear.

SuggestedRemedy
 Clarify point.

Proposed Response Response Status O

CI 05 SC 2 P 14 L 1 # 1719
 Young, Song-Lin Sharp Labs. of

Comment Type TR Comment Status D
 Operation of draft HR WPAN requires presence of a PNC. If a person owns two WPAN devices but neither of them are AC capable, then his/her products will be useful only when someone else's PNC shows up and is generous enough to provide the

SuggestedRemedy
 Make basic PNC function (beacon) mandatory so two devices can at least discover each other and exchange capability.

Proposed Response Response Status W
 PROPOSED REJECT. The group feels that certains devices for cost consideration will always required a separate PNC for operation. E.g., remote speaker.

CI 05 SC 3 P 14 L 13 # 110
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 Bullets should be in same order as they are listed in the subsections.

SuggestedRemedy
 Order appropriately

Proposed Response Response Status O

CI 05 SC 3 P 14 L 23 # 111
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 Why is this sentence not a bullet? It does not have enough information to stand alone as a paragraph.

SuggestedRemedy
 Make a bullet item

Proposed Response Response Status O

CI 05 SC 3 P 14 L 23 # 487
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type E Comment Status X
 use of "multiple levels" is confusing and for some converning

SuggestedRemedy
 Remove "mulitple" and "levels"

Proposed Response Response Status O

CI 05 SC 3.1 P 14 L 27 # 112
 DuVal, Mary Texas Instruments

Comment Type TR Comment Status A
 A WPAN only requires 1 device? or is the WPAN formed when a complete response if received from another device interested in joining a piconet?

SuggestedRemedy
 Clarify

Proposed Response Response Status C
 PROPOSED ACCEPT IN PRINCIPLE. . After "superframe." Add "Thus even if there are no associated DEVs, the PNC beaconing is considered to be a piconet."

CI 05 SC 3.2 P 14 L 48 # 114
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 "authenticate with the PNC and then with any other DEV ..." - the listed models only authenticate with the PNC, not with other DEVs.

SuggestedRemedy
 Wording issue.

Proposed Response Response Status O

CI 05 SC 3.2 P 15 L 7 # 116
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 "... e.g. ssh ..." - what is ssh?

SuggestedRemedy
 If this term is going to be used, define it in the acronyms.

Proposed Response Response Status O

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CI 05 SC 3.2 P 15 L 7 # 115
 DuVal, Mary Texas Instruments
 Comment Type **TR** Comment Status **A**
 Does this paragraph indicate that the defined method could be over written by a higher level protocol?
 SuggestedRemedy
 Need clarification.
 Proposed Response Response Status **C**
 PROPOSED ACCEPT IN PRINCIPLE. Delete that sentence. "Higher level . . . this standard."

CI 05 SC 3.3 P 15 L 12 # 117
 DuVal, Mary Texas Instruments
 Comment Type **E** Comment Status **X**
 "streamless asynchronous exchange" and "asynchronous connection" - how do these terms differ? It is not obvious at this point in the document. Also, define what is meant by "small amount of data". Different people would have a different tolerance for
 SuggestedRemedy
 Needs more explanation.
 Proposed Response Response Status **O**

CI 05 SC 3.4 P 15 L 20 # 118
 DuVal, Mary Texas Instruments
 Comment Type **E** Comment Status **X**
 "connection process" - this is not a descriptive discussion. Is it special? Are there any key features?
 SuggestedRemedy
 More description desired.
 Proposed Response Response Status **O**

CI 05 SC 3.5 P 15 L 24 # 119
 DuVal, Mary Texas Instruments
 Comment Type **E** Comment Status **X**
 How does a device know when to expect to transmit or receive? Need more intro information to understand this feature.
 SuggestedRemedy
 More explanation needed.
 Proposed Response Response Status **O**

CI 05 SC 3.6 P 15 L 32 # 120
 DuVal, Mary Texas Instruments
 Comment Type **T** Comment Status **A**
 What if none of the remaining devices have the capability to be a PNC? Does the piconet disappear?
 SuggestedRemedy
 Finish explaining all cases.
 Proposed Response Response Status **C**
 PROPOSED ACCEPT. Add the sentence: "If the PNC stops sending a beacon for any reason, after a certain period of time, the piconet ceases to exist."

CI 05 SC 3.7 P 15 L 38 # 121
 DuVal, Mary Texas Instruments
 Comment Type **E** Comment Status **X**
 A figure showing how a child piconet relates to the original piconet is needed here.
 SuggestedRemedy
 Provide figure
 Proposed Response Response Status **O**

CI 05 SC 3.7 P 15 L 41 # 490
 GUBBI, RAJUGOPAL Broadcom, corp
 Comment Type **E** Comment Status **X**
 PIND?
 SuggestedRemedy
 change "PIND" to "PNID"
 Proposed Response Response Status **O**

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CI 05 SC 3.8 P 15 L 49 # 122
 DuVal, Mary Texas Instruments
Comment Type **E** *Comment Status* **X**
 A figure showing how a neighbor piconet relates to the original piconet is needed here.
SuggestedRemedy
 Provide figure
Proposed Response *Response Status* **O**

CI 05 SC 3.8 P 15 L 49 # 123
 DuVal, Mary Texas Instruments
Comment Type **T** *Comment Status* **D**
 Description here is the same as a child piconet. It makes it hard to understand why a neighbor piconet is needed and why it is technically beneficial. If the complexity is to be added to provide this functionality, there should be a strong explanation of it's
SuggestedRemedy
 More explanation needed here to determine benefit of this functionality.
Proposed Response *Response Status* **W**
 PROPOSED ACCEPT.

CI 05 SC 3.8 P 16 L 6 # 125
 DuVal, Mary Texas Instruments
Comment Type **E** *Comment Status* **X**
 What is the last statement saying? The point is not clear.
SuggestedRemedy
 Clarify statement
Proposed Response *Response Status* **O**

CI 05 SC 4 P 16 L 10 # 124
 DuVal, Mary Texas Instruments
Comment Type **E** *Comment Status* **X**
 Figure needed to communicate quickly the available operation modes.
SuggestedRemedy
 Provide figure
Proposed Response *Response Status* **O**

CI 05 SC 4 P 16 L 11 # 127
 DuVal, Mary Texas Instruments
Comment Type **E** *Comment Status* **X**
 How does 5.4.1 and 5.4.2 relate to this paragraph.
SuggestedRemedy
 Check section flow.
Proposed Response *Response Status* **O**

CI 05 SC 4 P 16 L 12 # 126
 DuVal, Mary Texas Instruments
Comment Type **E** *Comment Status* **X**
 "... stopping a piconet." - based on 5.6.1, this should be ending a piconet.
SuggestedRemedy
 Provide consistency in document terms.
Proposed Response *Response Status* **O**

CI 05 SC 4.2 P 16 L 24 # 129
 DuVal, Mary Texas Instruments
Comment Type **E** *Comment Status* **X**
 The last sentence is awkward. Is it trying to say that sync streams have different acknowledgement modes?
SuggestedRemedy
 Provide clarification
Proposed Response *Response Status* **O**

CI 05 SC 5 P 16 L 27 # 130
 DuVal, Mary Texas Instruments
Comment Type **TR** *Comment Status* **A**
 How do the states relate? Is there a state flow diagram?
SuggestedRemedy
 Provide state flow diagram.
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT IN PRINCIPLE. State diagrams will be added to the appropriate clauses with a cross reference in clause 5.

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CI 05 SC 5 P 16 L 27 # 128
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 Is this section really the same as 5.4?

SuggestedRemedy
 Look at combining sections.

Proposed Response Response Status O

CI 05 SC 5.0 P L # 20
 Bain, Jay Time Domain

Comment Type E Comment Status X
 a covering comment should be located at the first instance of CAP to cover MTS

SuggestedRemedy
 Don't know exactly where but add "Throughout this clause, when CAP is referenced, the capabilities that CAP would provide may be alternatively provided by Management Time slots (MTS)

Proposed Response Response Status O

CI 05 SC 5.0 P 13 L # 18
 Bain, Jay Time Domain

Comment Type E Comment Status X
 It is noted that WPAN and piconet may be used with the same meaning in clause 5. Should we consistent with one or the other? Suggested is piconet although no strong preference except that piconet seems to be general term throughout the document.

SuggestedRemedy
 change multiple instances of "WPAN" to "piconet"

Proposed Response Response Status O

CI 05 SC 5.1 P 13 L 12 # 290
 Gifford, Ian Self

Comment Type E Comment Status X
 The term metropolitan area network (MAN) is used but it is not defined in Clause 4, however, the WAN, LAN, and PAN are.

SuggestedRemedy
 Add "MAN metropolitan area network" to Clause 4.

Proposed Response Response Status O

CI 05 SC 5.1 P 13 L 16 # 288
 Gifford, Ian Self

Comment Type E Comment Status X
 The word "wireless" in the sentence "Additionally, WPANs have the expected wireless differences as found in the following paragraphs." should be clarified by adding

SuggestedRemedy
 SuggestedRemedy
 I suggest the sentence be changed to "Additionally, WPANs have the expected wireless medium differences as found in the following paragraphs."

Proposed Response Response Status O

CI 05 SC 5.1.1 P 13 L 24 # 214
 Gifford, Ian Self

Comment Type E Comment Status X
 The following sentence does not end in a period: conformant PHY transceivers are known to be unable to receive network frames

SuggestedRemedy
 Add the period.

Proposed Response Response Status O

CI 05 SC 5.1.1 P 13 L 25 # 864
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status A
 Don't understand what the text is trying to say "The PHY is unprotected from outside signals."

SuggestedRemedy
 add additional text to clarify meaning

Proposed Response Response Status C
 PROPOSED ACCEPT IN PRINCIPLE. Delete the itemization point. "the PHY . . .

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CI 05 SC 5.1.1 P 13 L 26 # 215
 Gifford, Ian Self
Comment Type E *Comment Status* X
 The following sentence does not end in a period: The WPAN has a dynamic topology
SuggestedRemedy
 Add the period.
Proposed Response *Response Status* O

CI 05 SC 5.1.1 P 13 L 26 # 1374
 Shvodian, William XtremeSpectrum
Comment Type E *Comment Status* X
 First use of DEV should say "device (DEV)"
SuggestedRemedy
 change DEV to device (DEV) Is there some to to automatically check the first use of acronyms?
Proposed Response *Response Status* O

CI 05 SC 5.2 P 13 L 5054 # 289
 Gifford, Ian Self
Comment Type T *Comment Status* A
 The text that describes the components of the IEEE 802.15.3 WPAN is clear but I was expecting a figure that depicted the components of the WPAN being described.
SuggestedRemedy
 I suggest a figure be created and added that depicts the components of the IEEE 802.15.3 WPAN.
Proposed Response *Response Status* C
 PROPOSED ACCEPT.

CI 05 SC 5.2 P 14 L 2 # 1659
 Shvodian, William XtremeSpectrum
Comment Type E *Comment Status* X
 Should say "Additionally the PNC manages the quality of service (QoS) requirements and authentication requirements of the WPAN."
SuggestedRemedy
 Comment via Ari Singer.
Proposed Response *Response Status* O

CI 05 SC 5.2 P 14 L 2 # 62
 Barr, John Motorola
Comment Type E *Comment Status* X
 PNC management does not include security nor extended power save.
SuggestedRemedy
 Change "quality of service (QoS)" to "quality of service (QoS), security, and power
Proposed Response *Response Status* O

CI 05 SC 5.2 P 16 L # 799
 Kinney, Patrick Invensys
Comment Type T *Comment Status* A
 A node needs to be authenticated, then authorized before it can join a network. The following statement: "If the beacon indicates a piconet of interest to the DEV, it will attempt to authenticate with the PNC. Upon success, it is considered to be in the WPAN." does not refer to authorization.
SuggestedRemedy
 add verbage or mechanism to include authorization from a higher layer?

Proposed Response *Response Status* C
 PROPOSED ACCEPT IN PRINCIPLE. Change "to authenticate with the PNC." to "to associate with the PNC. If authentication is required, the DEV is also required to authenticate with the PNC."
 Authentication process implicitly includes authorization in our draft.

CI 05 SC 5.2 P 16 L 42 # 131
 DuVal, Mary Texas Instruments
Comment Type E *Comment Status* X
 "... (whether it needs to power management or not) ..." - the "to" is not needed in
SuggestedRemedy
 Remove "to".
Proposed Response *Response Status* O

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CI 05 SC 5.2 P 16 L 43 # 132
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 "... a PNC handover could occur." - change the to state "... a PNC handover is

SuggestedRemedy
 Change suggested above.

Proposed Response Response Status O

CI 05 SC 5.3 P 14 L 12 # 1375
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 PAN should be WPAN

SuggestedRemedy
 Change PAN to WPAN

Proposed Response Response Status O

CI 05 SC 5.3 P 14 L 1315 # 216
 Gifford, Ian Self

Comment Type E Comment Status X
 The following sentences do not end in a period: — Allow DEVs to form and terminate
 PANs — Transport data between DEVs — Authenticate DEVs with each other

SuggestedRemedy
 Add the periods.

Proposed Response Response Status O

CI 05 SC 5.3 P 14 L 23 # 63
 Barr, John Motorola

Comment Type E Comment Status X
 The data transport does not explicitly support multiple quality of service levels with
 optional priority. There is an SSCS that could be used to map prioritized QoS service
 traffic to specific GTS allocations, but this is not done in the MAC.

SuggestedRemedy
 Remove sentence on line 23. If desired to include a statement about QoS, include as an
 additional bullet the following: A procedure to allocate bandwidth and fixed time slots to
 support establishment of data streams that can guarantee repetitive allocation of
 bandwidth required for isochronous connections.

Proposed Response Response Status O

CI 05 SC 5.3 P 15 L # 1359
 Shellhammer, Steve Symbol Technologies

Comment Type T Comment Status A
 The complexity of supporting the child and neighboring piconet capability seems high.
 There does not seem to be any significant value in either since it does not increase the
 overall capacity.

SuggestedRemedy
 Eliminate the child and neighboring piconet concept or alternatively include a short
 statement of the utility of these capabilities.

Proposed Response Response Status C
 PROPOSED ACCEPT IN PRINCIPLE. Add text that identifies possible uses of child
 and neighbor piconets. Bob Huang to provide by Monday evening.

CI 05 SC 5.3.1 P 14 L 3336 # 217
 Gifford, Ian Self

Comment Type E Comment Status X
 The following sentences do not end in a period: — Beacon — Contention Free Period
 (CFP). This is composed of data streams, either synchronous or isochronous, with
 quality of service provisions

SuggestedRemedy
 Add the period.

Proposed Response Response Status O

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CI 05 **SC 5.3.1** **P 14** **L 34** **# 13**
 Bain, Jay Time Domain
Comment Type **E** *Comment Status* **X**
 Figure 1 starting on line 38 includes MTS1 and MTS2 elements but the text does not reflect this

SuggestedRemedy
 add after CAP - "or an alternate management time slot (MTS) method"

Proposed Response *Response Status* **O**

CI 05 **SC 5.3.1** **P 14** **L 3436** **# 64**
 Barr, John Motorola

Comment Type **E** *Comment Status* **X**
 The use of the CAP and the CFP are optional based on how the PNC allocated time in the superframe. In section 8.4.3.3, page 151, line 4-5 it is noted that "the PNC is responsible for choosing the CAP size if a CAP is used." In section 7.4.2, page 102, line 47-48 states: "The CFP duration is the time allocated to the CFP ... has a range of [0-524280] uS." This makes use of the CAP and the CFP optional as defined by the

SuggestedRemedy
 Change the two lines to: - Connection Access Period (CAP) when allocated. - Connection Free Period (CFP) when allocated. followed by: The superframe will always have a Beacon and at least one CAP or CFP, and may have a Beacon, CAP, and CFP in that order.

Proposed Response *Response Status* **O**

CI 05 **SC 5.3.1** **P 14** **L 35** **# 1383**
 Shvodian, William XtremeSpectrum

Comment Type **E** *Comment Status* **X**
 synchronous stream should be asynchronous stream

SuggestedRemedy
 change synchronous to asynchronous. Actually, do a global search on "synchronous" and either change to asynchronous or isochronous as appropriate. In 5.3.4 synchronous is used instead of isochronous. in 5.3.3 synchronous is used instead of

Proposed Response *Response Status* **O**

CI 05 **SC 5.3.1** **P 14** **L 35** **# 865**
 Roberts, Richard XtremeSpectrum

Comment Type **E** *Comment Status* **X**
 grammatical error

SuggestedRemedy
 Contention Free Period (CFP), which is composed of ...

Proposed Response *Response Status* **O**

CI 05 **SC 5.3.2** **P 14** **L 48** **# 1378**
 Shvodian, William XtremeSpectrum

Comment Type **E** *Comment Status* **X**
 authenticate "and then with any other DEV with which communication is required" is inconsistent with security clause.

SuggestedRemedy
 Remove reference to authenticating with other DEVs.

Proposed Response *Response Status* **O**

CI 05 **SC 5.3.2** **P 14** **L 4849** **# 65**
 Barr, John Motorola

Comment Type **E** *Comment Status* **X**
 DEVs are not required to authenticate with any other DEV with which communication is required. Instead, once a DEV is authenticated with the PNC, it belongs to the authenticated devices in the piconet and may utilized the resources of the piconet to allocated time slots and communicate with other DEVs in the piconet.

SuggestedRemedy
 Change "... with the PNC and then with any other DEV with which communication is required." to "... with the PNC."

Proposed Response *Response Status* **O**

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CI 05 SC 5.3.2 P 14 L 5052 # 219
Gifford, Ian Self

Comment Type E Comment Status X

The following sentences do not end in a period: a) Open - no authentication is required and data is not encrypted by the MAC b) Authentication - DEVs authenticate with the PNC before they have access to the piconet's resources. Data is not encrypted by the MAC and why are the Clause 5 lists different i.e., subclause 5.3.1 unordered and 5.3.2 ordered. Refer to IEEE Standards Style Manual, 12. Homogeneity, pg. 14.

SuggestedRemedy

Add the period and change the lists to be consistent i.e., all ordered or all unordered.

Proposed Response Response Status O

CI 05 SC 5.3.2 P 15 L 2 # 1660
Shvodian, William XtremeSpectrum

Comment Type T Comment Status A

Saying that the data is "encrypted" is not really what one might want. Entities may want to know that the transmission came from the appropriate person and wasn't tampered with (data integrity) and/or have the data encrypted. We should allow for these different combinations of integrity and privacy.

SuggestedRemedy

Change second sentence in paragraph to: "All data sent in the piconet uses payload protection (data integrity and/or data encryption) with the piconet payload protection key(s)." Comment via Ari Singer.

Proposed Response Response Status C

PROPOSED ACCEPT.

CI 05 SC 5.3.2 P 15 L 7 # 866
Roberts, Richard XtremeSpectrum

Comment Type T Comment Status A

add to clause 4

SuggestedRemedy

add "ssh" to clause 4 ... off-hand I do not know what ssh means.

Proposed Response Response Status C

PROPOSED ACCEPT IN PRINCIPLE. Sentence was deleted.

CI 05 SC 5.3.2 P 15 L 7 # 731
Huang, Bob Sony Electronics

Comment Type E Comment Status X

'ssh' is not defined either here or in clause 4.

SuggestedRemedy

Define.

Proposed Response Response Status O

CI 05 SC 5.3.3 P 15 L 12 # 66
Barr, John Motorola

Comment Type E Comment Status X

Bad grammar.

SuggestedRemedy

Change "is sent using either by" to "is sent either by".

Proposed Response Response Status O

CI 05 SC 5.3.3 P 15 L 12 # 14
Bain, Jay Time Domain

Comment Type E Comment Status X

the second "using" seems to be extra

SuggestedRemedy

omit the second instance of "using" on this line. Perhaps drop "either" as well.

Proposed Response Response Status O

CI 05 SC 5.3.3 P 15 L 1213 # 867
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X

grammatical

SuggestedRemedy

change to ... Data is sent using either by a streamless asynchronous exchange, or by

Proposed Response Response Status O

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CI 05 SC 5.3.3 P 15 L 13 # 1379
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 "asynchronous connection" and "isochronous connection" should be stream

SuggestedRemedy
 change connection to stream

Proposed Response Response Status O

CI 05 SC 5.3.4 P 15 L 1820 # 67
 Barr, John Motorola

Comment Type E Comment Status X
 The PNC does not allocate 'bandwidth'. It does allocate time slots in which a pair of DEVs can use any of the supported bit rates in order to obtain an effective throughput rate from the available raw bandwidth and the amount of error recovery required by the effective BER of the channel.

SuggestedRemedy
 Replace this section with: "Asynchronous or synchronous data streams are established for use in the CFP by the allocation of GTSS. The PNC manages allocation of GTSS based on the DEVs requirements and the DEVs then use the GTSS as needed. These streams are established by a connection process."

Proposed Response Response Status O

CI 05 SC 5.3.7 P 15 L 41 # 1792
 Liu, Shawn InProComm, Inc.

Comment Type E Comment Status X
 PIND

SuggestedRemedy
 PIND

Proposed Response Response Status O

CI 05 SC 5.3.7 P 15 L 42 # 15
 Bain, Jay Time Domain

Comment Type E Comment Status X
 multiple comments 1. suggest changing "private" GTS to better convey the idea. 2. need to add "for the child" in line 43 3. missing word in sentence.

SuggestedRemedy
 1. change "private" to "reserved" 2. after acknowledgments, insert "for the child" 3. at beginning of line 47, add "to"

Proposed Response Response Status O

CI 05 SC 5.3.7 P 15 L 43 # 1762
 Carmeli, Boaz IBM

Comment Type E Comment Status X
 Comment Type E Comment Status X
 handled within in the child...

SuggestedRemedy
 handled within the child...

Proposed Response Response Status O
 Proposed Response Response Status O

CI 05 SC 5.3.8 P 15 L 54 # 16

Bain, Jay Time Domain

Comment Type T Comment Status A
 1. use reserved or another term rather than private 2. add clarification as to what assoc, auth, sec and acks are related to

SuggestedRemedy
 1. change "private" to "reserved" 2. after acknowledgments, insert "for the neighbor"

Proposed Response Response Status C
 PROPOSED ACCEPT IN PRINCIPLE. Change "private GTS" to "time slot". Accept second part as written.

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Cl 05 SC 5.3.8 P 16 L 4 # 1712
 Young, Song-Lin Sharp Labs. of
Comment Type TR Comment Status A
 Does this suggest any 802-compliant wireless devices can operate as a 15.3 neighbor piconet and solve co-existing issue?

SuggestedRemedy
 This statement should be removed or clarified.

Proposed Response Response Status C
 PROPOSED ACCEPT IN PRINCIPLE. Other wireless devices could utilize the neighbor piconet capability to allocate time within an existing 802.15.3 piconet so that that wireless device could utilize the allocated time to coexist in the same spectrum as the existing 802.15.3 piconet. The other wireless device would need to use the 802.15.3 commands to associate as a neighbor piconet.

Delete "802-compliant" and also change "for supporting . . . Neighbor" to be "of using this coexistence method".

Cl 05 SC 5.4 P 16 L 11 # 732
 Huang, Bob Sony Electronics

Comment Type E Comment Status X
 Some of the list of states (association, authentication, stream connection, etc.) are more device actions than WPAN states. Thus 'disassociation' should be included.

SuggestedRemedy
 Add 'disassociation'.

Proposed Response Response Status O

Cl 05 SC 5.4 P 16 L 11 # 17
 Bain, Jay Time Domain

Comment Type E Comment Status X
 There is no mention of MTS at this level and at least a brief mention should be present in the overview of operation.

SuggestedRemedy
 add 5.4.3 MTS operation The stanard provides an alternative to CAP through the use of management time slots (MTS). Management time slots are located within the CFP.

Proposed Response Response Status O

Cl 05 SC 5.4 P 16 L 12 # 1380
 Shvodian, William XtremeSpectrum
Comment Type E Comment Status X
 WPAN operation states and DEV operations have been mixed.

SuggestedRemedy
 ...WPAN has several states of operation: An 802.15.3 WPAN has several states of operation: establishment, optional coordination function transfer, and stopping a piconet. DEVs have several states of operation: association, authentication, stream connection establishment, data exchange. These WPAN and DEV states operate around the structure of the superframe.

Proposed Response Response Status O

Cl 05 SC 5.4.1 P 16 L 17 # 733
 Huang, Bob Sony Electronics

Comment Type E Comment Status X
 CSMA/CA is not defined in the document.

SuggestedRemedy
 Define.

Proposed Response Response Status O

Cl 05 SC 5.4.2 P 16 L 25 # 1381
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 Data in asynchronous streams does not have to be acknowledged. Broadcast streams are not acknowledged.

SuggestedRemedy
 Change to: Data in asynchronous streams can be acknowledged, and synchronous streams are able to request acknowledgement as well.

Proposed Response Response Status O

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CI 05 SC 5.4.3 P 16 L 27 # 1388
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
Need to add a section on MTS

SuggestedRemedy

Add MTS description: Management Time Slots are a type of GTS that can be used to allow communications between the DEVs and the PNC. MTS slots can either be assigned or they can be shared slots that are accessed using SLOtted Aloha.

Proposed Response Response Status O

CI 05 SC 5.5 P 17 L 14 # 133
DuVal, Mary Texas Instruments

Comment Type E Comment Status X
"... a new DEVs joins." - add the following: "... a new DEVs joins with more capability."

SuggestedRemedy

See above

Proposed Response Response Status O

CI 05 SC 5.5.2 P 16 L 3940 # 1661
Shvodian, William XtremeSpectrum

Comment Type T Comment Status A
Again, privacy should be payload protection.

SuggestedRemedy

Change sentence to "If payload protection is enabled for the piconet, then the DEV receives the symmetric piconet payload protection key(s) during authentication."
Comment via Ari Singer.

Proposed Response Response Status C

PROPOSED ACCEPT. Replacing sentence "If privacy . . . encrypt data." Change "during" to "after" the the suggested remedy.

CI 05 SC 5.5.2 P 16 L 42 # 19
Bain, Jay Time Domain

Comment Type TR Comment Status A
power management status is not part of join. power management is negotiated between peers so is not part of join between DEV and PNC. The text is in error. We could replace this with the ability of a DEV to support power management.

SuggestedRemedy

change the text to "its ability to support power management " and remove "it power management status (whether it needs to power management or not"

Proposed Response Response Status C
PROPOSED ACCEPT.

CI 05 SC 5.5.2 P 16 L 42 # 1382
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
"whether it needs to power mangement or not" is not proper grammar

SuggestedRemedy

probably need to drop the "to" or change to "to use"

Proposed Response Response Status O

CI 05 SC 5.5.3 P 16 L 48 # 1384
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
"during the CAP" should be "during the CAP or MTS"

SuggestedRemedy

add "or MTS"

Proposed Response Response Status O

CI 05 SC 5.5.3 P 16 L 48 # 868
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status A
add some text

SuggestedRemedy

... from the PNC during the CAP or MTS.

Proposed Response Response Status C
PROPOSED ACCEPT. Change "CAP" to "CAP or MTS".

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CI 05 **SC 5.5.4** **P 17** **L 4** **# 1386**
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 asynch data is only allowed in the CAP if the PNC allows it.
SuggestedRemedy
 add "if allowed by the PNC." to the end of the sentence.
Proposed Response *Response Status* **O**

CI 05 **SC 5.5.4** **P 17** **L 4** **# 22**
 Bain, Jay Time Domain
Comment Type **T** *Comment Status* **A**
 I thought that we dropped the "data window." If we did, we should change the text in this subclause.
SuggestedRemedy
 remove "data window of the"
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT.

CI 05 **SC 5.5.4** **P 17** **L 4** **# 1385**
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 there is no "data window" in the CAP
SuggestedRemedy
 Remove reference to "data window"
Proposed Response *Response Status* **O**

CI 05 **SC 5.5.5** **P 17** **L 11** **# 869**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 change as shown
SuggestedRemedy
 It is possible, for many reasons, that the PNC function will be transferred.
Proposed Response *Response Status* **O**

CI 05 **SC 5.5.6** **P 17** **L 22** **# 1387**
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 "Power is removed removing power from all DEVs" does not make sense
SuggestedRemedy
 Change to "Power is removed from the DEV before the DEV can perform a PNC"
Proposed Response *Response Status* **O**

CI 05 **SC 5.5.6** **P 17** **L 22** **# 220**
 Gifford, Ian Self
Comment Type **E** *Comment Status* **X**
 The following sentence does not end in a period: — Power is removed removing power from all the DEVs
SuggestedRemedy
 Add the period.
Proposed Response *Response Status* **O**

CI 05 **SC 5.5.6** **P 17** **L 22** **# 870**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 Rewrite as ...
SuggestedRemedy
 Power is removed from all the DEVs
Proposed Response *Response Status* **O**

CI 05 **SC 5.5.6** **P 17** **L 22** **# 73**
 Barr, John Motorola
Comment Type **E** *Comment Status* **X**
 Bad Grammar
SuggestedRemedy
 Change "... removed removing power ..." to "... removed by removing power ..."
Proposed Response *Response Status* **O**

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CI 05 SC **5.5.6** P **17** L **26** # **735**
 Huang, Bob Sony Electronics
Comment Type **E** *Comment Status* **X**
 This refers to a parent piconet ending a subsidiary piconet, however it is the parent PNC that can end the subsidiary piconet.
SuggestedRemedy
 Change 'parent piconet' to 'parent PNC'.
Proposed Response *Response Status* **O**

CI 05 SC **5.6** P **17** L **27** # **134**
 DuVal, Mary Texas Instruments
Comment Type **E** *Comment Status* **X**
 "via the disassociation command ..." - this mode of operation should be included in section 5.4.
SuggestedRemedy
 Add disassociation command to 5.4.
Proposed Response *Response Status* **O**

CI 05 SC **5.6.1** P **17** L **38** # **135**
 DuVal, Mary Texas Instruments
Comment Type **T** *Comment Status* **A**
 Why would the PNC of the former child piconet immediately form a new piconet if it did not choose to continue operation after the parent piconet disappears? Isn't this the same as removing the parent device ID element and continuing the piconet?
SuggestedRemedy
 Explain why this possible operation? Explain why it is necessary.
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT IN PRINCIPLE. Delete sentence on line 38 "However . . . The new piconet."

CI 05 SC **Figure 1** P **14** L # **488**
 GUBBI, RAJUGOPAL Broadcom, corp
Comment Type **E** *Comment Status* **X**
 command and Data in CAP is confusing: makes the reader think all the commands are tx first and then the data
SuggestedRemedy
 merge the two blocks in CAP to one with the content "Command/Data"
Proposed Response *Response Status* **O**

CI 05 SC **Figure 1** P **14** L **41** # **1376**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **A**
 CAP is divided into Command and Data - inconsistent with text
SuggestedRemedy
 Remove reference to command and data from the cap in Figure 1
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT.

CI 05 SC **Figure 1** P **14** L **41** # **113**
 DuVal, Mary Texas Instruments
Comment Type **T** *Comment Status* **A**
 Are GTS and MTS packets randomly intertwined? Figure is unclear? If this level of detail exists in the figure, it should be explained in the section.
SuggestedRemedy
 Clarify figure and explain in the section.
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT IN PRINCIPLE. Delete MTS and GTS representations from Figure 1. Add text following "service provision" "This period includes both MTS and GTS allocations."

CI 05 SC **Figure 1** P **14** L **41** # **1377**
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 GTS N and MTS N make it look like there are an equal number of MTS and GTSs
SuggestedRemedy
 Change MTS N to MTS M.
Proposed Response *Response Status* **O**

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Cl 05 SC **Figure 1** P **14** L **41** # **218**
 Gifford, Ian Self
Comment Type **E** *Comment Status* **X**
 The term "GTS2" in Figure 1 is inconsistently used.
SuggestedRemedy
 Change the term to "GTS 2" (adding a space) to match GTS 1, GTS N, etc.
Proposed Response *Response Status* **O**

Cl 06 SC **3.1.1** P **23** L **32** # **1711**
 Young, Song-Lin Sharp Labs. of
Comment Type **E** *Comment Status* **X**
 No MLME-STREAM-CONNECT primitive in Table 1
SuggestedRemedy
 change to MLME-CREATE-STREAM
Proposed Response *Response Status* **O**

Cl 06 SC P L # **1423**
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 Putting clause 6 before clause 7 and 8 will confuse new readers.
SuggestedRemedy
 Move Clause 6 after Clause 8
Proposed Response *Response Status* **O**

Cl 06 SC **3.13, 3.14** P **5055** L # **1715**
 Young, Song-Lin Sharp Labs. of
Comment Type **TR** *Comment Status* **X**
 No time out for these two primitives
SuggestedRemedy
 Add time out parameters to the MLME-CREATE-STREME & MLME-MODIFY-STREME
 primitives
Proposed Response *Response Status* **O**

Cl 06 SC **1.1** P **20** L **5** # **138**
 DuVal, Mary Texas Instruments
Comment Type **T** *Comment Status* **A**
 How does MAC CPS fit into figure 2?
SuggestedRemedy
 Include this term and how it relates in figure 2
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT IN PRINCIPLE. Copy Figure A.1 to Figure 2 with any appropriate
 changes. Make sure supporting text is adequate.

Cl 06 SC **4.1** P **71** L **47** # **142**
 DuVal, Mary Texas Instruments
Comment Type **E** *Comment Status* **X**
 "... by the LME ..." - should this be "PLME"?
SuggestedRemedy
Proposed Response *Response Status* **O**

Cl 06 SC **1.1** P **20** L **7** # **137**
 DuVal, Mary Texas Instruments
Comment Type **E** *Comment Status* **X**
 SCS needs to be defined
SuggestedRemedy
Proposed Response *Response Status* **O**

Cl 06 SC **4.5** P **74** L **3** # **143**
 DuVal, Mary Texas Instruments
Comment Type **E** *Comment Status* **X**
 "... by the LME ..." - should this be "PLME"?
SuggestedRemedy
Proposed Response *Response Status* **O**

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CI 06 SC 6 P 75 L 51 # 144
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 Need to list the PHY PIB groups in this section to make it easier to for the reader to know what to expect in this section.

SuggestedRemedy
 List PHY PIB groups.

Proposed Response Response Status O

CI 06 SC 6.1 P 19 L 15 # 872
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 missing definite article, add as shown below

SuggestedRemedy
 ... functions on behalf of the general system ...

Proposed Response Response Status O

CI 06 SC 6.1 P 19 L 16 # 873
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 missing definitive article, modify as shown below

SuggestedRemedy
 relationship among the man-

Proposed Response Response Status O

CI 06 SC 6.1 P 19 L 20 # 446
 Gilb, James Appairnt

Comment Type T Comment Status A
 The figure does not include the SSCS layer.

SuggestedRemedy
 Replace the figure with the one from A.1 or modify it to include the SSCS layer.

Proposed Response Response Status C
 PROPOSED ACCEPT IN PRINCIPLE. Copy Figure A.1 to Figure 2 with any appropriate changes. Make sure supporting text is adequate.

CI 06 SC 6.1 P 19 L 44 # 447
 Gilb, James Appairnt

Comment Type T Comment Status A
 Should list all of the SAPs in this enumeration.

SuggestedRemedy
 Add SSCS SAP, MAC SAP and PHY SAP as items a and b (and fix numbering).

Proposed Response Response Status C
 PROPOSED ACCEPT.

CI 06 SC 6.1 P 19 L 4648 # 223
 Gifford, Ian Self

Comment Type E Comment Status X
 The ordered list starts at "d)" which is incorrect it should be a).

SuggestedRemedy
 Modify the ordered list to span "a)-c)".

Proposed Response Response Status O

CI 06 SC 6.1 P 19 L 6 # 1389
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 "may" does not belong in "Both MAC and PHY may conceptually"

SuggestedRemedy
 remove "may"

Proposed Response Response Status O

CI 06 SC 6.1 P 19 L 6 # 221
 Gifford, Ian Self

Comment Type E Comment Status X
 The term "sub-layer", used in the sentence "Both MAC and PHY layers may conceptually include management entities, called the MAC sub-layer...", is spelled

SuggestedRemedy
 Change to "sublayer", dropping the hyphen.

Proposed Response Response Status O

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CI 06 SC 6.1 P 76 L 41 # 550
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **TR** Comment Status **X**
 5 GHz and UWB are assumed to be future spectral bands to be used without any justification or mention given apriori. How can a current standard have mention of specifics of future standard

SuggestedRemedy
 The 5 GHz and UWB should not be mentioned in this table to avoid confusion.

Proposed Response Response Status **O**

CI 06 SC 6.1.1 P 20 L 5 # 224
 Gifford, Ian Self

Comment Type **E** Comment Status **X**
 The term "sub-layer", used in the subclause title "6.1.1 MAC common part sub-layer (MAC CPS)", is spelled wrong.

SuggestedRemedy
 Change to "sublayer", dropping the hyphen.

Proposed Response Response Status **O**

CI 06 SC 6.1.1 P 20 L 7 # 1391
 Shvodian, William XtremeSpectrum

Comment Type **E** Comment Status **X**
 "The MAC CPS provides stream-oriented service to the SSCS." What about

SuggestedRemedy
 add "and non-stream-oriented" and modify the paragraph to address non-stream flows.

Proposed Response Response Status **O**

CI 06 SC 6.2 P 20 L 20 # 874
 Roberts, Richard XtremeSpectrum

Comment Type **T** Comment Status **A**
 replace the word PAN with personality

SuggestedRemedy
 ... as a personality information ...

Proposed Response Response Status **C**
 PROPOSED ACCEPT IN PRINCIPLE. Change PAN Information Base to Personal Information Base in this section and in clause 1. Change 'personality' to 'characteristics' in this paragraph. Delete ", hence the acronym PIB".

CI 06 SC 6.2 P 20 L 24 # 225
 Gifford, Ian Self

Comment Type **E** Comment Status **X**
 The term "sub-layer", used in the subclause title "...personality of the sub-layer, hence the acronym PIB.", is spelled wrong.

SuggestedRemedy
 Change to "sublayer", dropping the hyphen.

Proposed Response Response Status **O**

CI 06 SC 6.2 P 20 L 26 # 875
 Roberts, Richard XtremeSpectrum

Comment Type **E** Comment Status **X**
 In lines 26 and 27, remove the hyphens

SuggestedRemedy
 PIB-related --> PIB related user-entity --> user entity

Proposed Response Response Status **O**

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CI 06 SC 6.2 P 20 L 34 # 448
 Gilb, James Apparent

Comment Type T Comment Status A
 Add a table with definitions of the parameters for these commands.

SuggestedRemedy

Add the following definitions: Name Type Valid range
 Description PIBattribute octet string Any PIB attribute as defined in 6.5 and 6.6
 The name of the PIB attribute PIBvalue variable as defined in 6.5 and 6.6
 The PIB value status enumeration SUCCESS, INVALID_PIB_ The result of the
 ATTRIBUTE, READ_ONLY_PIB_ command. ATTRIBUTE, WRITE_ONLY_PIB_ ATTRIBUTE

Proposed Response Response Status C

PROPOSED ACCEPT.

Name
 Type
 Valid range
 Description

PIBattribute
 octet string
 Any PIB attribute as defined in 6.5 and 6.6
 The name of the PIB attribute

PIBvalue
 variable
 as defined in 6.5 and 6.6
 The PIB value

status
 enumeration
 SUCCESS, INVALID_PIB_ATTRIBUTE, READ_ONLY_PIB_ATTRIBUTE, WRITE_ONLY_PIB_ATTRIBUTE
 The result of the command.

CI 06 SC 6.3 P 22 L 37 # 552
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type E Comment Status X
 The MLME-POWERMGT primitive in Table 1 is in the wrong location.

SuggestedRemedy

Move MLME-PowerMgt primitive at the beginning of Table 1 to the position just before the MLME-CREATE-STREAM primitive.

Proposed Response Response Status O

CI 06 SC 6.3 P 23 L 14 # 556
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type E Comment Status X
 The MLME-CREATE-REPEATER primitive is missing from Table 1.

SuggestedRemedy

Please add MLME-CREATE-REPEATER primitive to Table 1 just after the MLME-CHANNEL-STATUS primitive in Table 1.

Proposed Response Response Status O

CI 06 SC 6.3 P 23 L 14 # 555
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type E Comment Status X
 MLME-Tx-POWER-CHANGE primitive is missing from Table 1.

SuggestedRemedy

Please add MLME-Tx-POWER-CHANGE primitive to Table 1 just before the MLME-CHANNEL-STATUS primitive in Table 1.

Proposed Response Response Status O

CI 06 SC 6.3 P 23 L 15 # 557
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type E Comment Status X
 The MLME-REMOTE-SCAN primitive is missing from Table 1.

SuggestedRemedy

Please add the MLME-REMOTE-SCAN primitive to Table 1 just after the MLME-CREATE-REPEATER primitive and just before the MLME-CHANGE-CHANNEL

Proposed Response Response Status O

CI 06 SC 6.3 P 23 L 17 # 559
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type E Comment Status X
 The MLME-PNC-HANDOVER primitive is missing from Table 1.

SuggestedRemedy

Please add the MLME-PNC-HANDOVER primitive to Table 1 just before the MLME-PROBE-PNC primitive in Table 1.

Proposed Response Response Status O

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Cl 06 SC 6.3 P 23 L 19 # 449
Gilb, James Apparent
Comment Type E Comment Status X
Change MLME-DEV-INFO to be MLME-PROBE-DEV since that more closely reflects the command name.

SuggestedRemedy
Change as indicated here and in 6.3.19.

Proposed Response Response Status O

Cl 06 SC 6.3 P 23 L 6 # 554
Heberling, Allen XtremeSpectrum, Inc.
Comment Type E Comment Status X
The MLME-START primitive is in the wrong table position in Table 1.

SuggestedRemedy
Please move the MLME-START primitive from its current position in Table 1 to the second position in Table 1 just after MLME-RESET.

Proposed Response Response Status O

Cl 06 SC 6.3 P 23 L 19 # 558
Heberling, Allen XtremeSpectrum, Inc.
Comment Type E Comment Status X
The MLME-DEV-INFO primitive is in the wrong location in Table 1.

SuggestedRemedy
Please move the MLME-DEV-INFO primitive from its current location to just after the MLME-CHANGE-CHANNEL table location.

Proposed Response Response Status O

Cl 06 SC 6.3 Table 1 P 22 L 51 # 1662
Shvodian, William XtremeSpectrum
Comment Type T Comment Status R
MLME-DISTRIBUTE-KEY does not have a response. Without a response, the PNC (or security manager) will not know if the associated DEV actually received the key or not.

SuggestedRemedy
Add a response message. Comment via Ari Singer.

Proposed Response Response Status C
PROPOSED REJECT. If DEV does not properly decode message, it will make another request.

Cl 06 SC 6.3 P 23 L 19 # 560
Heberling, Allen XtremeSpectrum, Inc.
Comment Type E Comment Status X
The MLME-NEW-PNC primitive is missing from Table 1.

SuggestedRemedy
Please add the MLME-NEW-PNC primitive to Table 1 just after the MLME-PROBE-PNC primitive.

Proposed Response Response Status O

Cl 06 SC 6.3.1 P 23 L # 1422
Shvodian, William XtremeSpectrum
Comment Type TR Comment Status A
Break MLME-POWERMGT command up into separate MLMEs, like security/authentication did.
SuggestedRemedy

Break up into Peer Wakup, wakeup, DEV to PNC PS Information, query, join...

Proposed Response Response Status C
PROPOSED ACCEPT. Jay and WMS will draft the new MLMEs.

Cl 06 SC 6.3 P 23 L 5 # 553
Heberling, Allen XtremeSpectrum, Inc.
Comment Type E Comment Status X
The MLME-RESET primitive in Table 1 is in the wrong table location.

SuggestedRemedy
Please move the MLME-RESET primitive from its current position in Table 1 to the first position in Table 1.

Proposed Response Response Status O

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CI 06 SC 6.3.1 P 23 L 22 # 603
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type E Comment Status X
 The Power Management clauses 6.3.1, 6.3.1.1, 6.3.1.1.1, 6.3.1.1.2, 6.3.1.2, 6.3.1.2.1, 6.3.1.2.2 should be moved to the space just after clause 6.3.15.4 Terminate Stream Message Sequence Chart.

SuggestedRemedy
 Please move the indicated Power Management clauses to the location just after the Terminate Stream Message Sequence Chart. This new location makes more sense from a functional perspective.

Proposed Response Response Status O

CI 06 SC 6.3.1 P 23 L 24 # 226
 Gifford, Ian Self

Comment Type E Comment Status X
 The following sentence does not end in a period: The parameters used for these commands are defined in Table 2

SuggestedRemedy
 Add the period.

Proposed Response Response Status O

CI 06 SC 6.3.1 P 25 L # 1407
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status A
 Why is there no MLME-POWERMGT.response. The PNC should send a response in response to an indication.

SuggestedRemedy
 Add MLME-POWERMGT.response

Proposed Response Response Status C
 PROPOSED ACCEPT IN PRINCIPLE. Split MLME into separate commands. Jay and WMS to provide. Ensure there are responses when appropriate.e.g., EPSAction

CI 06 SC 6.3.1 P 25 L 10 # 1405
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status A
 MLME-POWERMGT.indication only has one parameter, but it really needs to have almost all of the parameters as the request. The PNC will receive an indication as the result of receiving a power management command.

SuggestedRemedy
 Add appropriate parameters to the indication.

Proposed Response Response Status C
 PROPOSED ACCEPT IN PRINCIPLE. Split MLME into separate commands. Jay and WMS to provide. Ensure that parameters in a .request match the parameters in a .indication.

CI 06 SC 6.3.1.1 P 23 L 30 # 25
 Bain, Jay Time Domain

Comment Type TR Comment Status A
 Text mentions that information is available prior to association. In fact, the power management information is a post-association process.

SuggestedRemedy
 change "prior to association" to "after association"

Proposed Response Response Status C
 PROPOSED ACCEPT.

CI 06 SC 6.3.1.1 P 23 L 31 # 450
 Gilb, James Appairant

Comment Type T Comment Status A
 Power management commands are relevant only in the context of an associated device.

SuggestedRemedy
 Change "to the DEV prior to association" to be "to the DEV after association"

Proposed Response Response Status C
 PROPOSED ACCEPT.

CI 06 SC 6.3.1.1 P 23 L 35 # 876
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 missing commas after parameters

SuggestedRemedy
 add commas after the following parameters: RequestType EPSSet EPSStatus

Proposed Response Response Status O

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CI 06 SC **6.3.1.1** P **23** L **46** # **227**
 Gifford, Ian Self
Comment Type **E** *Comment Status* **X**
 The following sentence does not end in a period: The parameters for this command are defined in Table 2
SuggestedRemedy
 Add the period.

Proposed Response *Response Status* **O**

CI 06 SC **6.3.1.1.1** P **24** L **7** # **1395**
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 Poor sentence - to implement the power-saving strategy of an implementation.
SuggestedRemedy
 Choose better wording

Proposed Response *Response Status* **O**

CI 06 SC **6.3.1.1.1 Table 2** P **24** L # **1591**
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 Having EPS be both a mode and an EPSSatus is very confusing.

SuggestedRemedy
 Rename either the EPSStatus values to EPS_Active and EPS_Inactive

Proposed Response *Response Status* **O**

CI 06 SC **6.3.1.1.2** P **24** L # **1393**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **A**
 Need to specify which commands are associated with the generation of the MLME-POWERMANAGEMENT .request.
SuggestedRemedy
 Add description of which commands are generated in response to MLME-POWERMANAGEMENT .request. If there is a one to one mapping of request type and Action type that needs to be spelled out.
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT. Jay and WMS will do this while adding new MLME text.

CI 06 SC **6.3.1.1.2** P **24** L **48** # **1404**
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **A**
 This request better do more than "sets the DEV power management parameters."
 Doesn't it also determine which power management commands are sent to the PNC or the other DEV?

SuggestedRemedy
 Put together a table that shows explicitly which PM commands are sent as a result of which PM primitives in the MLME

Proposed Response *Response Status* **C**
 PROPOSED ACCEPT IN PRINCIPLE. Split MLME into separate primitives. Jay and WMS to provide.

CI 06 SC **6.3.1.2** P **25** L **14** # **228**
 Gifford, Ian Self
Comment Type **E** *Comment Status* **X**
 The following sentence does not end in a period: The parameters for this command are defined in Table 2

SuggestedRemedy
 Add the period.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.1.3** P **25** L **27** # **451**
 Gilb, James Appairnt
Comment Type **T** *Comment Status* **A**
 The power managment changes come about as a result of changes in the beacon, not from direct communications with other DEVS.

SuggestedRemedy
 Change "from a specific peer MAC entity" to be "from the PNC" Also change "result of accommand ... in the piconet." to be "result of a change in the beacon."

Proposed Response *Response Status* **C**
 PROPOSED ACCEPT.

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CI 06 SC 6.3.1.3 P 25 L 28 # 229
Gifford, Ian Self

Comment Type E Comment Status X
The following sentence does not end in a semicolon: primitive are as follows

SuggestedRemedy
Add the semicolon.

Proposed Response Response Status O

CI 06 SC 6.3.1.3 P 25 L 34 # 230
Gifford, Ian Self

Comment Type E Comment Status X
The following sentence does not end in a period: The parameters for this command are defined in Table 2

SuggestedRemedy
Add the period.

Proposed Response Response Status O

CI 06 SC 6.3.10 P L # 1669
Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
When does DE-AUTHENTICATE actually get used? What purpose does it serve? I don't think it really makes sense to have a command that says that your key has been compromised if that is what this is for.

SuggestedRemedy
Recommend removing these commands. Comment via Ari Singer.

Proposed Response Response Status O

CI 06 SC 6.3.10.1 P 44 L 34 # 462
Gilb, James Appairant

Comment Type T Comment Status X
The DeviceID parameter description is inaccurate.

SuggestedRemedy
Change "de-authentication process" to be "de-authentication process or the MAC entity which is requesting de-authentication"

Proposed Response Response Status O

CI 06 SC 6.3.10.1 P 44 L 36 # 463
Gilb, James Appairant

Comment Type T Comment Status X
The valid rane of the ReasonCode for de-authenticate is incorrect.

SuggestedRemedy
Add the "TIMEOUT" to the valid range

Proposed Response Response Status O

CI 06 SC 6.3.10.1 P 44 L 49 # 464
Gilb, James Appairant

Comment Type T Comment Status X
The de-authenticate command does not use a reason code.

SuggestedRemedy
Delete ReasonCode from the semantics of the primitive in two places, page 44, line 49 and page 45, line 39 (in the .indication primitive).

Proposed Response Response Status O

CI 06 SC 6.3.11 P 46 L 1 # 599
Heberling, Allen XtremeSpectrum, Inc.

Comment Type E Comment Status X
Clauses 6.3.11, 6.3.11.1, 6.3.11.1.1, 6.3.11.1.2 and Table 18 should be where clause 6.3.1 is located on page 23.

SuggestedRemedy
Please move the requested clauses to the indicated location.

Proposed Response Response Status O

CI 06 SC 6.3.11.1 P 46 L 10 # 592
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
DeviceID is an unnecessary parameter left over from 802.11.

SuggestedRemedy
Please remove.

Proposed Response Response Status O

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CI 06 SC **6.3.11.1** P **46** L **10** # **465**
 Gilb, James Appairment
Comment Type T *Comment Status* X
 The DeviceID of a DEV is set through the PIB commands and should not be set here.
SuggestedRemedy
 Delete the DeviceID primitive parameter from the semantics and table 18.
Proposed Response *Response Status* O

CI 06 SC **6.3.11.1.1** P **46** L **33** # **594**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type E *Comment Status* X
 Text describing when the MLME-RESET.request is generated is partially incorrect.
SuggestedRemedy
 Please change the text to: The primitive is sent by the DME to its MLME to reset the MAC to its initial conditions.
Proposed Response *Response Status* O

CI 06 SC **6.3.11.1.2** P **46** L **38** # **595**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type T *Comment Status* X
 Text describing the effect reception of the MLME-RESET.request primitive has on the local MAC entity is incomplete.
SuggestedRemedy
 Please change the first sentence in this clause to: "The DEV MLME, upon receiving this primitive, sends a DISASSOCIATION-REQUEST command frame to the PNC, sets the MAC to its initial conditions and clears all of its internal variables to their default
Proposed Response *Response Status* O

CI 06 SC **6.3.11.1.2** P **46** L **40** # **596**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type T *Comment Status* X
 The last sentence of this clause is unnecessary.
SuggestedRemedy
 Please remove the last sentence from this clause since the MLME-RESET.confirm is unneeded.
Proposed Response *Response Status* O

CI 06 SC **6.3.11.1.2** P **46** L **40** # **597**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type T *Comment Status* X
 Text describing the effect this primitive has upon the PNC MLME is missing.
SuggestedRemedy
 Please add this paragraph to this clause: "The PNC MLME, upon receiving this primitive, behaves the same as the DEV MLME with the exception that it transmits a beacon containing a PICONET-SHUTDOWN information element."
Proposed Response *Response Status* O

CI 06 SC **6.3.11.2** P **46** L **42** # **598**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type T *Comment Status* X
 Clauses 6.3.11.2, 6.3.11.2.1, 6.3.11.2.2, and Table 19 are unnecessary.
SuggestedRemedy
 Please remove.
Proposed Response *Response Status* O

CI 06 SC **6.3.12** P **47** L **13** # **600**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type E *Comment Status* X
 Clauses 6.3.12, 6.3.12.1, 6.3.12.1.1, 6.3.12.1.2, 6.3.12.2, 6.3.12.2.1, 6.3.12.2.2 should be moved to where clause 6.3.2 is located so that the MLME-START primitives follow the MLME-RESET primitive at the beginning of MLME-SAP interface section.
SuggestedRemedy
 Please move the indicated clauses. It makes more sense to have these clauses located near the MLME-SCAN clauses.
Proposed Response *Response Status* O

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CI 06 SC **6.3.12.1** P **47** L **22** # **915**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 add commas
SuggestedRemedy
 add commas to the following parameters PiconetType ChannelList
 ChannelScanDuration MACParameterSet
Proposed Response *Response Status* **O**

CI 06 SC **6.3.12.1** P **47** L **45** # **293**
 Gilb, James Apparent
Comment Type **T** *Comment Status* **X**
 The parameter CapabilityInformation field is listed in the primitive but is not defined.
SuggestedRemedy
 Delete the parameter CapabilityInformation
Proposed Response *Response Status* **O**

CI 06 SC **6.3.12.1** P **47** L **53** # **916**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Add a figure
SuggestedRemedy
 Add a figure to show the MACParameterSet vector
Proposed Response *Response Status* **O**

CI 06 SC **6.3.12.1** P **47** L **54** # **917**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Reference to CAP Mode
SuggestedRemedy
 CAP Mode is not defined in clause 7.4.2. MAC subcommittee needs to clarify the
 reference here.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.12.2** P **48** L **14** # **1411**
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 Move Start MLME to be adjacent to Scan, Synchronization and Associate.
SuggestedRemedy
 Move Start MLME to be adjacent to Scan, Synchronization and Associate.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.12.2** P **48** L **20** # **601**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **TR** *Comment Status* **X**
 The PiconetDescriptionSet parameter is missing from the MLME-START.confirm
SuggestedRemedy
 Please add the PiconetDescriptionSet parameter to the MLME-START.confirm primitive.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.12.2** P **48** L **21** # **1424**
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 MLME-START.confirm should have the channel number that the piconet was started in.
SuggestedRemedy
 Add Channel Number to the MLME-START.confirm parameters.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.13** P **48** L **45** # **602**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **TR** *Comment Status* **X**
 The MLME-CHANNEL-TIME.request, indication,response and confirm are missing.
SuggestedRemedy
 Please insert clauses 6.xxxx from 01/410r1 into the space just before clause 6.3.13
 Stream creation.
Proposed Response *Response Status* **O**

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CI 06 SC 6.3.13.1 P 50 L 15 # 1430
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
Source and destination addresses should be initiator and target for consistency with stream management command.

SuggestedRemedy
Change source and destination addresses to initiator and target

Proposed Response Response Status O

CI 06 SC 6.3.13.1 P 50 L 22 # 1428
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Add direction parameter to MLME-CREATE-STREAM.request

SuggestedRemedy
Add direction parameter

Proposed Response Response Status O

CI 06 SC 6.3.13.1.2 P 50 L 33 # 919
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
Modify the sentence of line 33 as shown below.

SuggestedRemedy
... command (ActionType=request) (7.5.10.3), which is ...

Proposed Response Response Status O

CI 06 SC 6.3.13.5 P 53 L 10 # 466
Gilb, James Apparent

Comment Type T Comment Status X
The primitive parameters for MLME-STREAM-CTA.indication are not defined.

SuggestedRemedy
Copy the definitions from table 25 for StreamIndex and SlotStartTimeSet into a table in 6.3.13.5

Proposed Response Response Status O

CI 06 SC 6.3.13.5 P 53 L 8 # 1431
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
Slot Start Time set is defined in Table 25 - reference needed

SuggestedRemedy
Add reference to Table 25

Proposed Response Response Status O

CI 06 SC 6.3.13.6 P L # 1433
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
If we are going to have a figure showing bipartate MSC from DEV to PNC, we should show bipartate negotiaon from PNC to DEV.

SuggestedRemedy
Add figure showing bipartate negotiaon from PNC to DEV.

Proposed Response Response Status O

CI 06 SC 6.3.13.6 P 54 L # 1434
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Eliminate tripartate negotiation.

SuggestedRemedy
bipartate negotiaon between the PNC and DEV is all that is needed.

Proposed Response Response Status O

CI 06 SC 6.3.14 P 55 L # 1435
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Stream 0 is used regardless of destination address. Need to specify a destination DEV to start a channel time request for non stream data.

SuggestedRemedy
Add destination address to the MLME-MODIFY-STREAM.request

Proposed Response Response Status O

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CI 06 SC **6.3.14.1.2** P **56** L **20** # **922**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 modify line 20 as shown below
SuggestedRemedy
 ... command (7.5.10.1), which it will send ...
Proposed Response *Response Status* **O**

CI 06 SC **6.3.14.3.2** P **57** L **22** # **923**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 Modify line 22 as shown below
SuggestedRemedy
 ... CHANNEL-TIME-GRANT command (7.5.10.2) with a
Proposed Response *Response Status* **O**

CI 06 SC **6.3.14.4.2** P **57** L **46** # **924**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 ACK_TIMEOUT is referenced several times in clause 6.3.XX, but I can't find the definition of ACK_TIMEOUT.
SuggestedRemedy
 MAC subcommittee to provide a clause reference to ACK_TIMEOUT.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.14.4.2** P **57** L **52** # **925**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 Word misspelt
SuggestedRemedy
 Line 52, replace "with out" with "without"
Proposed Response *Response Status* **O**

CI 06 SC **6.3.15** P **59** L **7** # **467**
 Gilb, James Appairent
Comment Type **T** *Comment Status* **X**
 The definition of the ReasonCode for terminate stream is incorrect.
SuggestedRemedy
 Change the 3 entries as follows: Type Valid range Description Enumeration
 SUCCESS, TIMEOUT Indicates the result of the stream
 termination command.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.15.3** P **60** L **24** # **926**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 Missing comma
SuggestedRemedy
 add a comma at the end of the parameter Streamindex
Proposed Response *Response Status* **O**

CI 06 SC **6.3.16** P **61** L **23** # **604**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **TR** *Comment Status* **X**
 The MLME-Tx-POWER-CHANGE.request, indication, and confirm primitives are missing from Clause 6.3 MLME-SAP interface.
SuggestedRemedy
 Please insert clauses 6.3.1 through 6.3.1.3.2 of 01/410r1 into the D09 just before the Channel Status subclause and just after the Power Management subclauses.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.16** P **61** L **26** # **231**
 Gifford, Ian Self
Comment Type **E** *Comment Status* **X**
 The following sentence does not end in a period: primitive parameters are defined in Table 28
SuggestedRemedy
 Add the period.
Proposed Response *Response Status* **O**

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CI 06 SC 6.3.16 P 61 L 31 # 468
 Gilb, James Appairment

Comment Type T Comment Status X
 The RequestorDEVAddress is not defined and the ReasonCode is missing an

SuggestedRemedy
 Add the following as the first row: RequestorDEVAddress MAC address Any valid
 MAC address The MAC address of the DEV which is requesting the channel status.
 Add "TIMEOUT" to the valid range for ReasonCode.

Proposed Response Response Status O

CI 06 SC 6.3.16.1 P 62 L 7 # 1438
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 The requesting DEV choose the window size, not the responding DEV.

SuggestedRemedy
 Add window size to the request, and also to the Channel Status Request command in
 clause 7.5.4.3 and the indication in 6.3.16.2

Proposed Response Response Status O

CI 06 SC 6.3.16.1 P 62 L 7 # 606
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
 DestinationDEVAddress is an incorrect parameter name.

SuggestedRemedy
 Please change to RemoteDevAID.

Proposed Response Response Status O

CI 06 SC 6.3.16.1 P 62 L 8 # 469
 Gilb, James Appairment

Comment Type T Comment Status X
 DestinationDEVAddress does not match other usage.

SuggestedRemedy
 Change "DestinationDEVAddress" to be "RemoteDEVAddress"

Proposed Response Response Status O

CI 06 SC 6.3.16.1 P 62 L 8 # 470
 Gilb, James Appairment

Comment Type T Comment Status X
 ChannelIndex is an invalid parameter for a status report since all DEVs in the piconet
 use the same channel.

SuggestedRemedy
 Delete ChannelIndex from the semantics of the primitive and delete "on the indicated
 ChannelIndex" from line 21.

Proposed Response Response Status O

CI 06 SC 6.3.16.1 P 62 L 8 # 607
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
 ChannelIndex is an unnecessary parameter. Since the current Channel-Status command
 frame is only valid in the current piconet channel.

SuggestedRemedy
 Please remove the ChannelIndex parameter from this primitive.

Proposed Response Response Status O

CI 06 SC 6.3.16.1.1 P 62 L 16 # 608
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
 DestinationDEVAddress is the wrong parameter name.

SuggestedRemedy
 Please change from DestinationDEVAddress to RemoteDEVAID.

Proposed Response Response Status O

CI 06 SC 6.3.16.1.1.2 P 62 L 22 # 613
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
 The DestinationDEVAddress parameter at the end of the indicated sentence is incorrect.

SuggestedRemedy
 Please change to RemoteDEVAID.

Proposed Response Response Status O

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CI 06 SC 6.3.16.1.2 P 62 L 20 # 609
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type E Comment Status X
 Missing xref to the CHANNEL-STATUS-REQUEST command frame described in Clause
 SuggestedRemedy
 Please add the appropriate xref.
 Proposed Response Response Status O

CI 06 SC 6.3.16.1.2 P 62 L 21 # 610
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 the sentence fragment ...on the indicated ChannelIndex... is not needed.
 SuggestedRemedy
 Please remove the indicated sentence fragment.
 Proposed Response Response Status O

CI 06 SC 6.3.16.2 P 62 L 30 # 611
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 The RequestorDEVAddress in an incorrect parameter name.
 SuggestedRemedy
 Please change from RequestorDEVAddress to RequestorDEVAID.
 Proposed Response Response Status O

CI 06 SC 6.3.16.3 P 63 L 7 # 612
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 The RequestorDEVAddress is an incorrect parameter name
 SuggestedRemedy
 Please change to RequestorDEVAID.
 Proposed Response Response Status O

CI 06 SC 6.3.16.3.2 P 63 L 25 # 614
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type E Comment Status X
 Missing xref to the CHANNEL-STATUS-RESPONSE command clause in Clause 7
 SuggestedRemedy
 Please provide appropriate xref.
 Proposed Response Response Status O

CI 06 SC 6.3.16.4 P 63 L 35 # 615
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 The RemoteDEVAddress is incorrect.
 SuggestedRemedy
 Please change to RemoteDEVAID.
 Proposed Response Response Status O

CI 06 SC 6.3.16.4.1 P 63 L 49 # 616
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 the ReasonCode message "ACK_TIMEOUT" at the end of the indicated sentence is
 incorrect.
 SuggestedRemedy
 Please change from ACK_TIMEOUT to RESPONSE_TIMEOUT.
 Proposed Response Response Status O

CI 06 SC 6.3.16.5 P 64 L 15 # 617
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 The MLME-CHANNEL-STATUS message sequence chart is missing the
 ChnlStatusRspTO timer.
 SuggestedRemedy
 Please provide the appropriate timer symbol for the message sequence chart.
 Proposed Response Response Status O

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CI 06 SC 6.3.16.5 P 64 L 31 # 618
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **TR** *Comment Status* **X**
 The MLME-CREATE-REPEATER.request, indication, response, and confirm primitives are missing from the MLME-SAP interface clause.

SuggestedRemedy
 Please insert clauses 6.3.1.8 through 6.3.1.11.2 just after the 6.3.16.5 MLME-CHANNEL-STATUS message sequence chart.

Proposed Response *Response Status* **O**

CI 06 SC 6.3.17 P 64 L 31 # 620
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **TR** *Comment Status* **X**

The MLME-REMOTE-SCAN.request, indication, response and confirm primitives are missing from the MLME-SAP interface clause.

SuggestedRemedy
 Please insert clauses 6.3.1.13 through 6.3.1.16.2 from 01/410r1 into the space just after the MLME-CHANNEL-STATUS and MLME-CREATE-REPEATER message sequence chart clause.

Proposed Response *Response Status* **O**

CI 06 SC 6.3.17 P 64 L 31 # 619
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type **T** *Comment Status* **X**

The MLME-CHANNEL-STATUS and MLME-CREATE-REPEATER message sequence chart is missing.

SuggestedRemedy
 Please insert the MLME-CHANNEL-STATUS and MLME-CREATE-REPEATER message sequence chart clause and diagram just after the last clause of the MLME-CREATE-REPEATER.confirm primitive. Text and diagram are in clause 6.3.1.12

Proposed Response *Response Status* **O**

CI 06 SC 6.3.17 P 64 L 42 # 621
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **X**
 The NewChannelIndex data type is incorrect.

SuggestedRemedy
 Please change from octet to integer.

Proposed Response *Response Status* **O**

CI 06 SC 6.3.18 P 65 L # 1442
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**

Subclause is called Peer attribute discover, but the MLMEs are MLME-PROBE-PNC, and they cause device information request commands to be sent, not probe commands.

SuggestedRemedy
 Get ride of the word "probe" in the MLMEs. change to MLME-PNC-Information.

Proposed Response *Response Status* **O**

CI 06 SC 6.3.18 P 65 L 49 # 624
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **X**

The MLME-PNC-HANDOVER.request is missing from the MLME-SAP interface clause.

SuggestedRemedy
 Please insert clauses 6.3.1.24 through 6.3.26.2 of the MLME-PNC-HANDOVER.request, indication, response and confirm clauses into the space just before current D09 clause 6.3.18.

Proposed Response *Response Status* **O**

CI 06 SC 6.3.18 P 65 L 49 # 623
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **X**

The MLME-CHANNEL-STATUS-, MLME-REMOTE-SCAN, and MLME-CHANGE-CHANNEL message sequence chart is missing from the MLME-SAP

SuggestedRemedy
 Please insert Clause 6.3.1.19 from doc 01/410r1

Proposed Response *Response Status* **O**

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CI 06 SC **6.3.18** P **65** L **50** # **625**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **E** *Comment Status* **X**
 The clause title "Peer attribute discovery" is incorrect
SuggestedRemedy
 Change the clause title to: "Retrieving PNC Info"
Proposed Response *Response Status* **O**

CI 06 SC **6.3.18** P **65** L **52** # **626**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **E** *Comment Status* **X**
 Missing xref to Peer Discovery sub clause in Clause 8.
SuggestedRemedy
 Please provide appropriate xref.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.18** P **66** L **15** # **471**
 Gilb, James Appairent
Comment Type **T** *Comment Status* **X**
 The ReasonCode needs "TIMEOUT" added as part of its valid range.
SuggestedRemedy
 Change as indicated.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.18.1** P **66** L **19** # **472**
 Gilb, James Appairent
Comment Type **T** *Comment Status* **X**
 The use of the probe request does not require that a DEV be authenticated.
SuggestedRemedy
 Delete the word "authenticated" from line 19, 20, 36 and 37 all on page 66 (i.e. every occurrence in 6.3.18.1).
Proposed Response *Response Status* **O**

CI 06 SC **6.3.18.1** P **66** L **1939** # **1670**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Why does the PROBE-PNC command only get information about authenticated DEVs?
 Can this only be done in a secure piconet? What is the purpose of this command?
SuggestedRemedy
 Recommend explaining the purpose of this command (if it isn't in there already).
 Comment via Ari Singer.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.18.1** P **66** L **24** # **630**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **X**
 The QueriedDEVIDSet parameter name is incorrect
SuggestedRemedy
 Please change the QueriedDEVIDSet parameter name to QueriedDEVAID.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.18.1.2** P **66** L **35** # **1440**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 What is the PROBE-PNC-REQUEST command?
SuggestedRemedy
 Remove this and keep only DEVICE-INFORMATION-REQUEST command. Do this globally for 6.3.18.1-4
Proposed Response *Response Status* **O**

CI 06 SC **6.3.18.1.2** P **66** L **35** # **631**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **E** *Comment Status* **X**
 Missing xref to the PROBE-PNC-REQUEST command previously known as the DEVICE-INFO-REQUEST command.
SuggestedRemedy
 Please provide the appropriate xref.
Proposed Response *Response Status* **O**

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CI 06 SC 6.3.18.2 P 66 L 48 # 633
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 RequestorDEVAddress parameter name is incorrect.
 SuggestedRemedy
 Please change to: RequestorDEVAID.
 Proposed Response Response Status O

CI 06 SC 6.3.18.3 P 67 L 17 # 634
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 RequestorDEVAddress parameter name is incorrect
 SuggestedRemedy
 Please change to RequestorDEVAID
 Proposed Response Response Status O

CI 06 SC 6.3.18.3 P 67 L 18 # 635
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 DevInfoSet parameter name is incorrect
 SuggestedRemedy
 Please change to: PNCInfoSet.
 Proposed Response Response Status O

CI 06 SC 6.3.18.3.2 P 67 L 29 # 636
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type E Comment Status X
 Missing xref to PROBE-PNC-RESPONSE command frame clause previously known as
 DEVICE-INFORMATION-RESPONSE clause in clause 7.0
 SuggestedRemedy
 Please provide appropriate xref.
 Proposed Response Response Status O

CI 06 SC 6.3.18.4 P 67 L 38 # 637
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 DEVInfoSet parameter name is incorrect.
 SuggestedRemedy
 Please change to: PNCInfoSet
 Proposed Response Response Status O

CI 06 SC 6.3.18.4.1 P 67 L 47 # 638
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type E Comment Status X
 Missing xref to PROBE-PNC-RESPONSE command.
 SuggestedRemedy
 Please provide appropriate xref.
 Proposed Response Response Status O

CI 06 SC 6.3.18.4.1 P 67 L 48 # 639
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 ACK_TIMEOUT ReasonCode is incorrect.
 SuggestedRemedy
 Please change to: RESPONSE_TIMEOUT
 Proposed Response Response Status O

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CI 06 SC 6.3.18.4.2 P 68 L 1 # 640
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 This sentence fragment "...and may initiate another MLME-PROBE-PNC.request..."

SuggestedRemedy

Change the sentence fragment above to this: In the case where this MLME-PROBE-PNC primitives have been used by a device as part of the PNC-HANDOVER process, the initiating DME shall initiate an MLME-NEW-PNC.request. In the case where the MLME-PROBE-PNC primitives have been used by a device to simply request DEV information held by the PNC, the initiating DME may initiate another MLME-PROBE-PNC.request for a differernt remote device, or it may initiate an

Proposed Response Response Status O

CI 06 SC 6.3.18.5 P 68 L 8 # 641
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type E Comment Status X
 DEV-2 label in MSC is incorrect

SuggestedRemedy
 Change to PNC.

Proposed Response Response Status O

CI 06 SC 6.3.18/2 P 66 L 47 # 632
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
 QueriedDEVIDSet parameter name is incorrect.

SuggestedRemedy
 Please change to: QueriedDEVAID.

Proposed Response Response Status O

CI 06 SC 6.3.19 P L # 1443
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 MLME-DEV-INFO MLMEs don't send Device Information commands, they send probe rewwquest commands.

SuggestedRemedy

Change the names to MLME-DEV-Probe for consistency and readability.

Proposed Response Response Status O

CI 06 SC 6.3.19 P 68 L 30 # 645
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type E Comment Status X
 Current Location of clauses 6.3.19-6.3.19.5 is incorrect.

SuggestedRemedy
 Please move the MLME-DEV-INFO clauses and MSC to just after the MLME-CHANNEL-STATUS, MLME-REMOTE-SCAN, and MLME-CHANGE-CHANNEL message sequence chart and just before the MLME-PNC-HANDOVER.request clause.

Proposed Response Response Status O

CI 06 SC 6.3.19 P 68 L 50 # 473
 Gilb, James Appairment

Comment Type T Comment Status X
 The definition of the ReasonCode is incorrect.

SuggestedRemedy
 Change the two entries to be: Type Valid range Enumeration SUCCESS,

Proposed Response Response Status O

CI 06 SC 6.3.19 P 69 L 1 # 474
 Gilb, James Appairment

Comment Type T Comment Status X
 The sentence "The ReasonCode ... for failure." does not belong here since it has been put into the table.

SuggestedRemedy
 Delete the sentence.

Proposed Response Response Status O

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CI 06 SC 6.3.19.1 P 69 L 11 # 648
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
DestinationDEVAddress parameter name is incorrect

SuggestedRemedy
Please change to RemoteDEVAID

Proposed Response Response Status O

CI 06 SC 6.3.19.1.1 P 69 L 22 # 1444
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
This MLME should send the probe command, not the device informmation request (which goes to the PNC).

SuggestedRemedy
Remove "DEVICE-INFORMATION_REQUEST" and just keep PROBE-REQUEST. Do a global change for 6.3.19.1-4

Proposed Response Response Status O

CI 06 SC 6.3.19.1.2 P 69 L 22 # 646
Heberling, Allen XtremeSpectrum, Inc.

Comment Type E Comment Status X
Missing xref to the DEVICE-INFORMATION-REQUEST command frame previously known as PROBE-REQUEST.

SuggestedRemedy
Please add the appropriate xref

Proposed Response Response Status O

CI 06 SC 6.3.19.2 P 69 L 34 # 649
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
REquestorDEVAddress parameter is incorrect

SuggestedRemedy
Please change to RequestorDEVAID.

Proposed Response Response Status O

CI 06 SC 6.3.19.2.1 P 69 L 42 # 647
Heberling, Allen XtremeSpectrum, Inc.

Comment Type E Comment Status X
Missing xref to DEVICE-INFORMATION-REQUEST command frame previously known as PROBE-REQUEST.

SuggestedRemedy
Please provide appropriate xref.

Proposed Response Response Status O

CI 06 SC 6.3.19.3 P 70 L 8 # 650
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
RequestorDEVAddress parameter name is incorrect.

SuggestedRemedy
Please change to RequestorDEVAID

Proposed Response Response Status O

CI 06 SC 6.3.19.4 P L # 1445
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status A
MLME-DEV-INFO.confirm needs a DestinationDeviceID so the DME knows who is responding.

SuggestedRemedy
Add DestinationDeviceID (or new name) to the MLME confirm.

Proposed Response Response Status C
PROPOSED ACCEPT.

CI 06 SC 6.3.19.4.1 P 70 L 36 # 651
Heberling, Allen XtremeSpectrum, Inc.

Comment Type E Comment Status X
Missing xref to DEVICE-INFORMATION-RESPONSE previously known as PROBE-RESPONSE.

SuggestedRemedy
Please provide appropriate xref.

Proposed Response Response Status O

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CI 06 SC **6.3.19.4.1** P **70** L **37** # **652**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **X**
 ACK_TIMEOUT ReasonCode is incorrect.
SuggestedRemedy
 Please change to RESPONSE-TIMEOUT.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.19.5** P **71** L **1** # **927**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Opening sentence is missing the opening clause. Modify as shown below.
SuggestedRemedy
 Figure 10 illustrates the sequence of ...
Proposed Response *Response Status* **O**

CI 06 SC **6.3.2.1** P **26** L **21** # **452**
 Gilb, James Apparent
Comment Type **T** *Comment Status* **A**
 No such thing as a generic PNID. This is handled by the OpenScan parameter.
SuggestedRemedy
 Delete the words "generic or a"
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT.

CI 06 SC **6.3.2.1** P **26** L **7** # **561**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **TR** *Comment Status* **R**
 OpenScan is an unneeded parameter.
SuggestedRemedy
 Please remove the OpenScan parameter from the paramter list for the MLME-SCAN-REQUEST primitive.
Proposed Response *Response Status* **C**
 PROPOSED REJECT. Openscan needed since there is no reserved PNID.

CI 06 SC **6.3.2.1** P **26** L **7** # **880**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 Missing comma
SuggestedRemedy
 Put a comma after the parameter "OpenScan"
Proposed Response *Response Status* **O**

CI 06 SC **6.3.2.1.2** P **26** L **42** # **453**
 Gilb, James Apparent
Comment Type **T** *Comment Status* **A**
 The paragraph defines the functional description of the scan process that is already adequately defined in clause 8. The redundant description is an abomination to the technical editor and will cause woe, wailing and gnashing of the teeth.
SuggestedRemedy
 Delete the sentences "The time spent by ... and aggregated into a
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT. Note that multiple paragraphs are being deleted.

CI 06 SC **6.3.2.1.2** P **26** L **45** # **1409**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **A**
 The scan is done once PNID is found, but there is a small but non-zero probability that the same PNID may be heard on separate chanel
SuggestedRemedy
 Continue scan until all channels are scanned regardless if desired PNID is found.
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT IN PRINCIPLE. In 8.2.1, page 138, line 4, change "available in the PHY" to "indicated in the MLME command that initiated the scan." Replace the text "If the beacon . . Openscan, then" with "If the DEV finds only a frame and no beacon it shall report it as a part of the MLMEScan/Start.confirm commands. The".
 Note: The original comment references text that was deleted due to another accepted comment.

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CI 06 SC 6.3.3 P 29 L # 1413
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status A
Need a MLME-SyncLost.indicate to tell the DME that the DEV can no longer hear the Beacon.

SuggestedRemedy
Add a MLME-SyncLost.indicate

Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. WMS to provide text. Has no parameters. Sent when the ATP expires with no beacon heard.

CI 06 SC 6.3.3.1 P 28 L 13 # 882
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X

Remove comma
SuggestedRemedy
remove comma after parameter "SyncFailureTimeout"

Proposed Response Response Status O

CI 06 SC 6.3.3.1 P 28 L 8 # 569

Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status R

The functional description of the MLME-SYNCH.request primitive is incomplete.
SuggestedRemedy
Please change the first sentence to this: This primitive is used to initiate a local synchronization with a specific piconet beacon only when the PNID is set to 0xFFFF.

Proposed Response Response Status C
PROPOSED REJECT.

CI 06 SC 6.3.4.1 P 29 L 46 # 656
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status D
The DeviceAddress parameter is missing from the parameter list.

SuggestedRemedy
Please insert the DeviceAddress parameter into the MLME-ASSOCIATE.request parameter list just before the CapabilityInformation parameter.

Proposed Response Response Status W
PROPOSED REJECT.

CI 06 SC 6.3.4.1.2 P 30 L 8 # 655
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status A
the sentence fragment "...specified by the the DeviceID parameter." is unnecessary.

SuggestedRemedy
Please remove the indicated sentence fragment.

Proposed Response Response Status C
PROPOSED ACCEPT.

CI 06 SC 6.3.4.1.2 P 30 L 8 # 573
Heberling, Allen XtremeSpectrum, Inc.

Comment Type E Comment Status X
No xref to ASSOCIATION-REQUEST command frame type.

SuggestedRemedy
Please add the required xref to the appropriate subclause in clause 7.0

Proposed Response Response Status O

CI 06 SC 6.3.4.2 P 30 L 18 # 657
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status A
The DeviceID parameter name is incorrect.

SuggestedRemedy
Please change to DeviceAddress.

Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. DEVAddress instead of DeviceAddress.

CI 06 SC 6.3.4.3 P 30 L 41 # 658
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status A
The DeviceID parameter name is incorrect

SuggestedRemedy
Please change to DeviceAddress.

Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. DEVAddress instead of DeviceAddress.

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CI 06 SC 6.3.4.3 P 30 L 42 # 659
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status A
 The AssocDEVAddress parameter name is incorrect.

SuggestedRemedy
 Please change to DeviceAID.

Proposed Response Response Status C
 PROPOSED ACCEPT IN PRINCIPLE. DevID instead of DeviceAID.

CI 06 SC 6.3.4.3.2 P 31 L 3 # 574
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type E Comment Status X
 xref to ASSOCIATE-RESPONSE command frame type is missing.

SuggestedRemedy
 Please provide appropriate xref to ASSOCIATE-RESPONSE command frame type in Clause 7.

Proposed Response Response Status O

CI 06 SC 6.3.4.4 P 31 L 12 # 575
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status A
 AssocDEVAddress parameter name is incorrect.

SuggestedRemedy
 Please change AssocDEVAddress to DeviceAID

Proposed Response Response Status C
 PROPOSED ACCEPT IN PRINCIPLE. DevID instead of DeviceAID

CI 06 SC 6.3.4.4.1 P 31 L 19 # 577
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type E Comment Status X
 xref to ASSOCIATION-RESPONSE command frame subclause of clause 7 is missing.

SuggestedRemedy
 Please provide the appropriate xref.

Proposed Response Response Status O

CI 06 SC 6.3.4.4.1 P 31 L 20 # 576
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 The sentence fragment "...and a directed frame with null payload..."

SuggestedRemedy
 Please change the indicated phrase to: "...and a beacon containing the NewAssociatedDEV Information element..."

Proposed Response Response Status O

CI 06 SC 6.3.4.4.2 P 31 L 26 # 578
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status A
 AssocDEVAddress is an incorrect parameter name.

SuggestedRemedy
 Please change both instances of AssocDEVAddress to DeviceAID.

Proposed Response Response Status C
 PROPOSED ACCEPT IN PRINCIPLE. Use DevID instead of DeviceAID.

CI 06 SC 6.3.4.5 P 32 L 1 # 579
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status A
 The title of clause 6.3.4.5 MLME-ASOCIATION-RESPONSE.indication is incorrect.

SuggestedRemedy
 Please change the indicated clause title to: MLME-NEW-ASSOCIATED-DEV.indication.

Proposed Response Response Status C
 PROPOSED ACCEPT IN PRINCIPLE. The clause is being deleted so it doesn't matter any longer.

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CI 06 SC 6.3.4.5 P 32 L 1 # 454
 Gilb, James Apparent

Comment Type T Comment Status A
 This command is unnecessary. When an new DEV associates, the PNC sends out the new DEV info table anyway. A DEV may not even be listening for association response frames since it has already been associated.

SuggestedRemedy
 Delete the entire command. If not, delete the ReasonCode, since by definition it is set to SUCCESS for this command to be generated. Also, change the description of AssocDEVAddress to be "The allocated device address of the DEV that has been associated." since the association was successful for this command to have been

Proposed Response Response Status C
 PROPOSED ACCEPT. Delete the command. 6.3.4.5 up to but not including 6.3.4.6 and including table 9.

CI 06 SC 6.3.4.5 P 32 L 3 # 660
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status A
 The sentence fragment : "...reception of a broadcast ASSOCIATION-RESPONSE command." is incorrect.

SuggestedRemedy
 Please change the indicated sentence fragment to: "...reception of a beacon containing a NEW-ASSOCIATED-DEV information element.

Proposed Response Response Status C
 PROPOSED ACCEPT IN PRINCIPLE. This section has been deleted.

CI 06 SC 6.3.4.5 P 32 L 6 # 662
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 The MLME-ASSOCIATION-RESPONSE.indication primitive no longer needed.

SuggestedRemedy
 Please change the indicated primitive to: MLME-NEW-ASSOCIATED-DEV.indication.

Proposed Response Response Status O

CI 06 SC 6.3.4.5 P 32 L 8 # 661
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
 The ReasonCode parameter name is unneeded.

SuggestedRemedy
 Please remove the ReasonCode parameter from the MLME-NEW-ASSOCIATED-DEV.indication parameter list.

Proposed Response Response Status O

CI 06 SC 6.3.4.5 P 32 L 9 # 885
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 add a comma and remove a comma

SuggestedRemedy
 Add a comma after DeviceID Remove the comma after AssocDEVAddress

Proposed Response Response Status O

CI 06 SC 6.3.4.5.1 P 32 L 30 # 666
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status A
 The sentence fragment "... a broadcast ASSOCIATION-RESPONSE command with a ReasonCode of SUCCESS."

SuggestedRemedy
 Please change the indicated fragment to: "... a beacon containing a NEW-ASSOCIATED-DEV information element."

Proposed Response Response Status C
 PROPOSED ACCEPT IN PRINCIPLE. This section has been deleted.

CI 06 SC 6.3.4.5.2 P 32 L 35 # 667
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status A
 The text describing the Effect of receipt is incorrect

SuggestedRemedy
 Please change the indicated text to: " The non-initiating DME, when it receives the MLME-NEW-ASSOCIATED-DEV.indication primitive, is provided with the DeviceAddress and DeviceAID of a successfully associated DEV."

Proposed Response Response Status C
 PROPOSED ACCEPT IN PRINCIPLE. This section has been deleted.

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CI 06 SC **6.3.4.6** P **32** L **38** # **580**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **A**
 Missing Association message sequence chart.
SuggestedRemedy
 Please provide missing message sequence chart.
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT IN PRINCIPLE. Al Heberling wil providde MSC.

CI 06 SC **6.3.4.6** P **32** L **39** # **886**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **A**
 Missing MSC
SuggestedRemedy
 Add in the MSC ... MAC subcommittee
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT IN PRINCIPLE. See 580.

CI 06 SC **6.3.5** P **32** L **43** # **581**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **E** *Comment Status* **X**
 Missing xref to Dissaociation subclause in Clause 8.
SuggestedRemedy
 Please provide missing xref.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.5.1** P **33** L **6** # **582**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **TR** *Comment Status* **X**
 DeviceID is incorrect parameter name and its data type is incorrect as well.
SuggestedRemedy
 Please change DeviceID to DeviceAID and change the data type from MAC address to Integer with range 1-255.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.5.1** P **33** L **7** # **583**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **X**
 ReasonCode is unneccesary.
SuggestedRemedy
 Please remove ReasonCode as a parameter.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.5.1.2** P **33** L **29** # **585**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **E** *Comment Status* **X**
 Missing xref to DISASSOCIATION-REQUEST command frame subclause in clause 7.
SuggestedRemedy
 Please provide appropriate xref.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.5.2** P **33** L **37** # **586**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **E** *Comment Status* **X**
 Missing xref to DISASSOCIATION-REQUEST command sub clause in clause 7.
SuggestedRemedy
 Please provide missing xref.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.5.2** P **33** L **41** # **587**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **X**
 DeviceID parm name is incorrect.
SuggestedRemedy
 Please change DeviceID to DeviceAID.
Proposed Response *Response Status* **O**

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CI 06 SC 6.3.5.2 P 33 L 42 # 588
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
ReasonCode is unnecessary.

SuggestedRemedy
Please remove ReasonCode as a parameter for this primitive.

Proposed Response Response Status O

CI 06 SC 6.3.5.3 P 34 L 13 # 591
Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
Clauses 6.3.5.3, 6.3.5.3.1 and 2 along with Table 12 are not needed to satisfy the requirements of the disassociation protocol.

SuggestedRemedy
Please remove MLME-Disassociate.confirm and its subclauses.

Proposed Response Response Status O

CI 06 SC 6.3.6 P 3536 L # 850
Kleindl, Guenter Siemens

Comment Type TR Comment Status X
Include the possibility for authentication of the PNC.

SuggestedRemedy
Include the 'PublicKeyChallenge' as an optional parameter in the MLME-AUTHENTICATE.request and MLME-AUTHENTICATE.indication.

Proposed Response Response Status O

CI 06 SC 6.3.6 P 3637 L # 851
Kleindl, Guenter Siemens

Comment Type TR Comment Status X
Include the possibility for authentication of the PNC.

SuggestedRemedy
Include the 'PublicKeyProoffe' as a conditional parameter in the MLME-AUTHENTICATE.response and MLME-AUTHENTICATE.confirm.

Proposed Response Response Status O

CI 06 SC 6.3.6 Table 13 P 35 L 140 # 1663
Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
DEVPublicKeyObjectLength, AuthenticationInfoLength, SecurityManagerPublicKeyLength, PublicKeyChallengeLength and PublicKeyProofLength should all have values greater than or equal to 0, not 1. It may

SuggestedRemedy
Comment via Ari Singer.

Proposed Response Response Status O

CI 06 SC 6.3.6.2.2 P 36 L 30 # 894
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
The text says ... "The DME may use the MLME-CHALLENGE.request command to obtain additional security information from the associated DEV.

SuggestedRemedy
Security subgroup needs to provide reference in text where this procedure is described.

Proposed Response Response Status O

CI 06 SC 6.3.6.2.2 P 36 L 32 # 895
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
The text at the end of line 32 describes an authentication sequence.

SuggestedRemedy
Security subcommittee needs to provide text reference to this authentication sequence.

Proposed Response Response Status O

CI 06 SC 6.3.7 P 37 L 54 # 455
Gilb, James Appairnt

Comment Type T Comment Status X
The reason code is missing.

SuggestedRemedy
Add the following row to the table: Reason code enumeration SUCCESS, FAIL, TIMEOUT Indicates the result of the challenge command

Proposed Response Response Status O

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CI 06 SC **6.3.7 Table 14** P **37** L **3554** # **1664**
 Shvodian, William XtremeSpectrum
 Comment Type **T** Comment Status **X**
 PublicKeyChallengeLength and PublicKeyProofLength should have values greater than or equal to 0, not 1. It may be that these fields are intentionally left blank.
 SuggestedRemedy
 Comment via Ari Singer.

Proposed Response Response Status **O**

CI 06 SC **6.3.7.1** P **38** L **3** # **897**
 Roberts, Richard XtremeSpectrum
 Comment Type **TR** Comment Status **X**
 Description of public key authentication challenge

SuggestedRemedy
 What and where are the public key authentication challenge described?

Proposed Response Response Status **O**

CI 06 SC **6.3.7.4** P **39** L **31** # **898**
 Roberts, Richard XtremeSpectrum
 Comment Type **TR** Comment Status **X**
 Missing ReasonCode

SuggestedRemedy
 Table 14 does not define the ReasonCode. The security subcommittee needs to provide the reason codes.

Proposed Response Response Status **O**

CI 06 SC **6.3.7.4** P **39** L **32** # **1416**
 Shvodian, William XtremeSpectrum
 Comment Type **TR** Comment Status **X**
 Reason Code needs to be defined in Table 14

SuggestedRemedy
 Define the reason code in Table 14.

Proposed Response Response Status **O**

CI 06 SC **6.3.7.4.2** P **39** L **44** # **899**
 Roberts, Richard XtremeSpectrum
 Comment Type **E** Comment Status **X**
 missing phrase ...
 SuggestedRemedy
 ... of the results, via the reason code, of a previously ...

Proposed Response Response Status **O**

CI 06 SC **6.3.8** P **40** L **11** # **456**
 Gilb, James Appairnt
 Comment Type **T** Comment Status **X**
 The device ID purpose is incorrect.

SuggestedRemedy
 Change "with which ... process" to "that is requesting the key"

Proposed Response Response Status **O**

CI 06 SC **6.3.8** P **40** L **13** # **457**
 Gilb, James Appairnt
 Comment Type **E** Comment Status **X**
 Acronyms for KeyPurpose not defined.

SuggestedRemedy
 Add acronyms for KEK, DEK, DIK and SEED to the acronym clause.

Proposed Response Response Status **O**

CI 06 SC **6.3.8** P **40** L **25** # **458**
 Gilb, James Appairnt
 Comment Type **T** Comment Status **X**
 The reason code for request key is missing.

SuggestedRemedy
 Add a row to the end of the table which is: ReasonCode Enumeration SUCCESS, NOT_AUTHORIZED, Indicates the result of TIME_OUT the key request command

Proposed Response Response Status **O**

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CI 06 SC **6.3.8 Table 15** P **40** L # **1666**
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 DistributeKeyFailureTimeout should be removed.
SuggestedRemedy
 Comment via Ari Singer.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.8 Table 15** P **40** L **725** # **1665**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 EncryptedKeyObjectLength should have values greater than or equal to 0, not 1. It may be that this field is intentionally left blank.
SuggestedRemedy
 Comment via Ari Singer.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.8.1.1** P **40** L **41** # **904**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 PNC requirement to be the security manager
SuggestedRemedy
 In line 41 it is required that the PNC be the security manager, yet no place in the text is this function detailed. The security subcommittee needs to provide the details.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.8.2.2** P **41** L **19** # **905**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Line 19 indicates that "the PNC shall encrypt and return the designated key"
SuggestedRemedy
 Security committee needs to provide the encryption algorithm. What is the algorithm?
Proposed Response *Response Status* **O**

CI 06 SC **6.3.8.2.2** P **41** L **22** # **906**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 In line 22, reference is made to a null key and the appropriate result code.
SuggestedRemedy
 Security committee to provide definition of a null key and what are the associated (and appropriate) result codes.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.8.3** P **41** L **35** # **1419**
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Reason code needs to be defined in Tstable 15.
SuggestedRemedy
 Define reason code in Table 15
Proposed Response *Response Status* **O**

CI 06 SC **6.3.8.3** P **41** L **35** # **907**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Problem with ReasonCode parameter
SuggestedRemedy
 Referenced table 15 does not provide the reason code definitions. Security committee needs to provide these reason codes.
Proposed Response *Response Status* **O**

CI 06 SC **6.3.8.3.1** P **41** L **43** # **908**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 grammatical
SuggestedRemedy
 change the last word in line 43 from "message" to "response".
Proposed Response *Response Status* **O**

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CI 06 SC 6.3.8.4 P 42 L 4 # 909
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
 in line 4, reference is made to an "encrypted format".

SuggestedRemedy
 Security subcommittee to provide the details as to what is this encrypted format.

Proposed Response Response Status O

CI 06 SC 6.3.9 P L # 1668
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status R
 An MLME-DISTRIBUTE-KEY.response should be created so that the DEV that decided to distribute the key can know whether the key was successfully decrypted or not.

SuggestedRemedy
 Comment via Ari Singer.

Proposed Response Response Status C
 PROPOSED REJECT. If DEV does not properly decode message, it will make another request.

CI 06 SC 6.3.9 P 42 L 35 # 459
 Gilb, James Appairant

Comment Type T Comment Status X
 The DeviceID description is incorrect.

SuggestedRemedy
 Change "which which ... process" to "to which the key will be sent"

Proposed Response Response Status O

CI 06 SC 6.3.9 P 42 L 47 # 460
 Gilb, James Appairant

Comment Type T Comment Status X
 The ReasonCode for distribute key is not defined.

SuggestedRemedy
 Add the following to the end of table 16: ReasonCode Enumeration SUCCESS, TIME_OUT Indicates the result of the distribute key command.

Proposed Response Response Status O

CI 06 SC 6.3.9 Table 16 P 42 L 3147 # 1667
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 EncryptedKeyObjectLength should have values greater than or equal to 0, not 1. It may be that this field is intentionally left blank.

SuggestedRemedy
 Comment via Ari Singer.

Proposed Response Response Status O

CI 06 SC 6.3.9.1/2/3 P 43 L 1 # 911
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
 Spelling error in 6.3.9.1, 6.3.9.2, and 6.3.9.3

SuggestedRemedy
 The commands are misspelt ... replace "distibute" with "distribute"

Proposed Response Response Status O

CI 06 SC 6.3.9.2.2 P 43 L 45 # 461
 Gilb, James Appairant

Comment Type T Comment Status X
 The MLME-DISTRIBUTE-KEY.response command does not exist.

SuggestedRemedy
 Delete the sentence "The DME shall ... command."

Proposed Response Response Status O

CI 06 SC 6.3.9.2.2 P 43 L 45 # 912
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 question on command type

SuggestedRemedy
 Question for security committee ... in line 45 the command is given as "MLME.DISTRIBUTE-KEY.response". Should this be "MLME.DISTRIBUTE-KEY.indication"?

Proposed Response Response Status O

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CI 06 SC 6.3.9.3 P 44 L 8 # 1421
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Reason Code needs to be added to table 16

SuggestedRemedy
Add reason code to table 16

Proposed Response Response Status O

CI 06 SC 6.3.9.3 P 44 L 8 # 913
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
ReasonCode missing

SuggestedRemedy
Table 16 does not provide the reason code ... security committee needs to define the reason code.

Proposed Response Response Status O

CI 06 SC 6.3.9.3.1 P 44 L 15 # 914
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
Reference to "directed distribute key request command" and a "broadcast distributed key request command". These seem like two different commands.

SuggestedRemedy
Security committee needs to clarify what primitives handle these two commands. Are they differentiated by parameters? If so, which parameters?

Proposed Response Response Status O

CI 06 SC 6.4 P 71 L 21 # 654
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
The MLME-PNC-HANDOVER message sequence chart is missing.

SuggestedRemedy
Please insert Clause 6.3.1.34 MLME-DEV-INFO, MLME-PNC-HANDOVER, MLME-PROBE-PNC, and MLME-NEW-PNC message sequence chart from doc 01/410r1

Proposed Response Response Status O

CI 06 SC 6.4 P 71 L 26 # 653
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
The MLME-NEW-PNC.request, indication and confirm primitives are missing from the MLME-SAP interface clause.

SuggestedRemedy
Please insert clauses 6.3.1.31 through 6.3.1.33.2 from doc 01/410r1 into the space just after Clause 6.3.18.5 MLME-PROBE-PNC message sequence chart.

Proposed Response Response Status O

CI 06 SC 6.4 P 71 L 30 # 928
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
Modify first line of clause 6.4 as shown below.

SuggestedRemedy
SuggestedRemedy
... PLME-SET primitives operating on the PHY PIB ...

Proposed Response Response Status O

CI 06 SC 6.4.1 P 71 L 47 # 929
Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
Modify as shown below ...

SuggestedRemedy
... shall be a request by the PLME to reset ...

Proposed Response Response Status O

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CI 06 SC 6.4.19.1 P 92 L 22 # 482
 Gilb, James Apparent

Comment Type T Comment Status X
 The descriptions of When generated and Effect of receipt are copied from another sub-clause and are incorrect for this one.

SuggestedRemedy
 Change "sub-layer needs to ... of an MPDU." to be "sub-layer wants to change the PHY power management state." in 6.9.4.19.1, line 22 Change "will be to start the ... state machine." to be "will be to enter the indicated power management level." in 6.9.4.19.2, line 26

Proposed Response Response Status O

CI 06 SC 6.4.2.2 P 72 L 33 # 930
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Modify as shown below ...

SuggestedRemedy
 The PLME is notified ...

Proposed Response Response Status O

CI 06 SC 6.4.3 P 72 L 44 # 931
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 remove comma

SuggestedRemedy
 Remove the comma after the parameter "DataRate".

Proposed Response Response Status O

CI 06 SC 6.4.4.2 P 73 L 42 # 932
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Modify as shown below ...

SuggestedRemedy
 The PLME is notified ...

Proposed Response Response Status O

CI 06 SC 6.4.5 P 74 L 3 # 933
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 Modify as shown below

SuggestedRemedy
 This optional primitive shall be a request by the PLME to ...

Proposed Response Response Status O

CI 06 SC 6.5.1 P 74 L 41 # 934
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Add reference to table

SuggestedRemedy
 The PIB PNC group, Table 37, ...

Proposed Response Response Status O

CI 06 SC 6.5.2 P 74 L 46 # 935
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Add reference to table

SuggestedRemedy
 The PIB characteristics group, Table 38, ...

Proposed Response Response Status O

CI 06 SC 6.5.3 P 74 L 51 # 936
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Add reference to the table

SuggestedRemedy
 ... authentication group, Table 39, ...

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 06 SC 6.5.3 Table 39 P 76 L 319 # 1671
Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
Why does the device care about the last device to authenticate and deauthenticate?
Where does it get this information?

SuggestedRemedy
Remove AuthenticateFailDevice (why is it called "Fail" anyway?) and DeauthenticateDevice. Comment via Ari Singer.

Proposed Response Response Status O

CI 06 SC 6.5.4 P 75 L 45 # 937
Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
Add reference to table

SuggestedRemedy
... association group, Table 40, contains ...

Proposed Response Response Status O

CI 06 SC 6.6 P 75 L 52 # 938
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
grammatical

SuggestedRemedy
... PHY PIB values that are unique to ...

Proposed Response Response Status O

CI 06 SC 6.6.1 P 76 L 34 # 939
Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
modify as shown below

SuggestedRemedy
... on the regulatory domains for the 2.4 GHz PHY is given in 11.1.

Proposed Response Response Status O

CI 06 SC 6.6.1 P 76 L 41 # 1731
Karaoguz, Jeyhan Broadcom Corp.

Comment Type T Comment Status X
5 GHz and UWB are assumed to be future spectral bands to be used without any justification or mention given a prior. This is confusing.

SuggestedRemedy
The 5 GHz and UWB should not be mentioned in this table to avoid confusion.

Proposed Response Response Status O

CI 06 SC 6.6.1 P 76 L 42 # 444
Gilb, James Appairant

Comment Type T Comment Status X
The assignment of 5 GHz and UWB PHY layers presumes too much. It is not clear if there will be another PHY layer, if so what format it will be or what it will be called. If a new PHY layer is added, the new draft can add its definition to the PIB. It is not

SuggestedRemedy
Delete the assignments for 5 GHz and UWB.

Proposed Response Response Status O

CI 06 SC 6.6.2 P 77 L 4 # 940
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
The text in line 4 claims there is a mapping between the data rate vector and the actual data rate that is PHY dependent. Where is this mapping in clause 11. How does this map to the PHYPIB_DataRateVector and the PHYPIB_CurrentDataRate?

SuggestedRemedy
Refer to the PHY subgroup.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 06 **SC 6.6.8** **P 79** **L 5** **# 1732**
 Karaoguz, Jeyhan Broadcom Corp.
Comment Type **T** *Comment Status* **X**
 PHYPIB_CCA_Threshold is programmable but not enough guidance as to what values it should assume has been given in the standard.
SuggestedRemedy
 I suggest that CCA threshold values should be defined depending on TX power levels similar to 802.11b standard.
Proposed Response *Response Status* **O**

CI 06 **SC 6.6.8** **P 79** **L 5** **# 445**
 Gilb, James Appairant
Comment Type **T** *Comment Status* **X**
 The CCA threshold should depend on the transmitter power, which can be changed.
SuggestedRemedy
 Change "Static" to "Dynamic"
Proposed Response *Response Status* **O**

CI 06 **SC 6.6.9** **P 79** **L 1023** **# 1696**
 Siwiak, Kazimierz Time Domain
Comment Type **TR** *Comment Status* **X**
 6.6.9 PHY PIB ranging support: The PHYPIB_Range object calls for two octets, range in meters in the first octet, and fractional part of a meter in cm for the second octet. At the moment nothing supports this in clause 11. It is too early to understand if this is the correct format to carry us into the future. Since we don't know how "location awareness," which might include ranging and other attributes, will be addressed in 3a. It is better to remove the object now rather than be faced with a work-around in the future.
SuggestedRemedy
 Remove the PHYPIB_Range object.
Proposed Response *Response Status* **O**

CI 06 **SC 6.6.9** **P 79** **L 19** **# 1733**
 Karaoguz, Jeyhan Broadcom Corp.
Comment Type **T** *Comment Status* **X**
 Both "m" and "cm" portion of the range have been given an octet. Since the range is less than 10 m, I think the "cm" portion should be given more bits.
SuggestedRemedy
 Allocate more bits for the fraction part of the range.
Proposed Response *Response Status* **O**

CI 06 **SC 6.6.9** **P 79** **L 9** **# 945**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Need to add a statement to clause 6.6.9 that the PHY of clause 11 does not support ranging.
SuggestedRemedy
 Add the following statement at the end of line 12 (Note: the IEEE802.15.3 PHY of clause 11 does not currently support ranging).
Proposed Response *Response Status* **O**

CI 06 **SC 6.7.1.1** **P 80** **L 4** **# 475**
 Gilb, James Appairant
Comment Type **T** *Comment Status* **R**
 Multicast is not supported in this standard.
SuggestedRemedy
 Delete the words "and multicast" from three places, line 4 in 6.7.1.1, line 15 in 6.7.1.2 and line 33 in 6.7.3. Also, change "reorderable multicast service" to be "reorderable broadcast service"
Proposed Response *Response Status* **C**
 PROPOSED REJECT. Add a paragraph in clause 8 that defines the scope and intention of multicast in this draft. 8.6.1 is the target clause. WMS to write text.

P802.15.3 Draft 09 Comments

CI 06 SC 6.7.1.1 P 80 L 6 # 1454
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
"All DEVs shall support the asynchronous data service." This is a LAN mentality, not WPAN. Devs can may be simplified by eliminating asynchronous data service.

SuggestedRemedy
Make asynchronous data service optional.

Proposed Response Response Status O

CI 06 SC 6.7.1.1 P 80 L 6 # 1452
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
The sentence "Broadcast and Multicast transport are part of the asynchronous data service provided by the MAC." provides no information. Unicast is part of the data

SuggestedRemedy
Remove this sentence.

Proposed Response Response Status O

CI 06 SC 6.7.1.2 P 80 L 15 # 1453
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
The sentence "Broadcast and Multicast transport are part of the asynchronous data service provided by the MAC." provides no information. Unicast is part of the data

SuggestedRemedy
Remove this sentence.

Proposed Response Response Status O

CI 06 SC 6.7.2 P 80 L 1824 # 77
Barr, John Motorola

Comment Type TR Comment Status X
The 802.15.3 MAC does not support any prioritization of MSDUs delivered to it nor does it directly handle parameterized QoS requests. This section seems to be left over from earlier drafts that had an as yet undefined model for QoS that was not accepted.

SuggestedRemedy
Remove Section 8.7.2.

Proposed Response Response Status O

CI 06 SC 6.7.3 P 80 L 3439 # 1455
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
Remove reference to strictly ordered service class. This is an 802.11 holdover.

SuggestedRemedy
Remove references about strictly ordered service class.

Proposed Response Response Status O

CI 06 SC 6.7.3 P 80 L 3942 # 233
Gifford, Ian Self

Comment Type E Comment Status X
The following sentences do not end in a period: "device and the intended recipient devices" and "However, it does not maintain ordering among MSDUs belonging to

SuggestedRemedy
Add the period.

Proposed Response Response Status O

CI 06 SC 6.7.3 P 80 L 41 # 947
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
grammatical

SuggestedRemedy
change the sentence at the end of line 41 and the beginning of line 42 as: ... identified logical connection; however, it does not ...

Proposed Response Response Status O

CI 06 SC 6.8 P 76 L 41 # 551
GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
PHYPIB_CCA_Threshold is programmable but not enough guidance as to what values it should assume has been given in the standard.

SuggestedRemedy
CCA threshold values should be defined depending on TX power levels similar to 802.11b standard.

Proposed Response Response Status O

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CI 06 SC 6.8 P 80 L 49 # 948
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 grammatical
 SuggestedRemedy
 ... to understand the parameters which need ... (remove the comma after the word parameters)
 Proposed Response Response Status O

CI 06 SC 6.8.1 P 81 L # 1456
 Shvodian, William XtremeSpectrum
 Comment Type T Comment Status X
 Need a MAC_DATA.confirm to indicate status in the event of a failure.
 SuggestedRemedy
 Add a MAC_DATA.confirm
 Proposed Response Response Status O

CI 06 SC 6.8.1 P 81 L 36 # 949
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 remove comma
 SuggestedRemedy
 remove comma after the parameter Data
 Proposed Response Response Status O

CI 06 SC 6.8.2 P 82 L 13 # 950
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 remove comma
 SuggestedRemedy
 remove comma after the parameter ReceptionStatus
 Proposed Response Response Status O

CI 06 SC 6.9.1 P 82 L 32 # 951
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 grammatical
 SuggestedRemedy
 add a comma as shown below ... characteristics of, and methods of, transmitting and
 Proposed Response Response Status O

CI 06 SC 6.9.3 P 82 L 46 # 476
 Gilb, James Appairant
 Comment Type T Comment Status X
 There is only one type of primitive defined in the PHY service specification now.
 SuggestedRemedy
 Delete "The primitives associated ... sub-layer to sub-layer interactions." and connect the following paragraph to the previous one.
 Proposed Response Response Status O

CI 06 SC 6.9.3 P 82 L 46 # 234
 Gifford, Ian Self
 Comment Type E Comment Status X
 The term "sub-layer", used in the subclause title "...This sub-clause provides an overview of the PHY services."
 SuggestedRemedy
 Change to "sublayer", dropping the hyphen.
 Proposed Response Response Status O

CI 06 SC 6.9.3.1 P 83 L 1 # 477
 Gilb, James Appairant
 Comment Type T Comment Status X
 This sub-clause is redundant and therefore really irritates the technical editor while simultaneously promoting bad habits.
 SuggestedRemedy
 Delete sub-clause 6.9.3.1 in its entirety and wipe it from our minds.
 Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 06 SC 6.9.4.1 P 84 L 51 # 478
 Gilb, James Appairment

Comment Type T Comment Status X
 The definition of the DATA parameter is redundant and annoying.

SuggestedRemedy
 Delete the sentence "The DATA parameters is an octet value." in 6.9.4.1 and 6.9.4.2.

Proposed Response Response Status O

CI 06 SC 6.9.4.11.2 P 88 L 44 # 237
 Gifford, Ian Self

Comment Type E Comment Status X
 The following sentence does not end in a period: The effect of receipt of this primitive by the MAC is unspecified

SuggestedRemedy
 Add the period.

Proposed Response Response Status O

CI 06 SC 6.9.4.12 P 89 L 6 # 955
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
 In line 6 and also in line 10, the parameter STATE is incorrect. The parameter name is actually STATUS. This is needed to be consistent with table 54.

SuggestedRemedy
 Replace STATE with STATUS in two places as discussed above.

Proposed Response Response Status O

CI 06 SC 6.9.4.12.1 P 89 L 18 # 480
 Gilb, James Appairment

Comment Type T Comment Status X
 The criteria given are not applicable to this standard.

SuggestedRemedy
 Change "the period indicated ... has expired." to be "the chnannel has been quiet for an aCCADetectTime period."

Proposed Response Response Status O

CI 06 SC 6.9.4.13 P 89 L 34 # 481
 Gilb, James Appairment

Comment Type T Comment Status X
 The AntSelect parameter is already defined and we don't need any more ants at our

SuggestedRemedy
 Replace the sentence "AntSelect is an ... shall be used." with "The primitive parameter is defined in Table 55"

Proposed Response Response Status O

CI 06 SC 6.9.4.18 P 91 L 33 # 238
 Gifford, Ian Self

Comment Type E Comment Status X
 The following sentence does not end in a period: — NoError. This value is used to indicate that no error occurred during the receive process in the PHY

SuggestedRemedy
 Add the period.

Proposed Response Response Status O

CI 06 SC 6.9.4.19 P 92 L 1 # 26
 Bain, Jay Time Domain

Comment Type TR Comment Status X
 It is not clear, how a PHY may be returned to the powered state. This primitive is specified for placing the PHY in one of several available power states. It is recommended that the primitive also serve to restore full power. As an alternative, an additional primitive may meet the requirement.

SuggestedRemedy
 in 6.9.4.19 table 57 note that this includes the state for a fully powered PHY in 6.6.10 table 50, make the same note some text touch up may be desired so it is clear that powering up is also via the same mechanism.

Proposed Response Response Status O

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CI 06 SC 6.9.4.19 P 92 L 3 # 956
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 grammatical

SuggestedRemedy
 ... to the local PHY to enter the ...

Proposed Response Response Status O

CI 06 SC 6.9.4.19.1 P 92 L 19 # 27
 Bain, Jay Time Domain

Comment Type TR Comment Status X
 the text of both when generated and effect of receipt seems to have been pasted from elsewhere and does not match the power management of this sub-clause.

SuggestedRemedy
 change the when generated to : This primitive will be issued by the MAC sub-layer to the PHY entity whenever the MAC sub-layer needs to change the power state of the PHY
 change the effect of receipt to : The effect of receipt is to transistion the PHY to the desired state if possible, and then generate the PHY-PWRMGT.confirm primitive

Proposed Response Response Status O

CI 06 SC 6.9.4.4 P 86 L 11 # 479
 Gilb, James Appairnt

Comment Type T Comment Status X
 There is no PLCP

SuggestedRemedy
 Change "contains both the PLCP and PHY" to be "contains the PHY"

Proposed Response Response Status O

CI 06 SC 6.9.4.4.2 P 86 L 21 # 1459
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 Need to specify that the preamble starts when this command is received.

SuggestedRemedy
 Specify that the Preamble starts when PHY-TX-START.request is received.

Proposed Response Response Status O

CI 06 SC 6.9.4.9.2 P 88 L 8 # 236
 Gifford, Ian Self

Comment Type E Comment Status X
 The following sentence does not end in a period: The effect of receipt of this primitive by the MAC is unspecified

SuggestedRemedy
 Add the period.

Proposed Response Response Status O

CI 06 SC 7.1.1 P 80 L 8 # 146
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 It is indicate that two services classes exist. This is an introduction paragraph, the classes should be listed.

SuggestedRemedy
 List the service classes.

Proposed Response Response Status O

CI 06 SC 8 P 80 L 44 # 147
 DuVal, Mary Texas Instruments

Comment Type T Comment Status X
 MAC CPS SAP is not shown in Figure 2. It is hard to understand how it fits in without seeing the relationships pictorially.

SuggestedRemedy
 Add MAC CPS SAP to Figure 2.

Proposed Response Response Status O

CI 06 SC 9.4.11 P 88 L 30 # 150
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 "PHY has begun the CCA process." - shouldn't this be "ended the CCA process"?
 Possible cut and paste oversight.

SuggestedRemedy
 Fix

Proposed Response Response Status O

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CI 06 SC figure 2 P 19 L 18 # 23

Bain, Jay Time Domain

Comment Type T Comment Status A

It would seem that the reference model should include something like a convergence layer for QoS.

SuggestedRemedy

Update the figure to include QoS sublayer if appropriate

Proposed Response Response Status C

PROPOSED ACCEPT IN PRINCIPLE. Copy Figure A.1 to Figure 2 with any appropriate changes. Make sure supporting text is adequate.

CI 06 SC Figure 2 P 19 L 18 # 1390

Shvodian, William XtremeSpectrum

Comment Type T Comment Status A

How does MAC-CPS fit in to Figure 2? Is the MAC-SAP in figure 2 the MAC-CPS SAP or the SSCS SAP?

SuggestedRemedy

Make clear whether what is called the MAC in Figure 2 is the MAC-CPS, or both the MAC-CPS and the SSCS. It is not clear how Figure 2 and Figure A.1 are related.

Proposed Response Response Status C

PROPOSED ACCEPT IN PRINCIPLE. Copy Figure A.1 to Figure 2 with any appropriate changes. Make sure supporting text is adequate.

CI 06 SC Figure 2 P 19 L 2829 # 222

Gifford, Ian Self

Comment Type E Comment Status X

In Figure 6-2 the term "MAC sub-layer" and "PHY sub-layer" are incorrectly used; it should be MAC sublayer and PHY layer, respectively.

SuggestedRemedy

Change Figure 6-2 to read "MAC sublayer" and "PHY layer".

Proposed Response Response Status O

CI 06 SC Figure 3 P 54 L 1 # 140

DuVal, Mary Texas Instruments

Comment Type E Comment Status X

Which way is the communication flowing? DEV1 to DEV2 or vice versa?

SuggestedRemedy

Make a clear statement to the reader of communication flow.

Proposed Response Response Status O

CI 06 SC Figure 8 P 64 L 10 # 1439

Shvodian, William XtremeSpectrum

Comment Type E Comment Status X

Why is the PNC on of the MLMEs in a channel status request?

SuggestedRemedy

Change to DEV-1 and DEV-2

Proposed Response Response Status O

CI 06 SC Figure3 P 54 L 6 # 1432

Shvodian, William XtremeSpectrum

Comment Type E Comment Status X

Move the PNC to in between Dev A and Dev B since A and B only talk to the PNC. This will simplify the drawing.

SuggestedRemedy

Move the PNC to in between Dev A and Dev B since A and B only talk to the PNC.

Proposed Response Response Status O

CI 06 SC Table 10 P 33 L 15 # 668

Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status A

DeviceID parm name, data type, valid range, and description are incorrect

SuggestedRemedy

Change parm name to: DeviceAID; data type to: Integer; valid range to:0-255; and description to: "Specifies the DEVAID of the peer device with which to perform the disassociation process."

Proposed Response Response Status C

PROPOSED ACCEPT IN PRINCIPLE. DevID, type Integer, range any valid DevID (xref 7.2.3) Specifies the DevID of the peer MAC entity . . .

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CI 06 **SC Table 10** **P 33** **L 19** **# 584**
Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **X**
ReasonCode is unnecessary.
SuggestedRemedy
Please remove ReasonCode from Table 10.
Proposed Response *Response Status* **O**

CI 06 **SC Table 11** **P 34** **L 1** **# 887**
Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
Incorrect Title
SuggestedRemedy
Should be MLME-DISASSOCIATE.indication primitive parameters
Proposed Response *Response Status* **O**

CI 06 **SC Table 11** **P 34** **L 10** **# 590**
Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **X**
ReasonCode is unnecessary.
SuggestedRemedy
Please remove ReasonCode from Table 11.
Proposed Response *Response Status* **O**

CI 06 **SC Table 11** **P 34** **L 5** **# 589**
Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **X**
DeviceID parameter name, data type, Valid range and description fields are incorrect.
SuggestedRemedy
Please change DeviceID to DeviceAID; data type to: Integer; valid range to: 1-255;
description to: " Specifies the DEVAID of the peer device with which the association
relationship is terminated.
Proposed Response *Response Status* **O**

CI 06 **SC Table 12** **P 34** **L 22** **# 888**
Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
Incorrect Title
SuggestedRemedy
Should be MLME-DISASSOCIATE.confirm primitive parameters
Proposed Response *Response Status* **O**

CI 06 **SC Table 13** **P 35** **L 1** **# 889**
Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
Under the Type column ... should the integer type be defined as to the number of
octets? Also, what is the nature of the byte string ... shouldn't the number of bytes
SuggestedRemedy
Refer to MAC/security subcommittee to supply number of octets.
Proposed Response *Response Status* **O**

CI 06 **SC Table 13** **P 35** **L 17** **# 60**
Barr, John Motorola
Comment Type **E** *Comment Status* **X**
'device' used instead of 'defined'
SuggestedRemedy
Replace "format as device" with "format as defined"
Proposed Response *Response Status* **O**

CI 06 **SC Table 13** **P 35** **L 17** **# 893**
Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
Wrong word
SuggestedRemedy
second line of description for AuthenticationInfoLength parameter ... change the word
"device" to "defined"
Proposed Response *Response Status* **O**

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CI 06 SC Table 13 P 35 L 22 # 890
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
 Unused parameters

SuggestedRemedy

The following are listed as parameters for a primitive ... but no primitives use these.
 Where are they used? SecurityManagerPublicKeyObjectLength

Proposed Response Response Status O

CI 06 SC Table 13 P 35 L 28 # 891
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Unused parameters

SuggestedRemedy

Delete the following parameters from table 13. They are used in table 14 and are
 redundant. PublicKeyChallengeLength PublicKeyChallenge PublicKeyProofLength
 PublicKeyProof

Proposed Response Response Status O

CI 06 SC Table 13 P 35 L 8 # 892
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
 Reference to cipher suite

SuggestedRemedy

The description for the parameter DEVPublicKeyObject refers to a cipher suite. The
 cipher suite details are not present in draft 9 text. Needs to be added.

Proposed Response Response Status O

CI 06 SC Table 14 P 37 L 0 # 74
 Barr, John Motorola

Comment Type TR Comment Status X
 The MLME-CHALLENGE primitive parameters does not include the ReasonCode
 parameter

SuggestedRemedy

Add ReasonCode to Table 14 as an Enumeration, Valid Range of SUCCESS or
 TIMEOUT, and Description as "The result of the challenge command." Note that
 success here is defined to be reception of a valid Challenge.confirm frame from the
 peer DEV and not whether the PublicKeyProof is correct.

Proposed Response Response Status O

CI 06 SC Table 14 P 37 L 35 # 896
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Under the Type column ... should the integer type be defined as to the number of
 octets? Also, what is the nature of the byte string ... shouldn't the number of bytes

SuggestedRemedy

Refer to MAC/security subcommittee to supply number of octets.

Proposed Response Response Status O

CI 06 SC Table 15 P 40 L # 903
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
 Unused parameter

SuggestedRemedy

In table 15, the parameter DistributeKeyFailureTimeout is defined but not used by any
 primitives. Security committee needs to clarify.

Proposed Response Response Status O

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CI 06 SC Table 15 P 40 L # 901
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Need octets associated with Types integer and byte string in table 15
SuggestedRemedy
 MAC/security provide octets
Proposed Response *Response Status* **O**

CI 06 SC Table 15 P 40 L # 902
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Add following to clause 4 acronyms
SuggestedRemedy
 DEK DIK SEED
Proposed Response *Response Status* **O**

CI 06 SC Table 15 P 40 L 13 # 900
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Lacking definition and explanation
SuggestedRemedy
 security subcommittee needs to define and explain usage of the following items from table 15 KEK DEK DIK SEED
Proposed Response *Response Status* **O**

CI 06 SC Table 16 P 42 L # 910
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 In type column of table 16, how many octets are required?
SuggestedRemedy
 security committee to provide octets
Proposed Response *Response Status* **O**

CI 06 SC Table 18 P 46 L 19 # 593
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **X**
 DeviceID is an unnecessary entry in the parameter table.
SuggestedRemedy
 Please remove.
Proposed Response *Response Status* **O**

CI 06 SC Table 2 P 23 L # 1398
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 What does this mean "The operating superframe length adjusts this value."
SuggestedRemedy
 Please clarify
Proposed Response *Response Status* **O**

CI 06 SC Table 2 P 24 L 12 # 1397
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **R**
 Why is EPSTime in ms and not superframes?
SuggestedRemedy
 Change EPS time to superframes. Only 8 bits needed.
Proposed Response *Response Status* **Z**
 PROPOSED REJECT. This is just to wake up the dev host. Not required who did it and could be multiple.

CI 06 SC Table 2 P 24 L 17 # 1399
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 "This element has no meaning if the EPS DEV is not in power management mode." In WHAT power mangement mode.
SuggestedRemedy
 Please clarify should probably be EPS mode.
Proposed Response *Response Status* **O**

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CI 06 SC Table 2 P 24 L 17 # 877

Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
Run on sentence ... add white space.

SuggestedRemedy
... management mode. Defined in ...

Proposed Response Response Status O

CI 06 SC Table 2 P 24 L 19 # 1396

Shvodian, William XtremeSpectrum

Comment Type T Comment Status A
Is EPS Sync only allowed in the PNC?

SuggestedRemedy
Clarify

Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. Clarification will be made in 7.5.7.1.

CI 06 SC Table 2 P 24 L 25 # 878

Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
missing definite article

SuggestedRemedy
from errors rather than waiting for the next

Proposed Response Response Status O

CI 06 SC Table 2 P 24 L 43 # 879

Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status A
Reason code definitions ... there are no reason codes in clause 7.5.7.2

SuggestedRemedy
have management subgroup provide proper reference to reason codes

Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. Change xref from 7.5.7.2. To Table 67. Change ResonCode to ActionType.

CI 06 SC Table 22 P 49 L # 918

Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
Provide a figure that shows the vector representation of "ServiceFlowList" and "ARQList" as reflected in tables 23 and 24 respectively.

SuggestedRemedy
Add these two figures to clause 6.3.13

Proposed Response Response Status O

CI 06 SC Table 22 P 49 L # 1427

Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Direction bit needed for the MLME-CREATE-STREAM parameters.

SuggestedRemedy
Add direction bit.

Proposed Response Response Status O

CI 06 SC Table 22 P 49 L 17 # 1426

Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
2 octet SequenceNumber is inconsistent with the 1 octet stream requeest identifier in the stream request command. Also, we have a Sequence Number field in the MAC header - 2 words, but still too close.

SuggestedRemedy
Change 2 octet Sequence Number field to 1 octet StreamRequestIdentifier. Change all instances of SequenceNumber to StreamRequestIdentifier in all of clause 6.

Proposed Response Response Status O

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CI 06 SC Table 22 P 49 L 5 # 1425
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Source Address and destination address should be the 48 bit MAC address, not the 8 bit AD-AD. This is for 2 reasons: 1) to be consistent with the other MLMEs. Wo does the address translation, the DME or the MLME? We need to be consistent. Second, the stream request command should contain MAC addresses, not AD-ADs to safeguard against discrepancies.

SuggestedRemedy
Replace these 8 bit AD-ADs with 48 bit MAC Address
Proposed Response Response Status O

CI 06 SC Table 23 P 49 L 3540 # 1429
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Remove Peak Rate, Min rate and Max Burst Size from from service flow and stream mangement. The PNC cannot guarantee any of these. It can only guarantee channel time. If RSVP or other reservation protocol is used, the will negotiate at a higher layer, not at the MAC.

SuggestedRemedy
Remove Peak Rate, Min rate and Max Burst Size from from service flow and stream mangement.
Proposed Response Response Status O

CI 06 SC Table 23 P 49 L 49 # 139
DuVal, Mary Texas Instruments

Comment Type TR Comment Status X
Is MaxTXDelayVariation the same thing as Jitter? 802.11e has both a jitter and a delay bound. Which is being specified here?

SuggestedRemedy
I would like to see both jitter and delay defined.
Proposed Response Response Status O

CI 06 SC Table 25 P 55 L # 920
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
Add a figure to show the ChannelTimeList vector as referenced in table 26

SuggestedRemedy
Add this figure
Proposed Response Response Status O

CI 06 SC Table 25 P 55 L # 921
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
How is EPS impacted by a stream modification. Does the "SlotStartTimeSet" parameter shown in table 25 also apply to SFNext?

SuggestedRemedy
Refer this question to the power management subcommittee.
Proposed Response Response Status O

CI 06 SC Table 26 P 55 L 42 # 141
DuVal, Mary Texas Instruments

Comment Type TR Comment Status X
Is Maximum allocation delay the same thing as Jitter? 802.11e has both a jitter and a delay bound. Which is being specified here?

SuggestedRemedy
I would like to see both jitter and delay defined.
Proposed Response Response Status O

CI 06 SC Table 28 P 61 L 33 # 605
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
The RemoteDEVAddress is an inconsistent parameter name. Also its data type is incorrect.

SuggestedRemedy
Please change RemoteDevAddress to RemoteDevAID and its data type to an integer with a range of 0-255
Proposed Response Response Status O

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CI 06 **SC Table 29** **P 64** **L 45** **# 622**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **X**
 The ChannelChangeTimeout data type is incorrect.
SuggestedRemedy
 Please change the data type from octet to Duration with valid range of 0 to 255 ms?
Proposed Response *Response Status* **O**

CI 06 **SC Table 3** **P 26** **L 16** **# 562**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **TR** *Comment Status* **R**
 The OpenScan paramter is unneeded.
SuggestedRemedy
 Please remove the OpenScan parameter from Table 3.
Proposed Response *Response Status* **C**
 PROPOSED REJECT.

CI 06 **SC Table 3** **P 26** **L 22** **# 563**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **TR** *Comment Status* **R**
 The definition for PNID is partially correct.
SuggestedRemedy
 Please change the definition from its current text to: PNID "indicates to the MLME to either search for a specific PNID when the PNID is set to 0x0000 through 0xFFFF, or search for all PNIDs when the PNID is set to 0xFFFF."
Proposed Response *Response Status* **C**
 PROPOSED REJECT. Openscan is used rather than a reserved PNID.

CI 06 **SC Table 3** **P 26** **L 27** **# 881**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **A**
 Valid range for the ChannelScanDuration
SuggestedRemedy
 range is listed as 100-65535 ... should this be 0-65535?
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT.

CI 06 **SC Table 3** **P 26** **L 29** **# 564**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **A**
 The last sentence of the ChannelScanDuration description is not needed.
SuggestedRemedy
 Please remove the last sentence of the ChannelScanDuration description.
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT.

CI 06 **SC Table 30** **P 66** **L 11** **# 629**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **X**
 DEVInfoSet is an incorrect parameter name.
SuggestedRemedy
 Please change the DEVInfoSet parameter name to: PNCInfoSet.
Proposed Response *Response Status* **O**

CI 06 **SC Table 30** **P 66** **L 5** **# 627**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **X**
 QueriedDEVIDSet is an incorrect parameter name, data type and valid range.
SuggestedRemedy
 Please change the QueriedDEVIDSet parameter name to QueriedDEVAID; its data type to Integer, and its valid range to 0-255. Also change the description to: " The QueriedDEVAID when set to an integer value less than 255 will return information from the PNC regarding a CTA for a specific DEV. It the QueriedDEVAID is set to a broadcast AID value of 255 then the PNC will return CTA information for all the
Proposed Response *Response Status* **O**

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CI 06 SC Table 30 P 66 L 8 # 628
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
The RequestorDEVAddress parameter name, its data type, valid range and description are incorrect.

SuggestedRemedy
Please change the RequestorDEVAddress to RequestorDEVAID, its data type to Integer, its valid range to 0-255 and its description to:"The DEVAID of the DEV that is requesting the information from the PNC.

Proposed Response Response Status O

CI 06 SC Table 31 P 68 L 39 # 642
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
DestinationDEVAddress parameter name is incorrect, data type is incorrect, valid range is incorrect, and description are incorrect.

SuggestedRemedy
Please change parameter name to RemoteDEVAID, data type to Integer, Valid range to 0-255, and description to: "The RemoteDEVAID of the DEV from ..."

Proposed Response Response Status O

CI 06 SC Table 31 P 68 L 42 # 643

Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X

RequestorDEVAddress parameter name is incorrect, the data type is incorrect, valid range is incorrect, and the description is incorrect.

SuggestedRemedy
Please change parameter name to: RequestorDEVAID, the data type to: Integer, the valid range to: 0-255, and the description to: " The DEVAID of the DEV requesting the information."

Proposed Response Response Status O

CI 06 SC Table 31 P 68 L 50 # 644
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
The ReasonCode data type field is incorrect and its valid range is incorrect.

SuggestedRemedy
Please change ReasonCode data type field to: Enumeration, and the valid range to: "SUCCESS, RESPONSE_TIMEOUT

Proposed Response Response Status O

CI 06 SC Table 38 P 75 L 34 # 1447
Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
Dont really need 65535 CTAs

SuggestedRemedy
Change MACPIBMaxProcessedCTAs to 8 bits

Proposed Response Response Status O

CI 06 SC Table 39 P 76 L # 1248
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X

The second entry in this table is "privacy". Are we going to call this privacy or security.

SuggestedRemedy
Remove all reference to "privacy and private" and replace with "security or secure". (The other way around is ok to, but we need to be consistent.)

Proposed Response Response Status O

CI 06 SC Table 41 P 76 L 40 # 145

DuVal, Mary Texas Instruments

Comment Type E Comment Status X
PHYPIB_Type includes definitions for currently undefined PHYs (5 GHz and UWB). It is good to put a place holder, but do not presume a solution before the SG3a group has a chance to determine future possibilities.

SuggestedRemedy
Indicate the values are reserved for future PHYs

Proposed Response Response Status O

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CI 06 SC Table 41 P 76 L 43 # 232
Gifford, Ian Self

Comment Type E Comment Status X
In Table 41 the terms "UWB and ETSI, FCC, IC, ARIB" are introduced for the first time and are not defined in this clause and/or Clause 4.

SuggestedRemedy
Please add "UWB ultra-wideband and ETSI European Telecommunications Standards Institute, FCC Federal Communications Commission, IC Industry Canada, ARIB Association of Radio Industries and Businesses" to Clause 4.

Proposed Response Response Status O

CI 06 SC Table 44 P 77 L # 941
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
The Managed objects are PHY dependent but are not defined in clause 11.

SuggestedRemedy
The PHY subcommittee needs to add the following items to clause 11
PHYPIB_TxMaxPower PHYPIB_TxPowerStepSize PHYPIB_CurrentPowerLevel

Proposed Response Response Status O

CI 06 SC Table 47 P 78 L # 942
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
Managed Object in Table 47 is misspelt

SuggestedRemedy
Correct spelling ... it should be PHYPIB_MPDULengthMax

Proposed Response Response Status O

CI 06 SC Table 47 P 78 L # 943
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
Clause 11 does not list the managed object

SuggestedRemedy
Define PHYPIB_MPDULengthMax in clause 11 ... refer to PHY subcommittee

Proposed Response Response Status O

CI 06 SC Table 48 P 79 L # 944
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
Managed Object is misspelt

SuggestedRemedy
Spelling should be PHYPIB_CCAThreshold

Proposed Response Response Status O

CI 06 SC Table 5 P 27 L 35 # 565
Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status A
DeviceID is inconsistently used through out the document.

SuggestedRemedy
Please change DeviceID to DeviceAddress when referring to a parameter of data type address(48bit). It is a more accurate description of the data type. The association between DeviceID and MAC address is not intuitively obvious.

Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. Use DEV Address and DEVAddress instead of DeviceID and Device ID as appropriate when referring to a 48-bit MAC address.

CI 06 SC Table 5 P 27 L 37 # 566
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status A
The Beacon Period data type is incorrect.

SuggestedRemedy
Please change the Beacon Period data type to duration.

Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. Change all time durations to be type duration, change most octets to be integer, byte string to octet string, only in type columns of tables in clause 6.

CI 06 SC Table 5 P 27 L 39 # 567
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status A
The parameter Channel is incomplete.

SuggestedRemedy
Please change the parameter Channel to ChannelIndex and its data type to integer.

Proposed Response Response Status C
PROPOSED ACCEPT.

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Cl 06 **SC Table 5** **P 27** **L 41** **# 568**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **A**
 The parameter name " Parent Device ID" is inconsistent.
SuggestedRemedy
 Please change the parameter name from Parent Device ID to ParentDevAddress which is more consistent with its data type of MAC address(48bit)
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT.

Cl 06 **SC Table 50** **P 79** **L** **# 946**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Clause 11 does not address the managed objects of table 50
SuggestedRemedy
 The PHY committee needs to add reference to the values used for PHYPIB_NumPSLevels and PHYPIB_PSLevelReturn.
Proposed Response *Response Status* **O**

Cl 06 **SC Table 54** **P 84** **L** **# 952**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Add figures to illustrate the vectors TXVECTOR and RXVECTOR
SuggestedRemedy
 add two figures
Proposed Response *Response Status* **O**

Cl 06 **SC Table 54** **P 84** **L 11** **# 149**
 DuVal, Mary Texas Instruments
Comment Type **E** *Comment Status* **X**
 "A set of parameters" - not very descriptive
SuggestedRemedy
 add "(see Table 56)"
Proposed Response *Response Status* **O**

Cl 06 **SC Table 54** **P 84** **L 8** **# 148**
 DuVal, Mary Texas Instruments
Comment Type **E** *Comment Status* **X**
 "A set of parameters" - not very descriptive
SuggestedRemedy
 add "(see Table 55)"
Proposed Response *Response Status* **O**

Cl 06 **SC Table 55** **P 84** **L** **# 953**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Unused parameter ...
SuggestedRemedy
 In table 55, in the value column for parameter Length, it is stated the max number of octets is determined by PHYPIB_LengthMax. Should this be PHYPIB_MPDU_LengthMax. If not, then where is PHYPIB_LengthMax defined?
Proposed Response *Response Status* **O**

Cl 06 **SC Table 56** **P 84** **L 33** **# 1458**
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Remove PHYPIB_DataRates from the Rx vector. It should be Rxrate, not PIB.
SuggestedRemedy
 Change PHYPIB_DataRates to RxRate
Proposed Response *Response Status* **O**

Cl 06 **SC Table 6** **P 28** **L 25** **# 883**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **A**
 Type for SyncFailureTimeout
SuggestedRemedy
 Should this be one octet? Is there an upper limit?
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT IN PRINCIPLE. Resolved as in 566. Upper limit not specified.

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CI 06 SC Table 8 P 29 L 25 # 570
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status A
DeviceID is inconsistent with its data type.

SuggestedRemedy
Please change DeviceID to DeviceAddress since its data type is MAC address(48bit)

Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. DEVAddress

CI 06 SC Table 8 P 29 L 31 # 884
Roberts, Richard XtremeSpectrum

Comment Type T Comment Status A
Type for AssociationTimeOutPeriod

SuggestedRemedy
Should be integer with 2 octets

Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. Duration. See 566 for direction.Change valid range to be Xref to 7.5.2.1. Add in 7.5.2.1, this implies a range of 0-65535 ms.

CI 06 SC Table 8 P 29 L 32 # 572
Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status A
AssociationTimeOutPeriod has an incorrect data type.

SuggestedRemedy
The AssociationTimeOutPeriod data type should be changed from Integer to Duration.

Proposed Response Response Status C
PROPOSED ACCEPT.

CI 06 SC Table 8 P 29 L 33 # 571
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status A
AssocDevAddress is inconsistent with its data type.

SuggestedRemedy
Please change AssocDevAddress to DeviceAid which is short for Device Association ID. Also change the data type from octet to integer.

Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. Change AssocDevAddress to DevID.

Note: Change AD-AD to DevID as well in draft.

CI 06 SC Table 9 P 32 L 18 # 663
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status A
The ReasonCode parameter, data type, valid range, and Description are unnecessary given the new name of this primitive.

SuggestedRemedy
Please remove the indicated fields from the table.

Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. Table 9 has been deleted.

CI 06 SC Table 9 P 32 L 20 # 664
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status A
The DeviceID parameter name, and description are incorrect.

SuggestedRemedy
Please change the DeviceID parm name to DeviceAddress. Also change the Description to: The deviceAddress of the DEV that has been associated.

Proposed Response Response Status C
Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. Table 9 has been deleted.

CI 06 SC Table 9 P 32 L 23 # 665
Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status A
The AssocDEVAddress parm name, data type, and description are incorrect.

SuggestedRemedy
Please change the parm name to DeviceAID; the data type to Integer; and the description to: " The association ID of a new device that has become associated with

Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. Table 9 has been deleted.

CI 06 SC Table1 P 2223 L 35 # 1392
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
Table is missing some lines

SuggestedRemedy
SuggestedRemedy
Fix the table

Proposed Response Response Status O

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CI 06 SC Table13 P 35 L 5 # 1414
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 All the parameters in this table need maximum values in the valid range column so that implementers can choose the proper number of bits to use in their implements.
SuggestedRemedy
 Add maximum values into the Valid Range column for all fields.
Proposed Response *Response Status* **O**

CI 06 SC Table14 P 37 L 37 # 1415
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Table 14 needs maximum valuse in the range so that implementers can size their
SuggestedRemedy
 Add maximum values into the range column in Table 14
Proposed Response *Response Status* **O**

CI 06 SC Table15 P 40 L 13 # 1418
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 Need to define KEK, DEK, DIK, and SEED for us non-cryptographers, besides just the acronyms.
SuggestedRemedy
 Define KEK, DEK, KIK, and SEED, besides just the acronym.
Proposed Response *Response Status* **O**

CI 06 SC Table15 P 40 L 725 # 1417
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Table 15 needs maximum values in the range column
SuggestedRemedy
 Add max into the Valid Range column
Proposed Response *Response Status* **O**

CI 06 SC Table16 P 42 L 32 # 1420
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Need max values column
SuggestedRemedy
 Need Max Values Column.
Proposed Response *Response Status* **O**

CI 06 SC Table2 P 24 L # 1406
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 If you have peer wakeup, you need to have a peer address
SuggestedRemedy
 add peer address to the MLME parameters
Proposed Response *Response Status* **Z**

CI 06 SC Table2 P 24 L 23 # 1401
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 It is not clear why the PNC needs to know that the device is RPS vs. PM_OFF.
SuggestedRemedy
 Remove RPS as a state altogether. Any device can do what is described here ase RPS. There is no need to differetiate between active and EPS.
Proposed Response *Response Status* **O**

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CI 06 SC Table2 P 24 L 28 # 1402
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status A
Why is PowerManagementPriority here and not in the capability field where it belongs.

SuggestedRemedy
Remove PowerManagement Priority from the MLME. Add it to the PIB if it is really needed, or better yet eliminate it. What is to keep manufactureres from setting this to the High for all their devices so that they appear to get better battery life than the competitors. Our hardware team says that slot positions will not save any significant

Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. Remove from the MLME. Add to the PIB capability information element. Put in bits 8-9 in Figure 22. Ensure that it can be set from the Dev host. Delete PowerMgmtPriority from Figure 58 page 125 section 7.5.7.3.

CI 06 SC Table2 P 24 L 33 # 1403
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
I see no mention of ReasonCode in 7.5.7.2

SuggestedRemedy
Should Reason Code really be Action Type in Table 67?

Proposed Response Response Status O

CI 06 SC Table2 P 24 L 37 # 1400
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status A
There is no request type for Peer Wakeup, wakeup, DEV to PNC PS Information

SuggestedRemedy
Add Peer wakeup request type

Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. Split MLME PowerMgmt command into separate MLMEs for each command. Jay and WMS are providing.

CI 06 SC Table2 P 24 L 5 # 1394
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
I don't see RequestType in 7.5.7.1. Is this the same as EPS Action request command entries?

SuggestedRemedy
Please Clarify

Proposed Response Response Status O

CI 06 SC Table28 P 61 L 32 # 1436
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
Table is missing a vertical line between Valid Range and Description

SuggestedRemedy
Add the vertical line

Proposed Response Response Status O

CI 06 SC Table28 P 61 L 33 # 1437
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
RemoteDEVAddress does not match the parameters in the MLMEs

SuggestedRemedy
remove RemoteDEVAddress and add DestinationevAddress (or replacement) and RequestorDEVAddress (or replacement)

Proposed Response Response Status O

CI 06 SC Table31 P 26 L 21 # 1408
Shvodian, William XtremeSpectrum
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status A
Where does the DEV get the PNID from to scan for? Are PNIDs random at startup, or does PNC always use same PNID? What if different PNC?

SuggestedRemedy
Need to address where PNID to scan for comes from.

Proposed Response Response Status C
PROPOSED ACCEPT IN PRINCIPLE. DME has option of remembering PNID to allow DEV to join a specific piconet.

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CI 06 SC Table37 P 75 L 7 # 1446
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 What is MACPIBCFPMaxDuration used for
SuggestedRemedy
 Get rid of MACPIBCFPMaxDuration
Proposed Response *Response Status* **O**

CI 06 SC Table39 P 76 L # 1448
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 Why are table 39 and 40 in Clause 6.6?
SuggestedRemedy
 Move table 39 and 40 to clause 6.5
Proposed Response *Response Status* **O**

CI 06 SC Table42 P 77 L # 1449
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 PHYPIB_CurrentDataRate shouldn't be a PHY PIB. It is passed at the PHY SAP on a packet by packet basis.
SuggestedRemedy
 Remove PHYPIB_CurrentDataRate from the PIB
Proposed Response *Response Status* **O**

CI 06 SC Table43 P L # 1450
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **A**
 Current Rx and TX antenna are passed at the PHY SAP and should not be PIB values because they are set on a packet by packet basis.
SuggestedRemedy
 Remove current Rx and Current Tx antenna from PIB
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT.

CI 06 SC Table44 P 77 L 52 # 1451
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Current Power Level doesn't belong in the PIB. It is sent with each packet at the PHY
SuggestedRemedy
 Remove PHYPIB_CurrentPowerLevel from the PIB
Proposed Response *Response Status* **O**

CI 06 SC Table5 P 27 L 33 # 1410
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **A**
 There is no way to indicate that a frame with the PNID was found, but not a beacon
SuggestedRemedy
 Add a "PiconetStatus" where 0 indicates no frames were found, 1 indicates frames were found but not the beacon, and 2 indicates the beacon was found.
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT IN PRINCIPLE. Type will be integer. Valid range 0-2.

Note: This will improve ability to detect other piconets and reduce likelihood of starting another piconet in an occupied channel.

CI 06 SC Table5 P 27 L 43 # 1412
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **A**
 No indication of power level if no beacon found.
SuggestedRemedy
 Provide a signal strength field for avoidance of 802.11 or other users
Proposed Response *Response Status* **C**
 PROPOSED ACCEPT IN PRINCIPLE.

Add to MLME-SCAN a parameter, Channel Rating, type integer, valid range 0-255, that rates channels, 1 through N from "best" to "worst", 1 is the best channel (i.e. least interference) while N is the worst channel, (i.e. the most interference.)

Add to scan procedure:
 "If a DEV is looking to start a new piconet, then it should also look for potential interference in the channels that it scans and rate the channels, from best (lowest interference) to worst (highest interference) and return this information in the MLME-SCAN.confirm command via the ChannelRating. The DEV should choose to start the piconet in the channel with the least amount of interference in the channel."

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CI 06 SC Table55 P 84 L # 1457
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Data Rate and Power Level should not be PIB parameters. Rename the value.

SuggestedRemedy
change data rate and power level from being PIB valuse

Proposed Response Response Status O

CI 06 SC Tables 55 and 56 P 84 L # 954
Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
Add text to explain why the TX and RX MAC headers are passed in the TX and RX

SuggestedRemedy
Text that can be added to clause 6.9.4 "The MAC headers TxMacHead and RxMacHead are passed in the TX vector and RX vector respectively to facilitate calculation of the HCS as illustrated in Figure 107."

Proposed Response Response Status O

CI 07 SC P 109 L 33 # 1499
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
If the device uses EPS power management at any time during a session, this field is set to 2. Is this bit set anticipating EPS being used, or is it set after EPS is first used? After an EPS set id joined?

SuggestedRemedy
Please clarify.

Proposed Response Response Status O

CI 07 SC 1 P 93 L 12 # 151
DuVal, Mary Texas Instruments

Comment Type E Comment Status X
Figure desired to outline the MAC frame format

SuggestedRemedy

Proposed Response Response Status O

CI 07 SC 12 P 97 L 12 # 1469
Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
Do we really need a 16 bit sequence number? If we eliinate delayed ACK, we can probably get away with a 4 bit sequence number.

SuggestedRemedy
Reduce sequence number to 4 bits if we eliminate delayed ACK.

Proposed Response Response Status O

CI 07 SC 2 P 94 L 4 # 152
DuVal, Mary Texas Instruments

Comment Type E Comment Status X
"Each field is defined in 7.2.1." - Shouldn't this be 7.2?

SuggestedRemedy

Proposed Response Response Status O

CI 07 SC 2.1.10 P 96 L 15 # 154
DuVal, Mary Texas Instruments

Comment Type T Comment Status X
"repeater service" - why is this service needed? Wouldn't the devices just talk in a peer to peer mode? What benefit is there to having a go between (the PNC)?

SuggestedRemedy
Need understanding of this feature. Not explained well.

Proposed Response Response Status O

CI 07 SC 2.1.4 P 95 L 32 # 491
GUBBI, RAJUGOPAL Broadcom, corp

Comment Type E Comment Status X
use of word can mean different thing to different people

SuggestedRemedy
replace "maintain word aligned frames" to "maintain two-octet alignment of the frames"

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 07 SC 2.1.7 P L # 492
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
 Retry bit: This bit is unnecessary since the MAC will have to check for seq-number in the rx-frame to detect duplicates anyway.

SuggestedRemedy
 Remove "retry bit" from frame control field and mark its current position as reserved for future use

Proposed Response Response Status O

CI 07 SC 2.3 P L # 495
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
 Reserve 0xF0 to 0xF9 for future use: We never know what else we'll need special addresses for.

SuggestedRemedy
 Reserve 0xF0 to 0xF9 for future use

Proposed Response Response Status O

CI 07 SC 2.3 P 97 L 8 # 496
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
 In clause 8, it is mandated that isoch data shall always be streams. But here it seems to say it is upto DEV.

SuggestedRemedy
 Remove "or isochronous" in line 8 and add "All isochronous data transfers shall be

Proposed Response Response Status O

CI 07 SC 2.4 P 97 L 6 # 155
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X

This information is already stated on page 96, line 52. This paragraph is not needed.

SuggestedRemedy
 Delete the paragraph.

Proposed Response Response Status O

CI 07 SC 2.9.1 P L # 494
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type E Comment Status X
 add a line describing the situation of SEC bit being set to '0'. otherwise it might be interpreted to be undefinde behavior.

SuggestedRemedy
 When SEC bit is set 0 the frame body shall not be encrypted.

Proposed Response Response Status O

CI 07 SC 3 P 98 L 14 # 156
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 "... four defined frame types." - What are they? Please list them, otherwise the sentence is useless.

SuggestedRemedy
 State frame types up front.

Proposed Response Response Status O

CI 07 SC 3.1 P L # 1709
 Young, Song-Lin Sharp Labs. of

Comment Type E Comment Status X
 No frame format for Beacon like that of Fig. 14 & 16

SuggestedRemedy
 Add general data frame for Beacon

Proposed Response Response Status O

CI 07 SC 3.1 P 98 L 29 # 157
 DuVal, Mary Texas Instruments

Comment Type T Comment Status X
 "The information elements in the beacon frame may appear in any order in the beacon ..." - How do you know what you are looking at if they can appear in any order?

SuggestedRemedy
 Clarify meaning or method of information determination.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 07 SC 3.1 P 98 L 30 # 158
 DuVal, Mary Texas Instruments

Comment Type T Comment Status X
 "... DEVs may ignore any elements in the beacon that are not listed in Table 60." - then what are the optional elements that can be ignored. Please state them explicitly.

SuggestedRemedy
 Need a clear understanding of what is optional and what is mandatory.

Proposed Response Response Status O

CI 07 SC 3.1, Table 60 P 98 L # 1708
 Young, Song-Lin Sharp Labs. of

Comment Type E Comment Status X
 DEV GTS status (7.4.12) information is not listed in Table 60

SuggestedRemedy
 Add DEV GTS status as an entry in Table 60

Proposed Response Response Status O

CI 07 SC 3.1, Table 60 P 98 L # 1721
 Young, Song-Lin Sharp Labs. of

Comment Type TR Comment Status X
 PNC should be able to broadcast Application specific information (Table 63, p101) as needed

SuggestedRemedy
 Add entry for Application specific information in Table 60

Proposed Response Response Status O

CI 07 SC 4 P L # 498
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
 Is Transmit power change an info-element or command? it is listed in Table-63 on page 101, but described as a command in 7.5.5.1. In addition 8.14.2 references this as a command. the description in 7.5.5.1 describes this as an info-element

SuggestedRemedy
 Chnage the description in 7.5.5.1 from info-element to command

Proposed Response Response Status O

CI 07 SC 4 P L # 497
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
 Is Transmit power change an info-element or command? it is listed in Table-63 on page 101, but described as a command in 7.5.5.1. In addition 8.14.2 references this as a command

SuggestedRemedy
 Move Transmit power change from Table-63 to Table-65

Proposed Response Response Status O

CI 07 SC 4.10 P 106 L # 502
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
 Given that there can be different guard-band between GTS and between CFP and CAP depending on PHY type and network conditions, it is a good idea to let the PNC account for it when allocating the channel time. To enable that degree of freedom at PNC we need "Slot-duration" in CTA-block in figure-30

SuggestedRemedy
 Add a two-octet long Slot-duration field in figure-30 (and text in clause 7.4.10) with the resolution of this field being 8-microsec.

Proposed Response Response Status O

CI 07 SC 4.10 P 107 L # 503
 CI 07 SC 4.10 P 107 L # 503
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
 Key change field in figure-31 is unused

SuggestedRemedy
 remove "key change" field from figure-31 and mark b2 as reserved.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 07 SC 4.10 P 107 L # 504
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type E Comment Status X
 Definition of SFNext is better suited to be later in the sub-clause

SuggestedRemedy

1. move lines 27:31 on page 107 to be starting right after the current line number 44 on the same page. 2. change "as the SFNext" on line 26, page 107 to "as the SFNext, which is defined later in this clause" 3. reference the place of definition for EPSNext at its first use (at current line #30, page 107) 4. change the second occurrence of "set to 0" on line 34, page 107 to "set to 1" 5. remove line 36 6. Use of "slot location field" in lines 37:43 on page 107, without its definition. Actually its name is different in figure-30.

Proposed Response Response Status O

CI 07 SC 4.10 P 107 L 34 # 161
 DuVal, Mary Texas Instruments

Comment Type T Comment Status X
 "The bit shall be set to 0 if they are in ACTIVE mode and shall be set to 0 if they are in EPS mode." Which one should be set to 1?

SuggestedRemedy

Pick a value of 1.

Proposed Response Response Status O

CI 07 SC 4.10 P 107 L 35 # 162
 DuVal, Mary Texas Instruments

Comment Type TR Comment Status X
 This paragraph is very vague and does not say anything. Given the TBD, I assume this is a place holder for data to come.

SuggestedRemedy

Looks like agreement is needed here to determine the requirement for this place holder. Finish discussion and complete requirement.

Proposed Response Response Status O

CI 07 SC 4.10 P 107 L 35 # 1351
 Seals, Michael Intersil

Comment Type TR Comment Status X
 The meaning of the key change bit is TBD.

SuggestedRemedy

Define the meaning or remove the bit.

Proposed Response Response Status O

CI 07 SC 4.10 P 107 L 38 # 163
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 This paragraph is a repeat of one on page 107, line 23.

SuggestedRemedy

Consolidate information.

Proposed Response Response Status O

CI 07 SC 4.10 P 107 L 46 # 505
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
 Use of "guard time" without defining it. Beacon does not contain it.

SuggestedRemedy

Remove line-46 and all references to "guard time" in the draft. However state in clause 8.4.3.2, add a paragraph describing the need for guard time and how PNC is expected to take that into account while allocating the channel time.

Proposed Response Response Status O

CI 07 SC 4.11 P 108 L # 506
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type E Comment Status X
 Lack of examples to MaxAssignedCTAs and MaxProcessedCTAs make the readers think they are same.

SuggestedRemedy

Add examples to clearly state the differences and relation between MaxAssignedCTAs and MaxProcessedCTAs.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 07 SC 4.12 P 108 L # 507
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **TR** Comment Status **X**
 line-37 claims that the "element" itself is 256 bit bitmap where as figure-33 has 8-octets (64 bits) of bitmap as a field of the element. If DEV is required to look at CTAs in the worst case what savings is envisioned by this element that reduces the complexity of an implementation. At best this adds complexity to the implementation in checking these bits and then checking the GTS AND it adds to the overhead in the beacon. Besides that, having read EPS several times now, I am not convinced about the justification to add this complex mechanism in to the MAC. Later comments will detail

SuggestedRemedy
 Remove DEV GTS status element and all references to it from the draft.
 Proposed Response Response Status **O**

CI 07 SC 4.13 P 109 L # 508
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **TR** Comment Status **X**
 1. Figure-34 is inconsistent in "length" field and the contents of the element 2. Nowhere in the draft I see the text describing how this is set at PNC and how it is used at DEVs. 3. on lines 35:36: If EPS device is asleep how does it make use of this info? if this is for other DEVs, how is it useful. 4. What is the guarantee that DEVs always get EPS status of another DEV through beacon? Why not use a simple mechanism wherein a DEV can tell the PNC that it is going to be asleep and hence not allocate GTS with the current DEV in question as the recipient? What is the justification for the complexity of this mechanism that is being thrust upon implementors?

SuggestedRemedy
 Simplify "power management parameters" to have just the list of Device addresses of those DEVs that are currently asleep. no other field is needed as the receiving DEVs know that if an address is present in this list, that device is asleep.
 Proposed Response Response Status **O**

CI 07 SC 4.13 P 109 L 18 # 165
 DuVal, Mary Texas Instruments

Comment Type **T** Comment Status **X**
 What is a "EPS set"? Where is it defined? For that matter, where is RPS defined? Is it a parameter set by the design and communicated through the PIB?

SuggestedRemedy
 Proposed Response Response Status **O**

CI 07 SC 4.14 P 109 L # 509
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **E** Comment Status **X**
 Figure 36: spec on length missing
 SuggestedRemedy
 Figure 36: mark the length of variable field (app-specific data) as 'n' and note in the Length field that the length is equal to 'n+1'

Proposed Response Response Status **O**

CI 07 SC 4.15 P 110 L # 511
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **E** Comment Status **X**
 Ordering the subclauses for commands to be in the same order as the order of commands in Table-65 is very helpful
 SuggestedRemedy
 Reorder the subclauses describing the individual commands to be in the same order as their appearance in Table-65
 Proposed Response Response Status **O**

CI 07 SC 4.15 P 110 L # 512
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **TR** Comment Status **X**
 Just the number of commands, fields/subfields in information elements makes one wonder why power management has to be this complex. Why not simple commands like (a) sleep-time-request from DEV to PNC (b) sleep-time-grant/reject from PNC to DEV? What is not being achieved in those simple commands that is being achieved by this complex mechanism? What is the justification to add this complex mechanism to a draft that is supposed to spec a low-cost, low-power PAN implementation?

SuggestedRemedy
 Remove all the power management commands and all the references to them from the draft. Simplify power management to the following - Request for sleep time by DEV - Accept/Reject by PNC - Broadcast the addresses of sleeping DEV in Beacon - Allocation/modification of GTS by PNC depending on who is awake
 Proposed Response Response Status **O**

P802.15.3 Draft 09 Comments

CI 07 SC 4.15 P 110 L # 510
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **TR** Comment Status **X**
 For ease of understanding and implementation (use of clean ifs and elses), there is a need to reorder the command-type value to a given command.

SuggestedRemedy
 Move the association related commands to the top to start from value 0x0000, followed by authentication commands.

Proposed Response Response Status **O**

CI 07 SC 4.2 P 103 L 13 # 499
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **TR** Comment Status **X**

Why should PNC increment and publish DEK? if the key is changed the key-distribution scheme should make sure all the relevant DEVs in the piconet are informed before the change. Moreover, keys must be per-link and not global per piconet.

SuggestedRemedy
 Remove Key number from Figure-19 and all references to it from the draft

Proposed Response Response Status **O**

CI 07 SC 4.3, Fig.22 P 103 L # 1722
 Young, Song-Lin Sharp Labs. of

Comment Type **TR** Comment Status **X**
 No information regarding possible applications/services will provided by a devices (host) is included in capability field. Products should be classified based on application (PDA, Digital camera, camcorder, etc) and mapped to one field of capability. Therefore, a DEV can pre-filter device information sent by PNC(device information response command) for further actions. Currently no information is provided to DME for a device to select peer devices in the piconet for communication after association.

SuggestedRemedy
 Add 'product category' field to capability information

Proposed Response Response Status **O**

CI 07 SC 4.5 P 104 L 54 # 160
 DuVal, Mary Texas Instruments

Comment Type **T** Comment Status **A**
 "in Kus" (with u meaning micro here) - is this to mean that units are 1024 usescs?

SuggestedRemedy
 Unclear about actual meaning. State clearly.

Proposed Response Response Status **C**
 Changing all Kus to ms in document.

CI 07 SC 4.6 P 105 L # 500
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **TR** Comment Status **X**
 Supported rates in 11.7 presents less than one octet encoding to indicate the support for multiple rates.

SuggestedRemedy
 Change "supported rates" field in figure-25 from (1-8) octet(s) to 1-octet.

Proposed Response Response Status **O**

CI 07 SC 4.7 P 105 L # 501
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **E** Comment Status **X**
 Use of OID is confusing as the same term is used for the first 3-octets of IEEE MAC addresses.

SuggestedRemedy
 Pick a new name for OID in this subclause and at all places referencing to it in the draft

Proposed Response Response Status **O**

CI 07 SC 5.1 P L # 513
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **E** Comment Status **X**
 some inconsistencies

SuggestedRemedy
 1. 7.5.1.1, 7.5.1.2 and 7.5.1.3 describe them as "action types". change the description to "commands" 2. these subclause must refer to figure-37 for command structure 3. Change the caption of figure-37 to "PNC selection commands format"

Proposed Response Response Status **O**

P802.15.3 Draft 09 Comments

CI 07 SC 5.1 P 112 L 33 # 166

DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 "in Kus" (with u meaning micro here) - is this to mean that units are 1024 usecs?

SuggestedRemedy
 State meaning clearly

Proposed Response Response Status O

CI 07 SC 5.10 P L # 523

GUBBI, RAJUGOPAL Broadcom, corp

Comment Type E Comment Status X
 length nconsistency

SuggestedRemedy
 Inconsistency in the content of length field "n*10". change it is "n*12"

Proposed Response Response Status O

CI 07 SC 5.10 P 130 L 25 # 1716

Young, Song-Lin Sharp Labs. of

Comment Type TR Comment Status X

It is confusing that this command seems suggesting a DEV seeking to communicate with target DEV needs to use this command,even if after a stream connection has been established. While CTA for one stream is assigned at the end of stream conection

SuggestedRemedy
 Clarify if this command is used in conjunction with streme management command for establishment of communication and required for allocating time slots for the stream

Proposed Response Response Status O

CI 07 SC 5.10.1 P L # 525

GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
 Minimum GTS time can be reduce to one octet. If the other octet has to be left reserved, so be it since that creates room for future expansion.

SuggestedRemedy
 1. Reduce Minimum GTS time to one octet in figure-72 2. Make the name of the field and the description uniform with that in figure-66. Better yet, describe at one place and reference it at another to avoid duplication

Proposed Response Response Status O

CI 07 SC 5.10.1 P L # 524

GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
 Again, the complexity of power management has crept into frame formats of CTRB also. And the PNC must strive to rx and set these values appropriately for all different combinations, while the DEVs strive to produce/consume those bits and act appropriately. Why? Why not a simple mechanism of one command exchange between DEV and PNC to tell whether a DEV is planning to go to sleep? I don;t see any justification for this complexity all around the spec for power management.

SuggestedRemedy
 Remove CTRB type, EPS set and allocation period from figure-72 and all references to those fields from the draft.

Proposed Response Response Status O

CI 07 SC 5.10.1 P L # 527

GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
 Action type is incomplete

SuggestedRemedy
 specify a value of '3' to be applicable for "Dest-DEV to PNC" case also.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 07 SC 5.10.1 P L # 526
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **TR** Comment Status **X**
 The complexity of power management has crept into frame formats of channel time grant and stream management also. The PNC must strive to rx and set these values appropriately for all different combinations, while the DEVs strive to produce/consume those bits and act appropriately. Why? Why not a simple mechanism of one command exchange between DEV and PNC to tell whether a DEV is planning to go to sleep? I don't see any justification for this complexity all around the spec for power

SuggestedRemedy
 Remove Grant-status(s) from figure-73, remove figure 74 and all references to those fields from the draft. Remove GTS type from figure-76 and all references to that field from the draft.

Proposed Response Response Status **O**

CI 07 SC 5.10.1 P 130 L 23 # 1706
 Young, Song-Lin Sharp Labs. of

Comment Type **E** Comment Status **X**
 Each CTRB in Fig. 72 is 12 octets Also Length field in Fig.71 shows n*10

SuggestedRemedy
 Modify the text & Fig. 71 & 72 to be consistent

Proposed Response Response Status **O**

CI 07 SC 5.10.2, Fig. 73, 74 P 132 L # 1707
 Young, Song-Lin Sharp Labs. of

Comment Type **E** Comment Status **X**
 Grant status field (Fig. 73) in Fig. 74 is 3 octets Reason code of Fig. 74 should be

SuggestedRemedy
 Modify Length field (=n*9) and Grant status field (3 octets) to be consistent Modify Reason code (b16-b19) in Fig. 74

Proposed Response Response Status **O**

CI 07 SC 5.10.3 P L # 529
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **TR** Comment Status **X**
 M_{AX} TX delay variation in figure-77 and M_{AX}imum allocation delay in figure-72 are same but have different name and description

SuggestedRemedy
 Make the name of the field and the description uniform between figure-77 and figure-72. Better yet, describe at one place and reference it at another to avoid duplication

Proposed Response Response Status **O**

CI 07 SC 5.10.3 P L # 528
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **TR** Comment Status **X**
 Minimum requested channel time can be reduce to one octet. If the other octet has to be left reserved, so be it since that creates room for future expansion.

SuggestedRemedy
 1. Reduce Minimum requested channel time to one octet in figure-77 and remove the reserved field since the two-octet alignment is acheived by the reduction of size for Minimum requested channel time 2. Make the name of the field and the description uniform with that in figure-66. Better yet, describe at one place and reference it at another to avoid duplication

Proposed Response Response Status **O**

CI 07 SC 5.10.3 P 133 L 39 # 1352
 Seals, Michael Intersil

Comment Type **TR** Comment Status **X**
 The security field is TBD.

SuggestedRemedy
 Define the field or remove it.

Proposed Response Response Status **O**

P802.15.3 Draft 09 Comments

CI 07 SC 5.10.3 P 135 L 618 # 171
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 "in Kus" (with u meaning micro here) - is this to mean that units are 1024 usecs?

SuggestedRemedy
 Clarify meaning.

Proposed Response Response Status O

CI 07 SC 5.10.3 P 135 L 8 # 172

DuVal, Mary Texas Instruments
 Comment Type E Comment Status X

"in Kocetets/s" (with u meaning micro here) - is this to mean that units are 1024 octets/sec increments?

SuggestedRemedy
 Clarify meaning

Proposed Response Response Status O

CI 07 SC 5.2 P L # 514
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type E Comment Status X
 Use of "commands frame body shall be formatted ..." is wrong. Command is not a frame by itself, but some command frames may have only one command in them (along with MAC header, FCS etc.)

SuggestedRemedy
 Change all occurrences of "command frame body shall be formatted .." to means the following 1. Command structure is shown in figure-xx (no change in reference) 2. A frame containing certain commands like association, disassociation, authenticatio, deauthentication shall not contain any other commands. It shall be the sole command present in a command frame.

Proposed Response Response Status O

CI 07 SC 5.3 P L # 515
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
 Use of redundant fields that increase the overhead and lead to inconsistencies in the implementation

SuggestedRemedy
 1. remove PublicKeyObjectLength in figure-42 2. remove AuthenticationInfoLength in figure-43 3. remove PublicKeyChallengeLength in figure-44 4. Remove PublicKeyProofLength in figure-45 5. remove EncryptedKeyObjectLength in figure-47 6. remove EncryptedKeyObjectLength in figure-48 7. for all the above add one line each as to the formula to derive those fields at rx (or use those at tx) from the "Length" field present in the info-element structure.

Proposed Response Response Status O

CI 07 SC 5.4 P L # 516
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
 Probe request and response command types are redundant since their format is exactly same. Define one command with that format "Probe Information" and use it both as request and response

SuggestedRemedy
 Define one command with that format "Probe Information" with the format as in figure-50 and use it both as probe-request and probe-response in the behavior

Proposed Response Response Status O

CI 07 SC 5.4.4 P 121 L 29 # 167
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 "in Kus" (with u meaning micro here) - is this to mean that units are 1024 usecs?

SuggestedRemedy
 State meaning clearly

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 07 SC 5.6 P L # 517
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type E Comment Status X
 Use of "CTRB" without definition

SuggestedRemedy

1. expand CTRB 2. replace "channel time" in lines 42 and 43 with CTRB

Proposed Response Response Status O

CI 07 SC 5.7 P L # 519
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type E Comment Status X

This entire section is full of inconsistencies, use of terms never used anywhere in the draft, grammatical mistakes and language not suitable for an 802 standard. Some of them are: 1. what is "self sleep" as used in line 19 page 126 2. why is the sentence in line-19 needed? what is it conveying? 3. Language: one example is lines 16-20 on

SuggestedRemedy

I request the editor to read this clause and correct them. I am giving up on listing them as there are just too many to list.

Proposed Response Response Status O

CI 07 SC 5.7 P L # 518
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X

There are 6 different commands for power management and two of them with a different set of multiple action types, totalling 13 different actions. In addition there are different states within EPS such as momentary EPS. Just the listings in Table-66 and Table-67 outpour the complexity involved in the specified power management mechanism. Why not simple commands like (a) sleep-time-request from DEV to PNC (b) sleep-time-grant/reject from PNC to DEV? What is not being achieved in those simple commands that is being achieved by this complex mechanism? What is the justification to add this complex mechanism to a draft that is supposed to spec a

SuggestedRemedy

Remove all the power management commands and all the references to them from the draft. Simplify power management to the following - Request for sleep time by DEV -

Accept/Reject by PNC - Broadcast the addresses of sleeping DEV in Beacon - Allocation/modification of GTS by PNC depending on who is awake

Proposed Response Response Status O

CI 07 SC 5.8.2 P L # 521
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type E Comment Status X
 use of "TX slots"

SuggestedRemedy

Change "Number of TX slots" in the text of 7.5.8.2 and figure-64 to "number of GTS"

Proposed Response Response Status O

CI 07 SC 5.8.3 P L # 522
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type E Comment Status X

Stream index is listed in figure-66 but there is no description of what it is?

SuggestedRemedy

Relate the "Stream index" in figure-66 to the description in lines 36:37 on page 128

Proposed Response Response Status O

CI 07 SC 5.8.3 P 128 L # 1718
 Young, Song-Lin Sharp Labs. of

Comment Type T Comment Status X

What is the stream index of child/neighbor piconet? Are these fields(Duration between time slots, Min. requested channel time, Requested channel time per time slot) applied to the private GTS for child piconet?

SuggestedRemedy

Please clarify

Proposed Response Response Status O

CI 07 SC 5.8.3 P 128 L 31 # 169

DuVal, Mary Texas Instruments

Comment Type E Comment Status X

"in Kus" (with u meaning micro here) - is this to mean that units are 1024 usecs?
 "in Kus" (with u meaning micro here) - is this to mean that units are 1024 usecs?

SuggestedRemedy

Clarify meaning

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 07 SC 5.8.3 P 128 L 6 # 168
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 "... same response rules a the device ..." - should be "as".

SuggestedRemedy

Proposed Response Response Status O

CI 07 SC 7 P 93 L 3 # 1460
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 This clause does more than just specify the frame formats.

SuggestedRemedy

Add the following sentence after the first: An overview of the MAC frame is followed by a description of the general frame format, a description of the individual frame types, complete documentation of the information elements and then the command

Proposed Response Response Status O

CI 07 SC 7 P 93 L 4 # 1461
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 FCS and HCS are checked to validate the received frames.

SuggestedRemedy

modify the sentence as follows: either error free or in error, using the header check sequesnce (HCS) and frame check sequesnce (FCS).

Proposed Response Response Status O

CI 07 SC 7.1 P 93 L 14 # 958
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 poor sentence structure ... suggest rewrite as shown in sentence fragment below

SuggestedRemedy

... sequence number information, and optional traffic category ...

Proposed Response Response Status O

CI 07 SC 7.1 P 93 L 14 # 299
 Gilb, James Appairment

Comment Type T Comment Status X
 Enumeration items are incomplete in their description.

SuggestedRemedy

In a) change "frame control, address " to "frame control, network identification, source address, destination adress " In d) change "(FCS) which" to "(FCS), if the frame body is non-zero length, which"

Proposed Response Response Status O

CI 07 SC 7.1 P 93 L 15 # 1112
 Schrader, Mark Eastman Kodak Co.

Comment Type T Comment Status X
 The frame header structure is not described clearly, the CRC type of HCS should be specified, and a correction made to the specification of the FCS CRC designation.

SuggestedRemedy

Rewrite as follows: a) A frame header that includes the PHY header and the MAC header. The MAC header comprises frame control, ...,traffic category informantion. b) A fixed length header check sequence (HCS), which contains an IEEE 16-bit cyclic redundancy code CRC-16) for the frame header. c) ... d) ... code(CRC-32).

Proposed Response Response Status O

CI 07 SC 7.1 P 93 L 16 # 957
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
 reference is made to a "traffic category". This term is used just once in the whole doucument (i.e. used only in this sentence).

SuggestedRemedy

Question for MAC subcommittee ... resolve if this is the correct name. Is there another more common name used in the document?

Proposed Response Response Status O

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CI 07 SC 7.1.1 P 93 L 26 # 1462
Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
"order in which they are passed to the PHY," is not technically correct, since the interface between the MAC and the PHY is likely not serial.

SuggestedRemedy
replace with "order in which they are transmitted on the air,"

Proposed Response Response Status O

CI 07 SC 7.1.1 P 93 L 26 # 300
Gilb, James Appairnt

Comment Type T Comment Status X
Requirements are not strong enough for bit ordering.

SuggestedRemedy
Change "left-most bit is transmitted" to "left-most bit shall be transmitted" in line 26, change "a single octet are sent to" to be "longer than a single octet shall be sent to" in line 31, change "convention and is transmitted" to "convention and shall be transmitted" in line 34 and change "in decimal are coded" to be "in decimal shall be coded" in lin 37.

Proposed Response Response Status O

CI 07 SC 7.1.1 P 93 L 27 # 301
Gilb, James Appairnt

Comment Type T Comment Status X
Need a figure to show how the bit ordering is used in the figures that follow.

SuggestedRemedy
Add the figure once it has been generated and reviewed. Figure should have multiple fields with LSB and MSb indicated for each of the fields, an indication of the order in which they are sent over the air and an example of a simple command or information element with specific values.

Proposed Response Response Status O

CI 07 SC 7.1.1 P 93 L 28 # 959
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
remove the comma as shown below

SuggestedRemedy
... fields are numbered from 0 to k,

Proposed Response Response Status O

CI 07 SC 7.1.1 P 93 L 36 # 960
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
Item to add to clause 3

SuggestedRemedy
Please add the definition of a "natural number" to clause 3

Proposed Response Response Status O

CI 07 SC 7.2 P 9596 L # 1360
Shellhammer, Steve Symbol Technologies

Comment Type T Comment Status X
The MAC Frame includes a retry bit and a sequence number field. It seems that the sequence number makes the retry bit unnecessary.

SuggestedRemedy
Eliminate the retry bit if it is in fact redundant

Proposed Response Response Status O

CI 07 SC 7.2.1 P 94 L 25 # 302

Gilb, James Appairnt

Comment Type T Comment Status X
The description of the frame control field repeats what is in the figure and therefore is redundant and evil.

SuggestedRemedy
Change "consists of the ... and repeater" with "is used to identify the type of frame and how it is to be handled."

Proposed Response Response Status O

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CI 07 **SC 7.2.1** **P 94** **L 30** **# 805**
 Kleindl, Guenter Siemens
Comment Type **TR** *Comment Status* **X**
 in Figure 12 bit 10 is missing
SuggestedRemedy
 Add bit 10 in figure 12 and indicate 'reserved', possibly reorder the bits.
Proposed Response *Response Status* **O**

CI 07 **SC 7.2.1** **P 94** **L 44** **# 303**
 Gilb, James Appairnt
Comment Type **T** *Comment Status* **X**
 "will" is not formal language.
SuggestedRemedy
 Change "supports will discard" to "supports may discard"
Proposed Response *Response Status* **O**

CI 07 **SC 7.2.1.2** **P 95** **L 4** **# 1464**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Get rid of Delayed ACK. This will unnecessarily complicate the MAC to implement. We should keep a WPAN as simple as possible.
SuggestedRemedy
 Eliminate Delayed ACK.
Proposed Response *Response Status* **O**

CI 07 **SC 7.2.1.3** **P 95** **L 21** **# 852**
 Kleindl, Guenter Siemens
Comment Type **T** *Comment Status* **X**
 Immediate acknowledgement can be indicated in the ACK-policy field. Therefore the frame type 'Immediate acknowledgement' is redundant.
SuggestedRemedy
 If ACK-policy field is used to indicate 'immediate acknowledgement' than the frame type 'Immediate acknowledgement' may be removed.
Proposed Response *Response Status* **O**

CI 07 **SC 7.2.1.5** **P 95** **L 37** **# 1465**
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 "... command frames that is the start of the current..." is incorrect grammar - frames
SuggestedRemedy
 Replace with "... command frames that are the first frame in the current..."
Proposed Response *Response Status* **O**

CI 07 **SC 7.2.1.5** **P 95** **L 37** **# 304**
 Gilb, James Appairnt
Comment Type **T** *Comment Status* **X**
 Informal language used, change to shall
SuggestedRemedy
 Change "is set to" to be "shall be set to" in 2 places in each 7.2.1.5, 7.2.1.6, 7.2.1.7, 7.2.1.10 and one place in 7.2.1.9
Proposed Response *Response Status* **O**

CI 07 **SC 7.2.1.5** **P 95** **L 38** **# 806**
 Kleindl, Guenter Siemens
Comment Type **T** *Comment Status* **X**
 clarify value of frag-start field for frames, which are not fragmented
SuggestedRemedy
 add additional text at the end of the first sentence e.g.: ...start of the current MSDU/MCDU, which consists of multiple fregments.
Proposed Response *Response Status* **O**

CI 07 **SC 7.2.1.5 & 7.2.1.6** **P 95** **L 36** **# 961**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Why two Frag fields ... start and end?
SuggestedRemedy
 Couldn't the fragmentation process be signified by setting a single bit? 0=not fragmentating and 1=fragmentating
Proposed Response *Response Status* **O**

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CI 07 SC 7.2.1.6 P 95 L 42 # 1466
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
"... command frames that is the start of the current..." is incorrect grammar - frames

SuggestedRemedy
Replace with "... command frames that are the first frame in the current..."

Proposed Response Response Status O

CI 07 SC 7.2.1.6 P 95 L 43 # 807
Kleindl, Guenter Siemens

Comment Type T Comment Status X
clarify value of frag-end field for frames, which are not fragmented

SuggestedRemedy
add additional text at the end of the first sentence e.g.: ...end of the current MSDU/MCDU, which consists of multiple fregments.

Proposed Response Response Status O

CI 07 SC 7.2.1.9 P 96 L 9 # 962
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
Lack reference to information on encryption key

SuggestedRemedy
Please provide reference for the following sentence fragment "currently assigned data encryption key" where in clause 10 is this data contained? If not present it needs to be added.

Proposed Response Response Status O

CI 07 SC 7.2.1.9 P 96 L 910 # 1672
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
Should change the sentence to "When the SEC bit is set to 1, the frame body is protected by payload protection using the currently assigned payload protection key(s) for the piconet."

SuggestedRemedy
Comment via Ari Singer.

Proposed Response Response Status O

CI 07 SC 7.2.2 P 96 L 20 # 1467
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
"The PNID remains constant during the current instantiation of the piconet and may be persistent for multiple sequential instantiations of the piconet by the same PNC." "May be persistent"? Hos is it determined if it is persistent? Up to the implenter? Do PNCs always use the same PNID?

SuggestedRemedy
Need to describe the details of persistence of the PNID.

Proposed Response Response Status O

CI 07 SC 7.2.3 P 96 L 3035 # 239
Gifford, Ian Self

Comment Type E Comment Status X
The following sentences do not end in a period: — The address value 0 is reserved for the PNC, for coordinator related transmissions and receptions — The address value of all-ones (0xFF) is reserved for broadcast frames ... — The address value of 0xFD is reserved for multicast frames — The address values of 0xFA, 0xFB or 0xFC are reserved for neighbor piconets

SuggestedRemedy
Add the period.

Proposed Response Response Status O

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CI 07 **SC 7.2.3** **P 96** **L 34** **# 305**
 Gilb, James Appairment
Comment Type **T** *Comment Status* **R**
 No multicast capabilities have been defined for this standard. There is no way to create or join multicast groups. Delete all references to multicast addresses (this is one of

SuggestedRemedy
 Delete the itemization point "- the address value of 0xFD is reserved for multicast frames." and change the neighbor PNC addresses to be one more (i.e. 0xFB, 0xFC and

Proposed Response *Response Status* **C**
 PROPOSED REJECT.

CI 07 **SC 7.2.3** **P 96** **L 35** **# 1468**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Not sure why 3 addresses are reserved for neighbor piconets. Why 3? Is that enough?

SuggestedRemedy
 Describe the benefit of using a reserved address, or else just use the capability field for a DEV to indicate a neighbor piconet?

Proposed Response *Response Status* **O**

CI 07 **SC 7.2.3** **P 96** **L 35** **# 963**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 There are only 3 addresses available for neighbor piconets.

SuggestedRemedy
 Please increase the addresses available from 3 to 6 ... 4 on each side, 1 above and 1 below.

Proposed Response *Response Status* **O**

CI 07 **SC 7.2.3** **P 96** **L 35** **# 808**
 Kleindl, Guenter Siemens
Comment Type **T** *Comment Status* **X**
 There are address values for neighbor piconets, but not for child piconets.

SuggestedRemedy
 Add address values for child piconets, if required.

Proposed Response *Response Status* **O**

CI 07 **SC 7.2.4** **P 96** **L 40** **# 306**
 Gilb, James Appairment
Comment Type **T** *Comment Status* **X**
 Informal language

SuggestedRemedy
 Change "is set to zero, and ignored upon reception," to be "shall be set to zero on transmission and shall be ignored upon reception "

Proposed Response *Response Status* **O**

CI 07 **SC 7.2.4** **P 96** **L 50** **# 307**
 Gilb, James Appairment
Comment Type **T** *Comment Status* **X**
 Add requirement for formatting.

SuggestedRemedy
 Change "... and priority." to be "... and priority and shall be formatted as illustrated in Fig. 13."

Proposed Response *Response Status* **O**

CI 07 **SC 7.2.5** **P 97** **L 14** **# 1470**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Is the same sequence number counter used for asynchronous data to all destinations? If so, this will mess up the Rx frame loss counter in channel status response. If a separate counter is needed it will complicate implementations.

SuggestedRemedy
 Specify that a single counter is used for all frames and that the Rx frame loss counter may not be accurate for asynchronous frames.

Proposed Response *Response Status* **O**

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CI 07 SC 7.2.6 P 97 L # 1361
Shellhammer, Steve Symbol Technologies

Comment Type T Comment Status X
The MAC header check sequence (HCS) should be calculated and implemented by the MAC and not the PHY. The layers should not be mixed.

SuggestedRemedy
Have the MAC, not the PHY, calculate and implement the MCS.

Proposed Response Response Status O

CI 07 SC 7.2.6 P 97 L 28 # 1471
Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
Need to clarify that the MAC ignores the HCS.

SuggestedRemedy
add the following sentence "The MAC always ignores the CS field upon reception."

Proposed Response Response Status O

CI 07 SC 7.2.7 P 97 L 33 # 308
Gilb, James Appairnt

Comment Type T Comment Status X
Security information is no longer included as separate data, delete this reference.

SuggestedRemedy
Delete ", including the security information if any"

Proposed Response Response Status O

CI 07 SC 7.2.7 P 97 L 34 # 964
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
This clause states there is security information in the frame body.

SuggestedRemedy
Provide reference to the specific clause 10 subclause that describes this security information.

Proposed Response Response Status O

CI 07 SC 7.2.8 P 97 L 43 # 309
Gilb, James Appairnt

Comment Type T Comment Status X
Informal language

SuggestedRemedy
Change "The FCS is calculated" to be "The FCS shall be calculated" on line 43 and "The FCS field is transmitted" to be "The FCS field shall be transmitted"

Proposed Response Response Status O

CI 07 SC 7.2.8 P 97 L 49 # 809
Kleindl, Guenter Siemens

Comment Type E Comment Status X
unclear formula

SuggestedRemedy
replace 'xkx(x31+' by 'xk*(x31+'

Proposed Response Response Status O

CI 07 SC 7.2.8 P 98 L 1 # 310
Gilb, James Appairnt

Comment Type T Comment Status X
Informal language. Also, shouldn't all implementations initialize the the HCS remainder to the same number?

SuggestedRemedy
Delete "As a typical implementation, " and change "division is preset" to be "division shall be preset" in line 1 and change "remainder is preset" to be "remainder shall be preset" in line 5

Proposed Response Response Status O

CI 07 SC 7.3 P 98 L 14 # 810
Kleindl, Guenter Siemens

Comment Type E Comment Status X
editorial

SuggestedRemedy
replace 'within command frame' by 'within a command frame'

Proposed Response Response Status O

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CI 07 SC 7.3 P 98 L 19 # 965
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 rewrite sentence as shown below.

SuggestedRemedy
 The length field of the frame shall count the number of octets, including the stuffed

Proposed Response Response Status O

CI 07 SC 7.3 P 98 L 19 # 811
 Kleindl, Guenter Siemens

Comment Type E Comment Status X
 editorial

SuggestedRemedy
 replace 'shall the number' by 'shall indicate the number'

Proposed Response Response Status O

CI 07 SC 7.3 P 98 L 20 # 1472

Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 clarify that the pad octet field is in the header

SuggestedRemedy
 Modify the sentence as follows: "...the pad octet field in the header..."

Proposed Response Response Status O

CI 07 SC 7.3.1 P 98 L 29 # 1473

Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 Allowing information elements in any order in the beacon will complicate the design.
 CTAs should be the last IEs in the beacon.

SuggestedRemedy
 Change the sentence as follows: "The information elements in the beacon frame may appear in any order in the beacon, except that channel time allocations (CTAs) appear last. DEVs may ignore any elements in the beacon which are not listed in Table 60."

Proposed Response Response Status O

CI 07 SC 7.3.1 P 98 L 44 # 311
 Gilb, James Appairant

Comment Type T Comment Status X
 The channel time allocations are required in every beacon. Also, the DEV GTS status is not indicated as an allowed element in the beacon.

SuggestedRemedy
 Change "As needed" to "In every beacon" for channel time allocation in table 60. Also, add a row at the bottom of Table 60 that is "DEV GTS Status" "7.4.12" "Indicates if a DEV's GTSs have changed" "As needed"

Proposed Response Response Status O

CI 07 SC 7.3.3 P L # 1478
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 "A command data unit (MCDU) may also be transmitted in fragments, as described in 8.7." This is inconsistent with the fact that the sequence numbers from all command frames use a single counter. Since all command frames do not go to the same destination, fragmentation does not work.

SuggestedRemedy
 Change to : "Command data units (MCDUs) cannot be fragmented."

Proposed Response Response Status O

CI 07 SC 7.3.3 P 100 L 3 # 812
 Kleindl, Guenter Siemens

Comment Type E Comment Status X
 editorial

SuggestedRemedy
 replace 'sent in either in' by 'sent either in'

Proposed Response Response Status O

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CI 07 SC 7.3.3 P 100 L 4 # 966
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 add words as shown below ...

SuggestedRemedy
 PNC and the DEV (during a MTS) or during ...

Proposed Response Response Status O

CI 07 SC 7.3.3 P 100 L 4 # 240
 Gifford, Ian Self

Comment Type E Comment Status X
 The following sentence has an error in punctuation: PNC and the DEV or during the

SuggestedRemedy
 Delete the comma.

Proposed Response Response Status O

CI 07 SC 7.3.3 P 100 L 6 # 312
 Gilb, James Appairnt

Comment Type T Comment Status X
 Not all commands are allowed to be chained together. Some shall be sent individually

SuggestedRemedy
 Insert the following sentence after "... as shown in Figure 15." The following commands shall be sent in a command frame that contains only the command: alternate PNC announcement, new PNC announcement, association request, disassociation request.

Proposed Response Response Status O

CI 07 SC 7.3.4 P 100 L 42 # 967
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 missing definitive article, add as shown below

SuggestedRemedy
 The frame format of the data frame ...

Proposed Response Response Status O

CI 07 SC 7.4 P 101 L 26 # 313
 Gilb, James Appairnt

Comment Type T Comment Status X
 The transmit power change is a command, not an information element and has already been moved to the appropriate location in the draft.

SuggestedRemedy
 Update tables 63 and 65 by moving the transmit power change command from 63 to 65. Renummer the information element ID's and command ID's as necessary.

Proposed Response Response Status O

CI 07 SC 7.4 P 101 L 43 # 968
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 modify sentence as shown below

SuggestedRemedy
 frames that are allowed to include ...

Proposed Response Response Status O

CI 07 SC 7.4 P 101 L 45 # 969
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 Modify sentence as shown below

SuggestedRemedy
 SuggestedRemedy
 ... 2-octet boundary within the frame body.

Proposed Response Response Status O

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CI 07 **SC 7.4 Table 63** **P 101** **L 3637** **# 736**
 Huang, Bob Sony Electronics
Comment Type **TR** *Comment Status* **X**
 Element ID should be provided for the IEEE ID of a parent PNC. This will appear (as correctly shown) in Table 60 (refer page 98). Note: originally, the parent IEEE ID was to be identified by its position as last in the beacon. However, the ASIE also requests the last position. Therefore, we should declare an element ID for the parent IEEE ID and allow the parent ID to take any position in the beacon.

SuggestedRemedy
 Add element ID 0x0F for Parent PNC IEEE ID and decrement to reserved element IDs by one. Use the format in Figure 18 (page 102).
Proposed Response *Response Status* **O**

CI 07 **SC 7.4.1** **P 102** **L** **# 1480**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 What is the purpose of max burst duration? Is this for a single frame, or for multiple frames?

SuggestedRemedy
 Clarify the use of max burst duration or eliminate it.
Proposed Response *Response Status* **O**

CI 07 **SC 7.4.10** **P 106** **L 46** **# 320**
 Gilb, James Appairnt
Comment Type **T** *Comment Status* **X**
 Change the label "Slot Start time or SFNext" to be "slot location" since that is how it is referenced in the definitions.
SuggestedRemedy
 Change as indicated.
Proposed Response *Response Status* **O**

CI 07 **SC 7.4.10** **P 106** **L 47** **# 817**
 Kleindl, Guenter Siemens
Comment Type **E** *Comment Status* **X**
 Align text in Figure 30 with text on next page.

SuggestedRemedy
 Last field should be called 'slot location field'
Proposed Response *Response Status* **O**

CI 07 **SC 7.4.10** **P 107** **L 1** **# 1489**
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 I disagree that directed frames should not be allowed in a broadcast GTS. Allowing directed frames in a broadcast GTS should would help the efficiency of transmitting asynchronous traffic.
SuggestedRemedy
 Change this to say that directed frames are allowed in a broadcast GTS.

Proposed Response *Response Status* **O**

CI 07 **SC 7.4.10** **P 107** **L 28** **# 989**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 This paragraph references a field that contains "the least significant two octets of a beacon number".

SuggestedRemedy
 This paragraph is confusing. Power management subcommittee needs to clarify and provide additional references to other clauses.
Proposed Response *Response Status* **O**

CI 07 **SC 7.4.10** **P 107** **L 33** **# 990**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 appears there is a typo as shown below
SuggestedRemedy
 ... and shall be set to 1 if they are in EPS mode.
Proposed Response *Response Status* **O**

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CI 07 SC 7.4.10 P 107 L 33 # 1113
 Schrader, Mark Eastman Kodak Co.
 Comment Type T Comment Status X
 CTA type specified the same for ACTIVE and EPS modes
 SuggestedRemedy
 Change to: ... and shall be set to 1 if they are in EPS mode.
 Proposed Response Response Status O

CI 07 SC 7.4.10 P 107 L 34 # 1757
 Chen, Hung-Kun InProComm, Inc.
 Comment Type E Comment Status X
 set to 0 if they are in EPS ... (typo)
 SuggestedRemedy
 set to 1 if they are in EPS ...
 Proposed Response Response Status O

CI 07 SC 7.4.10 P 107 L 34 # 818
 Kleindl, Guenter Siemens
 Comment Type TR Comment Status X
 incorrect setting of CTA-type-bit
 SuggestedRemedy
 correct text to: ... shall be set to 1 if they are in EPS mode.
 Proposed Response Response Status O

CI 07 SC 7.4.10 P 107 L 35 # 991
 Roberts, Richard XtremeSpectrum
 Comment Type TR Comment Status X
 Need to resolve TDB
 SuggestedRemedy
 Security subcommittee needs to resolve this TBD in this line.
 Proposed Response Response Status O

CI 07 SC 7.4.10 P 107 L 35 # 1674
 Shvodian, William XtremeSpectrum
 Comment Type T Comment Status X
 The key change bit is defined as TBD. I actually don't see any reason for it at this point, but we can leave it in if we really want to.
 SuggestedRemedy
 Change the line to "The key change bit is reserved for possible security implementations. In the current version of the standard, this bit shall be set to 0."
 Proposed Response Response Status O

CI 07 SC 7.4.10 P 107 L 36 # 296
 Gilb, James Appairant
 Comment Type T Comment Status X
 TBD in "The key change bit is reserved for possible security implementation with TBD meaning"
 SuggestedRemedy
 This function has been taken over by the key field in the piconet synchronization parameters information element. Delete the sentence and the key bit (b2) from Figure 31. Add the bit to the reserved bits.
 Proposed Response Response Status O

CI 07 SC 7.4.10 P 107 L 42 # 992
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 grammatical as shown below
 SuggestedRemedy
 ... offset from the start of the superframe and hence the start of the transmission of the beacon frame ...
 Proposed Response Response Status O

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CI 07 SC 7.4.10 P 107 L 42 # 1493
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
It needs to be made clear that the timing starts from the beginning of the beacon

SuggestedRemedy
Modify the sentence as follows: "The value of this field is always an offset from the start of superframe and hence the start of transmission of the preamble of the beacon frame from the PNC."

Proposed Response Response Status O

CI 07 SC 7.4.10 P 107 L 43 # 1491
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Since superframe duration is limited to 100 ms, having the slot start time be 16 bits of 8 us resolution is not an effective use of bits. Also, having 8 us of resolution is going to allow efficient allocation of GTS slots for high rate PHYs.

SuggestedRemedy
Change resolution for CTAs to 1 us, with the max then 65.535 ms. Change the sentence to say: "The resolution of this field is 1 μs and so the range is [0-65535] μs."

Proposed Response Response Status O

CI 07 SC 7.4.10 P 107 L 46 # 1492
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
This line will change when we add the duration field back in as we agreed to.

SuggestedRemedy
Modify this sentence to say "The end of each GTS slot is the start of the GTS slot plus the duration."

Proposed Response Response Status O

CI 07 SC 7.4.10 P 108 L 10 # 1114
Schrader, Mark Eastman Kodak Co.

Comment Type T Comment Status X
Line in table says AWAKE rather than WAKE, and does not indicate that there is a GTS slot.

SuggestedRemedy
Change entry to: EPS CTA, WAKE superframe w/ GTS

Proposed Response Response Status O

CI 07 SC 7.4.11 P 108 L 30 # 321
Gilb, James Appairnt

Comment Type T Comment Status R
Multicast capabilities are not defined for this protocol.

SuggestedRemedy
Delete the sentence "The destination address may include group or multicast

Proposed Response Response Status C
PROPOSED REJECT. Add a paragraph in clause 8 that defines the scope and intention of multicast in this draft. 8.6.1 is the target clause. WMS to write text. In this clause change 'group' to 'broadcast'.

CI 07 SC 7.4.11 P 108 L 33 # 1495
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Mea Culpa: I no longer feel think that the Max CTAs field is a good idea. It is open to abuse by manufacturers who want to save power in their devices. It will also be difficult to interoperate if all devices choose a small number.

SuggestedRemedy
Remove the Max CTAs field and all references to it. We would be better off limiting the number of CTAs in a piconet.

Proposed Response Response Status O

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CI 07 SC 7.4.12 P 108 L 40 # 994
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 add commas to sentence as shown below

SuggestedRemedy
 ... DEV to know if any GTSs, where it is either the SA or DA, have changed ...

Proposed Response Response Status O

CI 07 SC 7.4.12 P 108 L 44 # 243
 Gifford, Ian Self

Comment Type E Comment Status X
 The following sentence does not end in a period: and not all bits in the bitmap

SuggestedRemedy
 Add the period.

Proposed Response Response Status O

CI 07 SC 7.4.12 P 108 L 49 # 819
 Kleindl, Guenter Siemens

Comment Type TR Comment Status X
 wrong octet number and length (256 bits = 32 octets)

SuggestedRemedy
 correct from 8 to 32 octets Lenth(=32)

Proposed Response Response Status O

CI 07 SC 7.4.12 P 109 L 1 # 1496
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 Need to clarify this sentence: "If either it's DEV GTS status bit or the broadcast GTS status bit is set to one, then the DEV needs to process the CTAs in that beacon."

SuggestedRemedy
 Modify as follows: "If either it's DEV GTS status bit or the broadcast GTS status bit is set to one or it did not correctly receive and process the preceeding beacon, then the DEV needs to process the CTAs in that beacon."

Proposed Response Response Status O

CI 07 SC 7.4.13 P 109 L 21 # 244
 Gifford, Ian Self

Comment Type E Comment Status X
 The following sentence does not end in a period: The EPS info field shall be formatted as illustrated in Figure 35

SuggestedRemedy
 Add the period.

Proposed Response Response Status O

CI 07 SC 7.4.13 P 109 L 32 # 1498
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 Having EPS be both a mode and a state is too confusing.

SuggestedRemedy
 Rename the EPS state to something other than EPS.

Proposed Response Response Status O

CI 07 SC 7.4.13 P 109 L 33 # 322
 Gilb, James Appairnt

Comment Type T Comment Status X
 Informal language used to define characteristics.

SuggestedRemedy
 Change "this field is set to 2." to be "this field shall be set to 2." and change "the field is set to 1" to be "the field shall be set to 1" and change "the field will be set to 0" to be "the field shall be set to 0"

Proposed Response Response Status O

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CI 07 SC 7.4.13 P 109 L 33 # 1500
Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
"If the DEV will not use any power management, the field will be set to 0." Why would any device listen to GTSS that are not assigned to it. Any device should be able to do RPS. There is no need to have an active state.

SuggestedRemedy
Power management ACTIVE vs RPS is an implementer decision. There should be no distinction in the standard between RPS and active devices. Only one bit is needed for the PowerManagementMode.

Proposed Response Response Status **O**

CI 07 SC 7.4.13 P 109 L 35 # 1501
Shvodian, William XtremeSpectrum

Comment Type **E** Comment Status **X**
"EPS status indicates the current operation (EPS or ACTIVE) for an EPS DEV and has meaning for a DEV with PowerManagementMode set = 2." should say "only has

SuggestedRemedy
Change sentence to: "EPS status indicates the current operation (EPS or ACTIVE) for an EPS DEV and only has meaning for a DEV with PowerManagementMode set = 2."

Proposed Response Response Status **O**

CI 07 SC 7.4.13 P 109 L 36 # 323
Gilb, James Appairment

Comment Type **T** Comment Status **X**
Informal language to describe the characterisctcs of EPS status

SuggestedRemedy
Change "A value of 1 is set" to be "The value shall be set to 1" and change "A value of 0 is set" to be "The value shall be set to 0"

Proposed Response Response Status **O**

CI 07 SC 7.4.13 P 5 L 8 # 1497
Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
It is not clear to me where thie Power management parameters infotmation element resides? In the Beacon? In a pwoer management frame? I did a search and I didn't find "power management parameters element anywhere in the rest of the draft.

SuggestedRemedy
Please clarify where this element is used or remove it.

Proposed Response Response Status **O**

CI 07 SC 7.4.14 P 109 L # 997
Roberts, Richard XtremeSpectrum

Comment Type **T** Comment Status **X**
Deletion of clause 7.4.14

SuggestedRemedy
I see no need for the application specific information information element. Unless someone can justify it, please delete the entire clause.

Proposed Response Response Status **O**

CI 07 SC 7.4.14 P 109 L 4 # 1502
Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
How is gteh application specific data put into the ASIE There is no MLME to do this.

SuggestedRemedy
Need to create and MLME to put application specific data into the ASIE.

Proposed Response Response Status **O**

CI 07 SC 7.4.14 P 110 L 9 # 324
Gilb, James Appairment

Comment Type **T** Comment Status **X**
The restrictions on negotiating theuse of the ASIE is too restrictive.

SuggestedRemedy
Delete " using a standard a GTS or CFP message exchange" since the negotiation is outside of the scope of the standard.

Proposed Response Response Status **O**

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CI 07 SC 7.4.14 P 110 L 9 # 763
 Huang, Bob Sony Electronics

Comment Type **TR** Comment Status **X**
 Text says that GTS or CFP mesaage exchange sets up the application specific capability. This means that higher protocol layers are involved. However, I can not find how the DME tells the MAC what information to put in the ASIE element or when to

SuggestedRemedy
 Add MLME.

Proposed Response Response Status **O**

CI 07 SC 7.4.2 P 102 L 30 # 241
 Gifford, Ian Self

Comment Type **E** Comment Status **X**
 The following sentence does not end in a period: The format of the piconet synchronization parameter element shall be formatted as illustrated in Figure 19

SuggestedRemedy
 Add the period.

Proposed Response Response Status **O**

CI 07 SC 7.4.2 P 102 L 43 # 972
 Roberts, Richard XtremeSpectrum

Comment Type **T** Comment Status **X**
 Field resolution is 8 uS ... this may be inefficient for 100+ Mbps data rates. Changing this to something less (like 1 uS) impacts a number of issues in the standard.

SuggestedRemedy
 Bill Shvodian of XtremeSpectrum to provide text on a recommended solution.

Proposed Response Response Status **O**

CI 07 SC 7.4.2 P 102 L 49 # 314
 Gilb, James Appairent

Comment Type **T** Comment Status **X**
 The CAP duration is not the time offset from the start of the beacon to the start of the

SuggestedRemedy
 Change "The same value is used as the time offset" to "The same value is used to calculate the time offset"

Proposed Response Response Status **O**

CI 07 SC 7.4.2 P 102 L 50 # 1479
 Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
 "The duration of the CAP is computed as the difference between the superframe duration and the CFP duration." The beacon duration needs to be accounted for.

SuggestedRemedy
 The duration of the CAP is computed as the difference between the superframe duration and the CFP duration minus the Beacon time.

Proposed Response Response Status **O**

CI 07 SC 7.4.2 P 102 L 52 # 45
 Bain, Jay Time Domain

Comment Type **T** Comment Status **X**
 There is no mention here of what the setting should be when MTS is used rather than CAP. Also, the xref to 8.4.2 would indicate that more would be found there, and 8.4.2 is fairly short in description.

SuggestedRemedy
 specify setting for MTS.

Proposed Response Response Status **O**

CI 07 SC 7.4.2 P 103 L 1 # 973
 Roberts, Richard XtremeSpectrum

Comment Type **TR** Comment Status **X**
 Reference is made to the "current data encryption key (DEK)"

SuggestedRemedy
 Provide reference to the DEK details. If the subclause is missing in clause 10 then provide the details.

Proposed Response Response Status **O**

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CI 07 **SC 7.4.2** **P 103** **L 27** **# 242**
 Gifford, Ian Self
Comment Type **E** *Comment Status* **X**
 The following sentence does not end in a period: — 0b11: both authentication and data encryption are required
SuggestedRemedy
 Add the period.
Proposed Response *Response Status* **O**

CI 07 **SC 7.4.2** **P 103** **L 29** **# 315**
 Gilb, James Appairent
Comment Type **T** *Comment Status* **X**
 The piconet synchronization parameters element does not include the guard time. The TG had agreed to use a constant guard time broadcast by the PNC to account for differences in the clocks of the DEVs participating in the piconet. This addition was held off on the chance that the CTAs would have both start and stop times. Since they do not, we need to add guard time back in.
SuggestedRemedy
 Add a 2 octet element to the end of the piconet synchronization parameters element that indicates the piconet guard time in microseconds, 0-65536 us. Also need to add to clause 8 the use of the guard time with the CFP.
Proposed Response *Response Status* **O**

CI 07 **SC 7.4.2** **P 103** **L 29** **# 1481**
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Rather than wasting a value, change the ecoding so that in the future we can allow a key per SA/DA pair.
SuggestedRemedy
 — 0b00: neither authentication nor data encryption are required. — 0b01: authentication is required. — 0b10: both authentication and data encryption are required - single Key per piconet — 0b11: both authentication and data encryption are required - single key per SA/DA pair
Proposed Response *Response Status* **O**

CI 07 **SC 7.4.3** **P 103** **L 49** **# 1756**
 Chen, Hung-Kun InProComm, Inc.
Comment Type **E** *Comment Status* **X**
 b0-b5, b6-b9 (supported data rates should be 5 bits, not 6 bits)
SuggestedRemedy
 b0-b4, b5-b9
Proposed Response *Response Status* **O**

CI 07 **SC 7.4.3** **P 103** **L 50** **# 813**
 Kleindl, Guenter Siemens
Comment Type **T** *Comment Status* **X**
 there is a bit for 'Neighbor PNC', but not for 'Child PNC'
SuggestedRemedy
 Add a bit for 'Child PNC', if required.
Proposed Response *Response Status* **O**

CI 07 **SC 7.4.3** **P 104** **L 17** **# 316**
 Gilb, James Appairent
Comment Type **T** *Comment Status* **X**
 The PNC Des-mode description is incorrect.
SuggestedRemedy
 Change the definition to match what is now in clause 8, the new definitions should read: The PNC Des-Mode is the designated mode of the DEV. This bit shall be set to 1 if it is desired that the DEV be the PNC of the piconet and the AC bit is set to 1. Otherwise this bit shall be set to 0.
Proposed Response *Response Status* **O**

CI 07 **SC 7.4.3** **P 104** **L 5** **# 814**
 Kleindl, Guenter Siemens
Comment Type **E** *Comment Status* **X**
 editorial
SuggestedRemedy
 replace 'if DEV is intends to be' by 'if DEV intends to be'
Proposed Response *Response Status* **O**

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CI 07 SC 7.4.3 P 104 L 8 # 44
 Bain, Jay Time Domain
 Comment Type T Comment Status X
 A left over in that EPS is called sleep state. Also, this bit should be to indicate possibility of operating in EPS mode. Other information carried elsewhere
 SuggestedRemedy
 Change text: The PSAVE bit shall be set to 1 if the DEV is capable of using EPS mode as part of power management.
 Proposed Response Response Status O

CI 07 SC 7.4.3 P 104 L 9 # 1764
 Carmeli, Boaz IBM
 Comment Type E Comment Status X
 Otherwise the PS bit ...
 SuggestedRemedy
 Otherwise the PSAVE bit ... (Consistency with previous row)
 Proposed Response Response Status O

CI 07 SC 7.4.5 P 104 L 45 # 317
 Gilb, James Appairnt
 Comment Type E Comment Status X
 All occurances of Kus were to be changed to milliseconds, but some were missed.
 SuggestedRemedy
 Change all occurances (there are 2 on 104 and more follow in clause 7) of Kus to milliseconds
 Proposed Response Response Status O

CI 07 SC 7.4.5 P 104 L 53 # 977
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 modify sentence as shown below
 SuggestedRemedy
 ... DEVs shall expect a beacon from the PNC in ...
 Proposed Response Response Status O

CI 07 SC 7.4.6 P 105 L 3 # 980
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 Add a definite article as shown below
 SuggestedRemedy
 ... are conveyed to the MAC ...
 Proposed Response Response Status O

CI 07 SC 7.4.7 P 105 L 30 # 982
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 Addition to clause 4
 SuggestedRemedy
 Add OID to the acronyms list
 Proposed Response Response Status O

CI 07 SC 7.4.7 P 105 L 31 # 1483
 Shvodian, William XtremeSpectrum
 Comment Type E Comment Status X
 OID needs to be defined here and in the acronyms, not just in the appendix.
 SuggestedRemedy
 Define OID and add to the appendix.
 Proposed Response Response Status O

CI 07 SC 7.4.7 P 105 L 33 # 983
 Roberts, Richard XtremeSpectrum
 Comment Type TR Comment Status X
 Reference is made to IEEE P1363
 SuggestedRemedy
 Clause 10 does not make reference to IEEE P1363 and it appears that it should. How does P1363 enter into the security algorithms?
 Proposed Response Response Status O

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CI 07 SC 7.4.7 P 105 L 3334 # 1673
 Shvodian, William XtremeSpectrum
Comment Type T Comment Status X
 The cipher suites are not defined according to any standard. In particular, the IEEE P1363 standard, which is Std IEEE 1363-2000, does not contain any cipher suites in it.
SuggestedRemedy
 Recommend changing the sentence to "The OID field specifies a unique cipher suite."
 Comment via Ari Singer.
Proposed Response Response Status O

CI 07 SC 7.4.8 P 105 L 44 # 1763
 Carmeli, Boaz IBM
Comment Type E Comment Status X
 Length (=2)
SuggestedRemedy
 Length (=3)
Proposed Response Response Status O

CI 07 SC 7.4.8 P 105 L 44 # 815
 Kleindl, Guenter Siemens
Comment Type TR Comment Status X
 wrong length value
SuggestedRemedy
 Length(=3)
Proposed Response Response Status O

CI 07 SC 7.4.8 P 106 L 3 # 1485
 Shvodian, William XtremeSpectrum
Comment Type E Comment Status X
 "the" missing
SuggestedRemedy
 Change to "The current Tx Power is THE DEVs estimate..."
Proposed Response Response Status O

CI 07 SC 7.4.8 P 106 L 3 # 985
 Roberts, Richard XtremeSpectrum
Comment Type E Comment Status X
 modify sentence as shown below
SuggestedRemedy
 The current TX power is the DEVs estimate ...
Proposed Response Response Status O

CI 07 SC 7.4.8 P 106 L 6 # 1486
 Shvodian, William XtremeSpectrum
Comment Type T Comment Status X
 Why is power at the antenna used, and not eirp?
SuggestedRemedy
 change to eirp
Proposed Response Response Status O

CI 07 SC 7.4.9 P 106 L 10 # 318
 Gilb, James Appairnt
Comment Type T Comment Status X
 The description of piconet maximum transmit power is incorrect.
SuggestedRemedy
 Change "... communicate the transmit power control (TPC) capabilities of a DEV." to be "... communicate the maximum power allowed by the PNC as described in 8.14.1"
Proposed Response Response Status O

CI 07 SC 7.4.9 P 106 L 10 # 816
 Kleindl, Guenter Siemens
Comment Type TR Comment Status X
 wrong sentence above figure 28 (correct description below figure 28)
SuggestedRemedy
 Delete wrong sentence about TPC capabilities of a DEV.
Proposed Response Response Status O

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CI 07 SC 7.4.9 P 106 L 15 # 319
 Gilb, James Appairment

Comment Type T Comment Status X
 Delete reserved field, elements can be defined as odd lengths, the protocol automatically pads them to even numbers of octets.

SuggestedRemedy
 Delete the field "Reserved" and change the length of the element to 1

Proposed Response Response Status O

CI 07 SC 7.4.9 P 106 L 23 # 1487
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 Why would we limit transmit power and not eirp?

SuggestedRemedy
 Change piconet maximum transmit power to limit eirp. Antennal gain PIB may be

Proposed Response Response Status O

CI 07 SC 7.4-7.5 P L # 853
 Kleindl, Guenter Siemens

Comment Type TR Comment Status X
 Each command has its own defined structure. This requires to store all the command structures.

SuggestedRemedy
 A command should only contain 'information elements', e.g. all the commands that now contain an 'Device ID'-field should instead contain the 'Device identifier' information element. This requires the definition of additional information elements, e.g. 'Key object', 'Authentication info', 'Key challenge', 'Key proof', 'Reason/Result', 'Timeout'.

Proposed Response Response Status O

CI 07 SC 7.5 P 110 L 17 # 295
 Gilb, James Appairment

Comment Type T Comment Status X
 Some of the commands have the settings specified for the MAC header fields, while other commands do not.

SuggestedRemedy
 Add a sentence that says that the MAC header fields are set as appropriate unless otherwise specified.

Proposed Response Response Status O

CI 07 SC 7.5 P 110 L 18 # 325
 Gilb, James Appairment

Comment Type T Comment Status X
 The restriction on transmitting command frames is too restrictive. It would not allow an unassociated DEV to associate.

SuggestedRemedy
 Change "No command ... within a piconet." to be "Other than the association request, association response, alternate PNC selection command and new PNC announcement command, no command frame shall be transmitted to or by and unassociated DEV within a piconet."

Proposed Response Response Status O

CI 07 SC 7.5 P 110 L 18 # 1503
 CI 07 SC 7.5 P 110 L 18 # 1503
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 "No command frame shall be transmitted to or by an unassociated DEV within a piconet." If no command frames are allowed by an unassociated DEV, you couldn't associate since association is a command frame!

SuggestedRemedy
 Change to: "No command frame except association request and response shall be transmitted to or by an unassociated DEV within a piconet." And Add: Alternate PNC announcement and pullout are allowed during piconet initialization.

Proposed Response Response Status O

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CI 07 SC 7.5 P 111 L 33 # 1000

Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
add the word "the"

SuggestedRemedy
... 2-octet boundary within the frame body.

Proposed Response Response Status O

CI 07 SC 7.5 P 111 L 33 # 1505

Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
We cannot understand the benefit of sending more than one command in a frame. Are we going to queue commands until we get enough to send? How long are they held? Won't this create latency?

SuggestedRemedy
For the good of the protocol, only allow one command per command frame.

Proposed Response Response Status O

CI 07 SC 7.5.1 P 111 L 44 # 1001

Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
grammatical ... add a colon as shown below

SuggestedRemedy
... PNC selection commands: the alternate PNC ...

Proposed Response Response Status O

CI 07 SC 7.5.1 P 111 L 47 # 326

Gilb, James Apparent

Comment Type T Comment Status X
There are no more directed frames in the PNC selection process, so the ACK policy shall always be No-ACK. In addition, the stream control field should be set to 0 in these commands.

SuggestedRemedy
Change "set to request ... zero." to be "set to No-ACK." Change "frame control field of the MAC header" to be "frame control field and the stream control field of the MAC"

Proposed Response Response Status O

CI 07 SC 7.5.1 P 111 L 50 # 1506

Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Why set the frag start and frag end bits to zero and ignore? this creates an exception at the receiver. Why not set both to one, then the receiver has the OPTION of ignoring, rather than forcing the receiver to ignore.

SuggestedRemedy
Change frag start and frag end to 1 for PNC selection and handover.

Proposed Response Response Status O

CI 07 SC 7.5.1 P 112 L 11 # 328

Gilb, James Apparent

Comment Type T Comment Status X
Reserved fields are no longer used in the commands or information elements.

SuggestedRemedy
Delete the reserved field and move the 3 1 byte fields to the end of the command so that the other fields end on 2 byte boundaries.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 07 SC 7.5.1 P 112 L 2 # 327
 Gilb, James Appairment

Comment Type T Comment Status X
 Directed frames are no longer used in the PNC selection process.

SuggestedRemedy
 Change the sentences "The DA is set to the ... upon reception." to read "The DA is set to the broadcast address." (i.e. change first sentence and delete the two that follow).

Proposed Response Response Status O

CI 07 SC 7.5.1 P 112 L 25 # 1507
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 Tx power level should be PHY dependant. Some PHYs may be regulated as powerspectral density, not power.

SuggestedRemedy
 Makd Tx Poweer level PHY dependant and move the description of this field to Clause

Proposed Response Response Status O

CI 07 SC 7.5.1 P 112 L 34 # 1508
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 "A late joining, new DEV may extend this time via its frame which shall be adopted by all the currently participating DEVs." What if all teh other DEVs can't hear? How does it get propagated?

SuggestedRemedy
 Explain how this change impacts the process.

Proposed Response Response Status O

CI 07 SC 7.5.1.1 P 112 L 36 # 670
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 Alternate PNC announcement command unneeded.

SuggestedRemedy
 Please delete clause 7.5.1.1

Proposed Response Response Status O

CI 07 SC 7.5.1.2 P 112 L 42 # 671
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 Alternate PNC pullout command unneeded given the change in Clause8.2.3 p139 line30-32.

SuggestedRemedy
 Please delete this clause 7.5.1.2

Proposed Response Response Status O

CI 07 SC 7.5.1.2 P 112 L 42 # 329
 Gilb, James Appairment

Comment Type T Comment Status X
 The alternate PNC pullout command was deleted from the functional description a couple of revisions ago. This command is no longer used.

SuggestedRemedy
 Delete the entire sub-clause 7.5.1.2 and all other references to the command in the draft, especially in Table 65, renumbering as necessary.

Proposed Response Response Status O

CI 07 SC 7.5.1.2 P 112 L 4247 # 738
 Huang, Bob Sony Electronics

Comment Type TR Comment Status X
 There was agreement by the meeting to remove this section.

SuggestedRemedy
 Remove.

Proposed Response Response Status O

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CI 07 SC 7.5.1.3 P 112 L 48 # 330

Gilb, James Appairant

Comment Type T Comment Status X

The new PNC announcement command doesn't need to use all of the bytes in the other PNC commands. It really only needs the new beacon timeout parameter.

SuggestedRemedy

Add to the text, following "as PNC in the piconet." on line 52 with "This command is also used at the end of a PNC handover by the new PNC of the piconet to signal the end of PNC handover. The new PNC announcement command shall be formatted as illustrated in Figure 38." Octets: 2 2 2 Type Length (=2) New beacon timeout Figure 38 -- New PNC announcement frame body (delete old paragraph beginning "At the end of ... hand over." and change the paragraph "The CTimeout ... in the channel." to read as follows:) "The new beacon timeout field indicates the time offset in milliseconds before which the first beacon shall be sent by the winning AC, in the case of PNC selection, or by the new PNC, in the case of PNC handover."

Proposed Response Response Status O

CI 07 SC 7.5.1.3 P 112 L 51 # 672

Heberling, Allen XtremeSpectrum, Inc.

Comment Type E Comment Status X

An AC uses this action type to ...

SuggestedRemedy

Please change to: " An AC uses this frame type to ..."

Proposed Response Response Status O

CI 07 SC 7.5.1.3 P 113 L 1 # 1003

Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X

grammatical correction

SuggestedRemedy

At the end of a PNC handover, the new PNC of the piconet uses the PNC selection frame with this action type to signal the end of the PNC handover.

Proposed Response Response Status O

CI 07 SC 7.5.1.4 P 113 L 28 # 1005

Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X

grammatical

SuggestedRemedy

replace "hand over" with "handover"

Proposed Response Response Status O

CI 07 SC 7.5.1.4 P 113 L 9 # 331

Gilb, James Appairant

Comment Type T Comment Status X

The PNC handover command has unnecessary items in the frame format and adds a redundant and therefore evil definition of how the frame will be used.

SuggestedRemedy

Change "The PNC shall use this command" to be "The PNC uses this command" and delete the following fields from both the frame format and the definitions that follow: superframe duration - every DEV associated with the piconet is required to know this anyway. PNC device ID - every DEV knows this from the beacon. AC device ID - The DEV already knows its own device ID Change the command length from 18 to 4

Proposed Response Response Status O

CI 07 SC 7.5.10.1 P 130 L 21 # 725

Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X

The Channel Time request command is inadequately defined for the functions required of it in this protocol.

SuggestedRemedy

The Channel Time request command clause in doc 02/037r0 provides detailed resolution to this issue.

Proposed Response Response Status O

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CI 07 SC 7.5.10.1 P 130 L 23 # 770
 Akahane, Masa Sony
 Comment Type E Comment Status X
 Length(n*10)+pad should be (n*12)
 SuggestedRemedy
 correct
 Proposed Response Response Status O

CI 07 SC 7.5.10.1 P 130 L 2333 # 837
 Kleindl, Guenter Siemens
 Comment Type TR Comment Status X
 wrong length indicated
 SuggestedRemedy
 replace at the end of line 23: '9' by '12' correct in Figure 71: Length(n*12)
 Proposed Response Response Status O

CI 07 SC 7.5.10.1 P 130 L 24 # 750
 Huang, Bob Sony Electronics
 Comment Type E Comment Status X
 'Each block of 9' is incorrect.
 SuggestedRemedy
 Change to 'Each block of 12'
 Proposed Response Response Status O

CI 07 SC 7.5.10.1 P 130 L 24 # 1085
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 grammatical
 SuggestedRemedy
 octets corresponds to a channel time ...
 Proposed Response Response Status O

CI 07 SC 7.5.10.1 P 130 L 25 # 1086
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 grammatical ... at the end of the sentence strike out the words "format of a" as shown
 SuggestedRemedy
 ... with the target DEV. The channel time request block ...
 Proposed Response Response Status O

CI 07 SC 7.5.10.1 P 131 L # 1332
 Shvodian, William XtremeSpectrum
 Comment Type TR Comment Status X
 2 fields had to be added to the CTREZB, plus 7 paragraphs to attempt to explain their usage.
 SuggestedRemedy
 This type of complexity in the name of powermanagement is unwarranted. Revisit power management.
 Proposed Response Response Status O

CI 07 SC 7.5.10.1 P 131 L 12 # 1122
 Schrader, Mark Eastman Kodak Co.
 Comment Type T Comment Status X
 The current text allows for changing an ACTIVE CTA to an EPS CTA or vice versa. This should not be allowed to simplify the PNC.
 SuggestedRemedy
 Add the following text after the end of the sentence: A channel time request for an existing stream shall not change an ACTIVE CTA to an EPS CTA, nor vice versa. A channel time request for an existing stream may modify the persistence of an ACTIVE
 Proposed Response Response Status O

CI 07 SC 7.5.10.1 P 131 L 12 # 3
 Bain, Jay Time Domain
 Comment Type E Comment Status X
 extra words present
 SuggestedRemedy
 remove "PNC it the"
 Proposed Response Response Status O

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CI 07 SC 7.5.10.1 P 131 L 12 # 2
 Bain, Jay Time Domain
Comment Type **TR** *Comment Status* **X**
 A DEV requesting switch to ACTIVE CTA expects the PNC to grant previously requested QoS upon receipt of the switch command. This is a "should" and not a "shall" as is appropriate. However, the expectation is that the PNC shall do the switch in the very next superframe beacon even if the requested bandwidth is not immediately available. This lets the EPS DEV make the switch to ACTIVE in anticipation of bandwidth becoming available in the next few superframes as the PNC is able to juggle requirements. The comment is located here because of adjacent text that might lead the

SuggestedRemedy
 Add - The PNC shall provide the switch to ACTIVE operation even if it is unable to return the full CTR allocation.
Proposed Response *Response Status* **O**

CI 07 SC 7.5.10.1 P 131 L 12 # 838
 Kleindl, Guenter Siemens
Comment Type **E** *Comment Status* **X**
 editorial

SuggestedRemedy
 at the beginning of line 12 delete 'the PNC it'
Proposed Response *Response Status* **O**

CI 07 SC 7.5.10.1 P 131 L 12 # 46
 Bain, Jay Time Domain
Comment Type **E** *Comment Status* **X**
 extra words

SuggestedRemedy
 remove "PNC it the"
Proposed Response *Response Status* **O**

CI 07 SC 7.5.10.1 P 131 L 14 # 1593
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 The first time EPS Channel Time Request is used, it should say (EPS CTR)

SuggestedRemedy
 Change from "The CTRB type value of 2 is used to create an EPS channel time request." to "The CTRB type value of 2 is used to create an EPS channel time request"
Proposed Response *Response Status* **O**

CI 07 SC 7.5.10.1 P 131 L 14 # 358
 Gilb, James Appairt
Comment Type **T** *Comment Status* **X**
 The frame format description contains a redundant (evil) functional description.

SuggestedRemedy
 Delete the sentence "The PNC shall create and retain this EPS CTR based on this"
Proposed Response *Response Status* **O**

CI 07 SC 7.5.10.1 P 131 L 18 # 1089
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 grammatical

SuggestedRemedy
 ... shall be a member of the EPS set before ...
Proposed Response *Response Status* **O**

CI 07 SC 7.5.10.1 P 131 L 19 # 256
 Gifford, Ian Self
Comment Type **E** *Comment Status* **X**
 The following sentence does not end in a period: The use of this field for EPS CTRs is described in 8.13.3.4

SuggestedRemedy
 Add the period.
Proposed Response *Response Status* **O**

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CI 07 SC 7.5.10.1 P 131 L 22 # 359
Gilb, James Appairent

Comment Type T Comment Status X
Need to add clarification for the stream index setting when this command is used to allocate a non-stream CTA.

SuggestedRemedy
After the paragraph that ends "This field is defined in 7.2.4." add the following: "For a new channel time request, the stream index shall be 0x00 for this command. All time requests that are for non-zero stream indices use the stream management command, 7.5.10.3, to initiate the request."

Proposed Response Response Status O

CI 07 SC 7.5.10.1 P 131 L 26 # 1090
Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
The line on 26 seems to indicate that the CTRB type field indicates a request for the EPS mode; however, in the paragraph starting at line 8 we saw that a device in EPS could have CTRB=0 or 1 ... so how can the CTRB field alone indicate the EPS mode?

SuggestedRemedy
Have power management subcommittee clarify line 26.

Proposed Response Response Status O

CI 07 SC 7.5.10.1 P 131 L 27 # 47
Bain, Jay Time Domain

Comment Type E Comment Status X
the text mentions EPS slots. Clearer wording would be wake superframes.

SuggestedRemedy
change "EPS slots" to "wake superframes"

Proposed Response Response Status O

CI 07 SC 7.5.10.1 P 131 L 28 # 1345
Schrader, Mark Eastman Kodak Co.

Comment Type T Comment Status X
"A zero value is not allowed ... to be ignored by the recipient" is not correct. A requested edit did not make this draft.

SuggestedRemedy
Delete the sentence and add the following replacement: A zero value shall be treated as "never", which will have the effect that the only EPS CTA elements generated by the PNC will be the result of the EPS DEV sending a Momentary EPS CTA command.

Proposed Response Response Status O

CI 07 SC 7.5.10.1 P 131 L 31 # 1091
Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
Restructure sentence assuming the technical comment is correct

SuggestedRemedy
It appears thta CTRB=0 indicates the active mode ... is this correct? If so then rewrite the sentence of line 31 as "If the CTRB type field is zero, the allocation period is for an ACTIVE ... (i.e. delete the word "otherwise")"

Proposed Response Response Status O

CI 07 SC 7.5.10.1 P 131 L 32 # 48
Bain, Jay Time Domain

Comment Type T Comment Status X
we should be talking about microseconds and not milliseconds. If we stay consistent, the resolution should be 8 us and range is 0 to 524280

SuggestedRemedy
change to 8 us and 0 - 524280

Proposed Response Response Status O

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CI 07 **SC 7.5.10.1** **P 131** **L 41** **# 1333**
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Since the PNC clock and the application clocks on the DEV won't be perfectly synchronized, the superframe and the application clock will slip with respect to each other. Therefore, the applications need to be able to handle at least a superframe worth of jitter. By limiting the max superframe size to 65.535 ms, we put a 65.535 ms bound on delay variation. This should be suitable for most applications. If not, 65 ms of buffering can smooth out the jitter.

SuggestedRemedy
 Remove maximum allocation delay variaion from the CTRB.

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.10.1** **P 131** **L 8** **# 1088**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 poor sentence structure.

SuggestedRemedy
 There is something wrong at the end of the sentence that lies between lines 8 and 12. Since I'm having trouble understanding the EPS mode I don't want to guess at the fix. Have the power management subgroup fix this sentence.

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.10.2** **P 132** **L** **# 1336**
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 What is the CTA element set to if it is not the same in every superframe?

SuggestedRemedy
 Need to define what the CTA is set to in the chanel time grant if it is not the same for every SF.

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.10.2** **P 132** **L 17** **# 360**
 Gilb, James Appairment
Comment Type **T** *Comment Status* **X**
 Informal language defines the CTA elements.

SuggestedRemedy
 Change "element is defined" to be "element shall be formatted as illustrated in Figure 30 and is defined"

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.10.2** **P 132** **L 22** **# 1747**
 Chen, Kwang-Cheng InProComm, Inc.
Comment Type **E** *Comment Status* **X**
 b16-b9 (typo)

SuggestedRemedy
 b16-b19
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.10.2** **P 132** **L 30** **# 1347**
 Schrader, Mark Eastman Kodak Co.
Comment Type **T** *Comment Status* **X**
 Incorrect term used

SuggestedRemedy
 Change: "...start time of next GTS" to ... superframe of next GTS.

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.10.2** **P 132** **L 31** **# 50**
 Bain, Jay Time Domain

Comment Type **T** *Comment Status* **X**
 I don't understand the use of the grant status field format. Isn't the SFNext a short form of the next beacon that an EPS DEV will wake on? It would seem that what we want in Figure 74 is the start time of the adjacent GTS as the text in line 31 states.

SuggestedRemedy
 change from SFNext to adjacent GTS start time in Figure 74 and then use adjacent GTS start time instead of SFNext on line 31.

Proposed Response *Response Status* **O**

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CI 07 SC 7.5.10.3 P L # 1115
Schrader, Mark Eastman Kodak Co.

Comment Type T Comment Status X
1. The stream QoS parameters field of the stream management command, connection request cause the generation of GTS slots specified by a subset of the QoS parameters. The channel time request command specifies GTS slots using the CTRB shown in 7.7.5.10.1. The corresponding parameters are named differently and defined differently, obfuscating their equivalency. 2. The CTA Type and EPS set parameter are missing in the QoS specification and are required to assign a stream to and EPS

SuggestedRemedy
Change QoS parameters to match CTRB parameters as follows: inter slot duration --> allocation period Min. time per slot --> Min GTS time Max. time per slot --> Desired GTS time Max Tx delay variation --> Maximum allocation delay Add the following QoS parameters before the allocation period EPS Type, 1 octet EPS Set, 1 octet
Proposed Response Response Status O

CI 07 SC 7.5.10.3 P 132 L # 1096
Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
line 51

SuggestedRemedy
replace the 4th word in line 51 (index) with the word "identifier"
Proposed Response Response Status O

CI 07 SC 7.5.10.3 P 132 L 36 # 726
Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
The Stream managment command is an inordinately complicated frame command for the functions it is needed in this draft.

SuggestedRemedy
Replace the Stream managment command with the upgraded Channel Time request command described in doc 02/037r0.

Proposed Response Response Status O

CI 07 SC 7.5.10.3 P 132 L 44 # 1748
Chen, Kwang-Cheng InProComm, Inc.

Comment Type E Comment Status X
20 (typo, Stream QoS parameters should be 23 octets long, cf. Fig. 77 in page 134)

SuggestedRemedy
23

Proposed Response Response Status O

CI 07 SC 7.5.10.3 P 132 L 4451 # 839

Kleindl, Guenter Siemens

Comment Type TR Comment Status X
some inconsistencies

SuggestedRemedy
Correct number of octets for 'Stream QoS parameters' to '23' Correct: Length(=29) Use either 'stream request identifier' or 'stream request index' in the Figure 75 AND the text below (line 51)

Proposed Response Response Status O

CI 07 SC 7.5.10.3 P 132 L 45 # 1533
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Stream management command should use the 48 bit address instead of the 8 bit address. Even though each DEV should have the latest table, it may get out of sync. Using the 48 bit address will prevent problems.

SuggestedRemedy
Have stream management command use the 48 bit address.

Proposed Response Response Status O
Proposed Response Response Status O

CI 07 SC 7.5.10.3 P 132 L 51 # 1116

Schrader, Mark Eastman Kodak Co.

Comment Type T Comment Status X
stream request indes is the wrong term

SuggestedRemedy
change "stream request index" to stream request identifier

Proposed Response Response Status O

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CI 07 SC 7.5.10.3 P 132 L 51 # 1337
 Shvodian, William XtremeSpectrum
 Comment Type E Comment Status X
 "stream request index" is not consistent with Figure 75.
 SuggestedRemedy
 Change to stream request index.
 Proposed Response Response Status O

CI 07 SC 7.5.10.3 P 133 L 13 # 1121
 Schrader, Mark Eastman Kodak Co.
 Comment Type T Comment Status X
 The Action Type field cannot encode 0-5
 SuggestedRemedy
 Change to 3 bits, 0 - 2 in Figure 76 and change line 20 from "2-bit" to 3-bit
 Proposed Response Response Status O

CI 07 SC 7.5.10.3 P 133 L 1420 # 840
 Kleindl, Guenter Siemens
 Comment Type TR Comment Status X
 For Action Type more than 2 bits are required
 SuggestedRemedy
 change action type length to 3 bits
 Proposed Response Response Status O

CI 07 SC 7.5.10.3 P 133 L 20 # 361
 Gilb, James Appairnent
 Comment Type T Comment Status X
 The action type requires a 3 bit field, not a 2 bit field.
 SuggestedRemedy
 Change the text from "a 2-bit" to "a 3-bit" and re-number the bits accordingly in figure 76
 Proposed Response Response Status O

CI 07 SC 7.5.10.3 P 133 L 20 # 751
 Huang, Bob Sony Electronics
 Comment Type TR Comment Status X
 Text specifies a 2 bit field, yet there are 6 outcomes (6 values).
 SuggestedRemedy
 Expand action type.
 Proposed Response Response Status O

CI 07 SC 7.5.10.3 P 133 L 27 # 1117
 Schrader, Mark Eastman Kodak Co.
 Comment Type T Comment Status X
 This will tie into a proposed change to the text in 8.6. The stream connection process involves communication between the PNC and each of the two peers (originator of the stream connection request and the target) destined to use the stream. The stream connection process involves the PNC to determine if it can provide the GTS slot allocation requested, and the two peers must agree on a set of QoS parameters. As currently proposed the communication flow is Originator->PNC->Target->PNC->Originator. The originator will then reply to only to the PNC if it rejects the Targets modified QoS values. The trigger for PNC generation of time slots should be a response from the Target to the PNC confirming acceptance of
 SuggestedRemedy
 At line 36 add the following text to create a final confirmation or acceptance of the stream connection which is the trigger to the PNC to begin creating GTS: -- A value of "6" indicates that the frame is sent by the originator DEV to the PNC as a final confirmation or acceptance of the steam connecton.
 Proposed Response Response Status O

CI 07 SC 7.5.10.3 P 133 L 3234 # 257
 Gifford, Ian Self
 Comment Type E Comment Status X
 The following sentences do not end in a period: — A value of "4" indicates that the frame is sent by one of the DEVs to the PNC to reject or disconnect the stream — A value of "5" indicates that the frame is sent by the PNC to one of the DEVs to reject or disconnect the stream
 SuggestedRemedy
 Add the period.
 Proposed Response Response Status O

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CI 07 **SC 7.5.10.3** **P 133** **L 38** **# 362**
 Gilb, James Apparent
Comment Type **T** *Comment Status* **X**
 Security is not defined on a stream by stream basis, but rather for the piconet as a
SuggestedRemedy
 Delete the security bits in the control information field and delete the sentence "The security field is a 3 bit field that <TBD>."
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.10.3** **P 133** **L 38** **# 1097**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Line 38 contains a TBD
SuggestedRemedy
 Resolve TBD ... security subcommittee
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.10.3** **P 133** **L 39** **# 294**
 Gilb, James Apparent
Comment Type **T** *Comment Status* **X**
 The security field is a 3-bit field that <TBD>
SuggestedRemedy
 Security is applicable on a piconet basis, not a stream-by-stream basis. Delete the sentence and the associated bits in figure 76 (b4-b6). Reassign the bits as reserved and move the other bits forward so that the reserved bits are contiguous.
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.10.3** **P 133** **L 39** **# 1119**
 Schrader, Mark Eastman Kodak Co.
Comment Type **T** *Comment Status* **X**
 TBD present
SuggestedRemedy
 must be removed or replaced with spec. I ask guidance from the security subcommittee members.
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.10.3** **P 133** **L 39** **# 75**
 Barr, John Motorola
Comment Type **TR** *Comment Status* **X**
 Security field not required.
SuggestedRemedy
 Remove "The security field is a 2 bit field defined in 7.2.1.2."
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.10.3** **P 133** **L 40** **# 52**
 Bain, Jay Time Domain
Comment Type **T** *Comment Status* **X**
 there is a TBD for the security field
SuggestedRemedy
 define the TBD
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.10.3** **P 133** **L 41** **# 1339**
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 This sentence is unclear "The direction field value of '1' means that the stream is being transmitted from the DEV that sent the command. The value of '0' means that the stream is being received."
SuggestedRemedy
 Modify the sentence as follows: "The direction field value of '1' means that the stream is being transmitted from the DEV that originated the stream request. The value of '0' means that the stream is being received by the originator of the stream request."
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.10.3** **P 134** **L 48** **# 1118**
 Schrader, Mark Eastman Kodak Co.
Comment Type **T** *Comment Status* **X**
 "frequency" is the wrong term.
SuggestedRemedy
 change "frequency" to period.
Proposed Response *Response Status* **O**

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CI 07 SC 7.5.10.3 P 134 L 52 # 1341
Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
Setting the resolution of the channel time to 8 us will result in inefficient CTAs. This should be change to 1 us resolution.

SuggestedRemedy
Change CTA resolution to 1 us.

Proposed Response Response Status **O**

CI 07 SC 7.5.10.3 P 134 L 56 # 737
Huang, Bob Sony Electronics

Comment Type **E** Comment Status **X**
'11' is used twice. '16' is not available from a 4 bit field.

SuggestedRemedy
Correct.

Proposed Response Response Status **O**

CI 07 SC 7.5.10.3 P 135 L # 1342
Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
All of these parameters have use K which is 1024. They should be small k, which according to the definitions is 1000.

SuggestedRemedy
Change K to k.

Proposed Response Response Status **O**

CI 07 SC 7.5.10.3 P 135 L 18 # 1099
Roberts, Richard XtremeSpectrum

Comment Type **T** Comment Status **X**
In line 18 ... in the middle of the sentence is the word "over" ... would a better word be "after"

SuggestedRemedy
... the time, in Kus, after which the retransmission ... Review by MAC people.

Proposed Response Response Status **O**

CI 07 SC 7.5.2.1 P 113 L 41 # 1510
Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
Why set the frag start and frag end bits to zero and ignore? this creates an exceptionb at the receiver. Why not set both to one, then the receiver has the OPTION of ignoring, rather than forcing the receiver to ignore.

SuggestedRemedy
Change frag start and frag end to 1 for Association Request Command.

Proposed Response Response Status **O**

CI 07 SC 7.5.2.1 P 113 L 43 # 1509
Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
Ignoring the header fields should be optional and not mandatory. Setting the bits should be mandatory, ignoring them on reception should be optional.

SuggestedRemedy
change to "may be ignored upon reception" This applies to all of the commands.

Proposed Response Response Status **O**

CI 07 SC 7.5.2.1 P 113 L 43 # 332
Gilb, James Appairnt

Comment Type **T** Comment Status **X**
Need to add a definition of the stream control field (0x00). Best place to put this is 7.5 since all commands are non-stream data. Also need to delete the redundant and therefore evil definition of what goes in the PNID field (that is defined much earlier,

SuggestedRemedy
Add the sentence to 7.5 at the end of the first paragraph, "All commands shall have the stream index field in the MAC header set to 0x00 and shall be ignored upon reception."
Delete the sentence "The PNID values ... to associate."

Proposed Response Response Status **O**

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CI 07 **SC 7.5.2.1** **P 114** **L 14** **# 1007**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 add definitive article

SuggestedRemedy
 ... capability field is the same ...

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.2.1** **P 114** **L 16** **# 1008**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 add definitive article

SuggestedRemedy
 ... if the frames from the PNC ...

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.2.1** **P 114** **L 18** **# 1009**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 grammatical, add definitive

SuggestedRemedy
 larly, if the PNC did not ...

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.2.1** **P 114** **L 19** **# 333**
 Gilb, James Appairent
Comment Type **T** *Comment Status* **X**
 A DEV that fails ATP will not necessarily re-associate and so the PNC should not expect that to happen. The PNC does not need to expect anything.

SuggestedRemedy
 Change "the DEV and expect the DEV to associate again." to be "the DEV."

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.2.2** **P 114** **L 38** **# 1511**
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Why set the frag start and frag end bits to zero and ignore? this creates an exceptionb at the receiver. Why not set both to one, then the receiver has the OPTION of ignoring, rather than forcing the receiver to ignore.

SuggestedRemedy
 Change frag start and frag end to 1 for Association Response Command. This applies to all commands.

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.2.2** **P 114** **L 42** **# 1011**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 grammatical

SuggestedRemedy
 ... association address; hence, this command ...

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.2.2** **P 114** **L 42** **# 334**
 Gilb, James Appairent
Comment Type **T** *Comment Status* **X**
 The ACK policy for the association response command is defined in three places and therefore is evil.

SuggestedRemedy
 Delete the sentence "Hence this command shall not be ACKed" Also delete "If there is a match, ... future communications." on line 48 since this is already defined in clause 8.

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.2.2** **P 115** **L 10** **# 1512**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Why is "DEV wishes to disassociate" a reason code?

SuggestedRemedy
 Need to explain this.

Proposed Response *Response Status* **O**

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CI 07 SC 7.5.2.2 P 115 L 11 # 335
 Gilb, James Appairnt

Comment Type T Comment Status X
 The condition code "DEV wishes to disassociate" is not possible in the PNC's response. However, we do not have a code for when the PNC does not wish to allow neighbor piconets.

SuggestedRemedy
 Change reason code 5 from "DEV wishes to disassociate" to "Neighbor piconet not

Proposed Response Response Status O

CI 07 SC 7.5.2.2 P 115 L 14 # 1513
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 Security required should be a reason code.

SuggestedRemedy
 Add "security requered" as a reason code.

Proposed Response Response Status O

CI 07 SC 7.5.2.2 P 115 L 6 # 820
 Kleindl, Guenter Siemens

Comment Type TR Comment Status X
 Add possibility for reject, without giving a detailed reason

SuggestedRemedy
 add a reason code 'reject'

Proposed Response Response Status O

CI 07 SC 7.5.2.3 P 115 L 22 # 245
 Gifford, Ian Self

Comment Type E Comment Status X
 The following sentence does not end in a period: command shall be formatted as illustrated in Figure 41

SuggestedRemedy
 Add the period.

Proposed Response Response Status O

CI 07 SC 7.5.2.3 P 115 L 33 # 678
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
 Text between lines 33 and 43 is not needed if the DeviceAddress, ReasonCode, and Reserved fields are deleted.

SuggestedRemedy
 Please remove the indicated text.

Proposed Response Response Status O

CI 07 SC 7.5.2.3 P 115 L 37 # 1514
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 What does "DEV state has expired" mean? Does this mean that ATP timeout?

SuggestedRemedy
 Describe what this means. If this does not mean ATP, add ATP expired as a valid reason code.

Proposed Response Response Status O

CI 07 SC 7.5.2.3 P 115 L 37 # 1013
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 grammatical

SuggestedRemedy
 Channel is too severe to serve the DEV

Proposed Response Response Status O

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CI 07 SC 7.5.2.3 P 115 L 37 # 336
 Gilb, James Appairent

Comment Type T Comment Status X
 Reason code 0 and 2 are not well defined. There is no way for the PNC to know 2, unless it monitors all GTSS. Compliant DEVs are not allowed to overshoot their allocated channel time.

SuggestedRemedy
 Change reason code 0 to read "ATP has expired, DEV needs to re-associate". Delete reason code 2 and re-number the reason codes. As an alternative, perhaps allow reason code 2 to be "PNC unable to service DEV" as a catch-all for any problems the PNC might encounter.

Proposed Response Response Status O

CI 07 SC 7.5.2.3 P 115 L 38 # 821
 Kleindl, Guenter Siemens

Comment Type E Comment Status X
 editorial

SuggestedRemedy
 replace 'Channel is servere ..' by 'Channel is too servere ..'

Proposed Response Response Status O

CI 07 SC 7.5.3 P 115 L 48 # 337
 Gilb, James Appairent

Comment Type T Comment Status X
 The definition of the role of the PNC as PSM redundant and is therefore an abomination to the technical editor.

SuggestedRemedy
 Delete the two sentences "In all cases ...maager in a piconet."

Proposed Response Response Status O

CI 07 SC 7.5.3 P 115 L 49 # 1015
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
 Piconet Security Manager

SuggestedRemedy
 Add text to clause 10 the details of the Piconet Security Manager - security

Proposed Response Response Status O

CI 07 SC 7.5.3 P 115 L 49 # 1014
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 acronym PSM

SuggestedRemedy
 add PSM to clause 4

Proposed Response Response Status O

CI 07 SC 7.5.3.1 P 116 L 11 # 1516
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 What is the maximum size of a public key object? If it won't fit in a max frame size, the command frame would need to be fragmented. Fragmenting command frames won't work because of single sequence counter.

SuggestedRemedy
 Need to ensure max key object size is less than the max frame size or figure out how to fragment commands.

Proposed Response Response Status O

CI 07 SC 7.5.3.1 P 116 L 11 # 1515
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 Public Key Object Length and Length are redundant.

SuggestedRemedy
 Delete Public Key Object Length.

Proposed Response Response Status O

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CI 07 **SC 7.5.3.1** **P 116** **L 18** **# 823**
 Kleindl, Guenter Siemens
Comment Type **E** *Comment Status* **X**
 reorder the paragraphs
SuggestedRemedy
 Move sentence in line 18 up to be directly below Figure 42.
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.1** **P 116** **L 5** **# 246**
 Gifford, Ian Self
Comment Type **E** *Comment Status* **X**
 The following sentence does not end in a period: The authentication request command frame structure shall be formatted as illustrated in Figure 42
SuggestedRemedy
 Add the period.
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.1** **P 116** **L 810** **# 822**
 Kleindl, Guenter Siemens
Comment Type **TR** *Comment Status* **X**
 Include the possibility for authentication of the PNC in the authentication request.
SuggestedRemedy
 Include the 'Public Key Challenge' as optional information in the authentication request command.
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.2** **P 116** **L 29** **# 247**
 Gifford, Ian Self
Comment Type **E** *Comment Status* **X**
 The following sentence does not end in a period: The authentication response command frame structure shall be formatted as illustrated in Figure 50
SuggestedRemedy
 Add the period.
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.2** **P 116** **L 29** **# 1022**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 in correct figure number
SuggestedRemedy
 change figure 50 to figure 43
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.2** **P 116** **L 29** **# 771**
 Akahane, Masa Sony
Comment Type **E** *Comment Status* **X**
 Pointing Figure should be 43 insted of 50
SuggestedRemedy
 correct
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.2** **P 116** **L 30** **# 741**
 Huang, Bob Sony Electronics
Comment Type **E** *Comment Status* **X**
 incorrect figure reference.
SuggestedRemedy
 should be figure 43
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.2** **P 116** **L 3235** **# 824**
 Kleindl, Guenter Siemens
Comment Type **TR** *Comment Status* **X**
 Include the possibility for authentication of the PNC.
SuggestedRemedy
 Include the 'Public Key Proof' as conditional information in the authentication response command.
Proposed Response *Response Status* **O**

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CI 07 SC 7.5.3.2 P 116 L 35 # 338
 Gilb, James Appairnt
 Comment Type T Comment Status X
 Move the Authentication timeout field to be prior to AuthenticationInfo in the command format so that the variable field is last.
 SuggestedRemedy
 Change as indicated.
 Proposed Response Response Status O

CI 07 SC 7.5.3.2 P 116 L 38 # 1518
 Shvodian, William XtremeSpectrum
 Comment Type T Comment Status X
 AuthenticationInfoLength is redudant with Length
 SuggestedRemedy
 Delete AuthenticationInfoLength
 Proposed Response Response Status O

CI 07 SC 7.5.3.2 P 116 L 41 # 825
 Kleindl, Guenter Siemens
 Comment Type E Comment Status X
 To avoid confusion the term 'cipher suite' should only be used for the privacy service (encryption, ciphering).
 SuggestedRemedy
 replace 'cipher suite' by 'authentication algorithm'
 Proposed Response Response Status O

CI 07 SC 7.5.3.2 P 117 L 5 # 772
 Akahane, Masa Sony
 Comment Type E Comment Status X
 Pointing Figure should be 44 insted of 50
 SuggestedRemedy
 correct
 Proposed Response Response Status O

CI 07 SC 7.5.3.3 P 116 L 50 # 826
 Kleindl, Guenter Siemens
 Comment Type E Comment Status X
 To avoid confusion the term 'cipher suite' should only be used for the privacy service (encryption, ciphering).
 SuggestedRemedy
 replace 'cipher suite' by 'authentication algorithm'
 Proposed Response Response Status O

CI 07 SC 7.5.3.3 P 117 L 10 # 339
 Gilb, James Appairnt
 Comment Type T Comment Status X
 Move the AuthenticateFailueTimeout to be the first field so that the variable length field is last in the command format.
 SuggestedRemedy
 Change as indicated in the figure.
 Proposed Response Response Status O

CI 07 SC 7.5.3.3 P 117 L 10 # 1519
 Shvodian, William XtremeSpectrum
 Comment Type T Comment Status X
 PublicKeyChallengeLength is redundant with Length
 SuggestedRemedy
 Delete PublicChallengeLength
 Proposed Response Response Status O

CI 07 SC 7.5.3.3 P 117 L 17.18 # 827
 Kleindl, Guenter Siemens
 Comment Type E Comment Status X
 To avoid confusion the term 'cipher suite' should only be used for the privacy service (encryption, ciphering).
 SuggestedRemedy
 replace 'cipher suite' by 'authentication algorithm'
 Proposed Response Response Status O

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CI 07 **SC 7.5.3.3** **P 117** **L 2021** **# 79**
 Barr, John Motorola

Comment Type **TR** *Comment Status* **X**
 AuthenticateFailureTimeout is not sent with the Challenge command. It is used within the MAC to limit the amount of time the MAC will wait for an Authentication response.

SuggestedRemedy
 Remove the last field (AuthenticationFailureTimeout) from Figure 44 on page 117.
 Remove lines 20-22 on page 117.

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.3** **P 117** **L 5** **# 743**
 Huang, Bob Sony Electronics

Comment Type **E** *Comment Status* **X**
 incorrect figure reference.

SuggestedRemedy
 Should be figure 44.

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.3** **P 117** **L 5** **# 1023**
 Roberts, Richard XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 in correct figure number

SuggestedRemedy
 should be figure 44

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.4** **P 117** **L 2644** **# 828**
 Kleindl, Guenter Siemens

Comment Type **E** *Comment Status* **X**
 To avoid confusion the term 'cipher suite' should only be used for the privacy service (encryption, ciphering).

SuggestedRemedy
 replace 'cipher suite' by 'authentication algorithm'

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.4** **P 117** **L 32** **# 1024**
 Roberts, Richard XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 in correct figure number

SuggestedRemedy
 figure should be 45

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.4** **P 117** **L 32** **# 248**
 Gifford, Ian Self

Comment Type **E** *Comment Status* **X**
 The following sentence does not end in a period: The challenge response command frame structure shall be formatted as illustrated in Figure 50

SuggestedRemedy
 Add the period.

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.4** **P 117** **L 32** **# 744**
 Huang, Bob Sony Electronics

Comment Type **E** *Comment Status* **X**
 incorrect figure reference.

SuggestedRemedy
 Should be figure 45.

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.4** **P 117** **L 32** **# 773**
 Akahane, Masa Sony

Comment Type **E** *Comment Status* **X**
 Pointing Figure should be 45 insted of 50

SuggestedRemedy
 correct

Proposed Response *Response Status* **O**

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CI 07 SC 7.5.3.4 P 117 L 37 # 1520
 Shvodian, William XtremeSpectrum
 Comment Type T Comment Status X
 PublicKeyProofLength is redundant with Length
 SuggestedRemedy
 Eliminate PublicKeyProofLength
 Proposed Response Response Status O

CI 07 SC 7.5.3.5 P 117 L 47 # 1521
 Shvodian, William XtremeSpectrum
 Comment Type E Comment Status X
 Request key request command is redundant.
 SuggestedRemedy
 Change to Key Request command.
 Proposed Response Response Status O

CI 07 SC 7.5.3.5 P 118 L 1 # 774
 Akahane, Masa Sony
 Comment Type E Comment Status X
 Pointing Figure should be 46 insted of 50
 SuggestedRemedy
 correct
 Proposed Response Response Status O

CI 07 SC 7.5.3.5 P 118 L 1 # 249
 Gifford, Ian Self
 Comment Type E Comment Status X
 The following sentence does not end in a period: The request key request command
 frame structure shall be formatted as illustrated in Figure 50
 SuggestedRemedy
 Add the period.
 Proposed Response Response Status O

CI 07 SC 7.5.3.5 P 118 L 1 # 1030
 Roberts, Richard XtremeSpectrum
 Comment Type TR Comment Status X
 incorrect figure number
 SuggestedRemedy
 should be figure 46
 Proposed Response Response Status O

CI 07 SC 7.5.3.5 P 118 L 1 # 745
 Huang, Bob Sony Electronics
 Comment Type E Comment Status X
 incorrect figure reference.
 SuggestedRemedy
 Should be figure 46.
 Proposed Response Response Status O

CI 07 SC 7.5.3.5-7.5.3.7 P 118 L # 829
 Kleindl, Guenter Siemens
 Comment Type TR Comment Status X
 could not find the details of the cipher suite list
 SuggestedRemedy
 clarify contents of cipher suit list
 Proposed Response Response Status O

CI 07 SC 7.5.3.6 P 118 L 16 # 1297
 Shvodian, William XtremeSpectrum
 Comment Type E Comment Status X
 request key response command dosen't sound right.
 SuggestedRemedy
 change to Key Response command.
 Proposed Response Response Status O

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CI 07 **SC 7.5.3.6** **P 118** **L 21** **# 250**
 Gifford, Ian Self

Comment Type **E** *Comment Status* **X**
 The following sentence does not end in a period: The request key response command frame structure shall be formatted as illustrated in Figure 50

SuggestedRemedy
 Add the period.

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.6** **P 118** **L 21** **# 1031**
 Roberts, Richard XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 incorrect figure number

SuggestedRemedy
 should be figure 47

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.6** **P 118** **L 21** **# 775**
 Akahane, Masa Sony

Comment Type **E** *Comment Status* **X**
 Pointing Figure should be 47 insted of 50

SuggestedRemedy
 correct

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.6** **P 118** **L 22** **# 746**
 Huang, Bob Sony Electronics

Comment Type **E** *Comment Status* **X**
 incorrect figure reference.

SuggestedRemedy
 Should be figure 47.

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.7** **P 118** **L 43** **# 1298**
 Shvodian, William XtremeSpectrum

Comment Type **E** *Comment Status* **X**
 Since there is no Distribute Key Response command, this can just be distribute Key command.

SuggestedRemedy
 Change to Distribute Key command

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.7** **P 118** **L 43** **# 1033**
 Roberts, Richard XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 Incomplete specification for usage of distribute key request

SuggestedRemedy
 Clause 10 needs detail on usage and specs for distribute key request - security subcommittee.

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.7** **P 119** **L 1** **# 1034**
 Roberts, Richard XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 incorrect figure number

SuggestedRemedy
 should be figure 48

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.7** **P 119** **L 1** **# 747**
 Huang, Bob Sony Electronics

Comment Type **E** *Comment Status* **X**
 incorrect figure reference.

SuggestedRemedy
 Should be figure 48.

Proposed Response *Response Status* **O**

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CI 07 **SC 7.5.3.7** **P 119** **L 1** **# 251**
 Gifford, Ian Self

Comment Type **E** *Comment Status* **X**
 The following sentence does not end in a period: The distribute key request command frame structure shall be formatted as illustrated in Figure 50

SuggestedRemedy
 Add the period.

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.7** **P 119** **L 6** **# 340**
 Gilb, James Apparent

Comment Type **T** *Comment Status* **X**
 Change the order of the fields so that the variable length field is last, in particular put the DistributeKeyFailureTimeout as the first field following the length field.

SuggestedRemedy
 Change as indicated.

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.7** **P 120** **L 1** **# 776**
 Akahane, Masa Sony

Comment Type **E** *Comment Status* **X**
 Pointing Figure should be 48 insted of 50

SuggestedRemedy
 correct

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.8** **P 119** **L 23** **# 1037**
 Roberts, Richard XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 Deauthenticate Request Command Usage

SuggestedRemedy
 Security subcommittee to provide details on Deauthenticate Request command in clause 10

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.8** **P 119** **L 24** **# 1299**
 Shvodian, William XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 Not sure what the deauthenticate request command does. It does not appear anywhere in the text except in clause 6 and 7.5.3.8. If PNC is going to deauthenticate a DEV, why not just disassociate it.

SuggestedRemedy
 This command should be deleted unless someone can find a use for it.

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.8** **P 119** **L 29** **# 252**
 Gifford, Ian Self

Comment Type **E** *Comment Status* **X**
 The following sentence does not end in a period: The deauthenticate request command frame structure shall be formatted as illustrated in Figure 50

SuggestedRemedy
 Add the period.

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.8** **P 119** **L 29** **# 1038**
 Roberts, Richard XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 wrong figure number

SuggestedRemedy
 figure 49

Proposed Response *Response Status* **O**

CI 07 **SC 7.5.3.8** **P 119** **L 29** **# 748**
 Huang, Bob Sony Electronics

Comment Type **E** *Comment Status* **X**
 incorrect figure reference.

SuggestedRemedy
 Should be figure 49.

Proposed Response *Response Status* **O**

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CI 07 SC 7.5.3.8 P 119 L 34 # 830
 Kleindl, Guenter Siemens
 Comment Type TR Comment Status X
 correct length value
 SuggestedRemedy
 Leng(=0)
 Proposed Response Response Status O

CI 07 SC 7.5.3.8 P 120 L 29 # 777
 Akahane, Masa Sony
 Comment Type E Comment Status X
 Pointing Figure should be 49 insted of 50
 SuggestedRemedy
 correct
 Proposed Response Response Status O

CI 07 SC 7.5.4.1 P 119 L 45 # 679
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 The title of clause 7.5.4.1 Probe request command is incorrect. This command requests
 and delivers specific device information elements and is used to communicate DEV to
 DEV, DEV to PNC, or PNC to DEV.
 SuggestedRemedy
 Please change the clause title to Device Information request command.
 Proposed Response Response Status O

CI 07 SC 7.5.4.1 P 119 L 46 # 680
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 Text between line 46 and 49 referencing the probe name command is incorrect.
 SuggestedRemedy
 Please replace all instances of probe request with device information request.
 Proposed Response Response Status O

CI 07 SC 7.5.4.1 P 119 L 49 # 341
 Gilb, James Appairment
 Comment Type T Comment Status X
 The stream control field should be defined once for all commands in 7.5 (as indicated in
 an earlier comment). Hence it should be deleted from this location. Redundancy is
 evil. This sentence also occurs in 7.5.4.2 and should be deleted from there as well.
 SuggestedRemedy
 Delete the sentence "The stream control ... ignored upon reception." which ends on the
 top of the next page. Also delete the sentence "The stream control .. ignored upon
 reception." on page 120, line 33, sub-clause 7.5.4.2.
 Proposed Response Response Status O

CI 07 SC 7.5.4.1 P 120 L # 1044
 Roberts, Richard XtremeSpectrum
 Comment Type TR Comment Status X
 So how is the MSB of the information request filed mapped (ref. Figure 50)? Suggestion
 below.
 SuggestedRemedy
 1=binary coded 0=bit map
 Proposed Response Response Status O

CI 07 SC 7.5.4.1 P 120 L 1 # 681
 CI 07 SC 7.5.4.1 P 120 L 1 # 681
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 Text between line 1 and 27 referencing the probe name command is incorrect.
 SuggestedRemedy
 Please replace all instances of probe request with device information request.
 Proposed Response Response Status O

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CI 07 SC 7.5.4.1 P 120 L 12 # 1300
Shvodian, William XtremeSpectrum

Comment Type **E** Comment Status **X**
These two paragraphs are confusing. The first paragraph says that the 15 LSBs are a bitmap. Then, the second paragraph says "The most significant bit of information request field indicates that the rest of the bits in the field are not bit maps, instead they are binary coded to indicate the element ID of the information element that is being requested by the sender of this command from its intended recipient." This is very confusing. IF the MSB is a what?

SuggestedRemedy
The MSB action should be first, followed by a description of what the LSBs are in either case.
Proposed Response Response Status **O**

CI 07 SC 7.5.4.1 P 120 L 16 # 1043
Roberts, Richard XtremeSpectrum

Comment Type **E** Comment Status **X**
grammatical
SuggestedRemedy
... request field corresponds to the information ...

Proposed Response Response Status **O**

CI 07 SC 7.5.4.1 P 120 L 2 # 253
Gifford, Ian Self

Comment Type **E** Comment Status **X**
The following sentence does not end in a period: frame structure shall be formatted as illustrated in Figure 50

SuggestedRemedy
Add the period.

Proposed Response Response Status **O**

CI 07 SC 7.5.4.1 P 120 L 27 # 1301
Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
Why does the probe request command contain information elements? This is requesting IEs not sending them.

SuggestedRemedy
Remove Information Elements from the probe request command.

Proposed Response Response Status **O**

CI 07 SC 7.5.4.2 P 120 L 26 # 342
Gilb, James Appairant

Comment Type **T** Comment Status **X**
Clarify what is the purpose of the information elements field.

SuggestedRemedy
Change "information elements, described in 7.4." to be "information elements, 7.4, about the source DEV that is being provided to the destination DEV."

Proposed Response Response Status **O**

CI 07 SC 7.5.4.2 P 120 L 29 # 682

Heberling, Allen XtremeSpectrum, Inc.

Comment Type **T** Comment Status **X**
The title of clause 7.5.4.2 Probe response command is incorrect. This command requests and delivers specific device information elements and is used to communicate DEV to DEV, DEV to PNC, or PNC to DEV.

SuggestedRemedy
Please replace all instances of probe response with device information response.

Proposed Response Response Status **O**

CI 07 SC 7.5.4.2 P 120 L 34 # 254
Gifford, Ian Self

Comment Type **E** Comment Status **X**
The following sentence does not end in a period: The probe response command frame structure shall be formatted as illustrated in Figure 51

SuggestedRemedy
Add the period.

Proposed Response Response Status **O**

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CI 07 **SC 7.5.4.2** **P 120** **L 44** **# 255**
 Gifford, Ian Self
Comment Type **E** *Comment Status* **X**
 The following sentence does not end in a period: The information request field is defined in 7.5.4.1
SuggestedRemedy
 Add the period.
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.4.2** **P 120** **L 44** **# 343**
 Gilb, James Apparent
Comment Type **T** *Comment Status* **X**
 The information request field is not used in the probe response command.
SuggestedRemedy
 Delete the field from figure 51 and the sentence referencng it on line 44.
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.4.3** **P 121** **L 4** **# 1046**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 misspelling ... wrong word
SuggestedRemedy
 ... DEV in the piconet to any other DEV ...
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.4.3** **P 121** **L 40** **# 1305**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Specify that the frames received in error wer from the destination of this command.
SuggestedRemedy
 Modify the sentence as followe: "The RX error frames count is the total number of frames, not including Imm-ACK frames, that were received in error by the sender of this command from the destination of this command."
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.4.4** **P 121** **L** **# 1309**
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Channel status gives no more information to the transmitter than if acknowledgements are used.
SuggestedRemedy
 Eliminate channel status request and response altogether an just use ACKs if you want to determine channel status.
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.4.4** **P 121** **L 29** **# 1303**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Max window sizesould be an integer number of superframes, not ms.
SuggestedRemedy
 Change max window size to be an integer number of superframes.
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.4.4** **P 121** **L 37** **# 1049**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Question to PHY subcommittee about which directed frames should be counted.
SuggestedRemedy
 Is it that we should only count frames from the probe response source?
Proposed Response *Response Status* **O**

CI 07 **SC 7.5.4.4** **P 121** **L 37** **# 1304**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Should specify that the frame counts was for frames feceived from the destination of the command.
SuggestedRemedy
SuggestedRemedy
 Modify the sentence as follows "by the sender of this command from the destination of this command."
Proposed Response *Response Status* **O**

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CI 07 SC 7.5.4.4 P 121 L 43 # 1307
Shvodian, William XtremeSpectrum

Comment Type T Comment Status X

This paragraph is inconsistent. First it says the frame loss count is frames that were not successfully received on their first attempt. Then it says that missing frames (a gap in sequence number) is the way that lost frames are determined. However, successful retries will not show up as a gap in sequence number. Then it says that frames with retry bit set are not included in the calculation.

SuggestedRemedy

Redo this paragraph and remove inconsistencies so that we have a solid definition of what frame loss count means.

Proposed Response Response Status O

CI 07 SC 7.5.4.4 P 121 L 44 # 1306
Shvodian, William XtremeSpectrum

Comment Type T Comment Status X

How do we know if a frame was received on its first attempt or a subsequent attempt? Is this what the retrr bit is used for?

SuggestedRemedy

Explain how it is determined gthat a frame was received correctly on its first attempt.

Proposed Response Response Status O

CI 07 SC 7.5.4.4 P 121 L 49 # 1308
Shvodian, William XtremeSpectrum

Comment Type T Comment Status X

"These numbers are accumulated for all streams at a DEV and sent as receive frame loss count." It is not clear that these are only the streams from one particular DEV.

SuggestedRemedy

Modify the sentence as follows: "These numbers are accumulated for all streams from one DEV to the other DEV and sent as receive frame loss count."

Proposed Response Response Status O

CI 07 SC 7.5.5.1 P 122 L # 831
Kleindl, Guenter Siemens

Comment Type E Comment Status X
'transmit power change' is an element and not a command

SuggestedRemedy

move 7.5.5.1 into section 7.4

Proposed Response Response Status O

CI 07 SC 7.5.6.1 P 122 L # 1310
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X

The DEV requesting repeater service will not know the amount of channel time required for the PNC to the destination DEV. Also, it does not make sense to have the transmitting DEV send to both the receiver and the PNC. This will waste too much channel time by forcing the DEV to use the lowest TxRate. Also, Immediate ACKs can

SuggestedRemedy

If we keep repeater service, the PNC will need to determine the channel time required itself. I recommend eliminating the repeater service. If repeater service is needed then it should be handled by the higher layers.

Proposed Response Response Status O

CI 07 SC 7.5.6.1 P 122 L 33 # 344
Gilb, James Appairment

Comment Type T Comment Status X

The repeater services request command has incorrect fields and fields that are not needed. The PNC will repeat all communications between the two DEVs and it knows all of the CTRB's that have been allowed between the two. Also, the device ID should not be used, but rather the AD-AD. Since this is used for the repeater service grant command, adopting this change will require changes in 7.5.6.2 as well.

SuggestedRemedy

Change the destination device ID field to be the destination AD-AD field and change the definition from "The destination device ID is the 48 bit IEEE 802 address" to be "The destination AD-AD is the addresss". Change the length of this field to 2 octets. Delete all of the CTRBs from the figure. Delete the sentences "The format of channel time ... destination device ID." Change the command length to be 2 In 7.5.6.2, change "The destination device ID is that" to be "The destination AD-AD is that" Delete the sentences "The format of channel time ... repeater service."

Proposed Response Response Status O

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CI 07 SC 7.5.6.1 P 122 L 43 # 749
 Huang, Bob Sony Electronics

Comment Type E Comment Status X
 Incomplete wording: 'channel time'

SuggestedRemedy
 Change to 'channel time request block'

Proposed Response Response Status O

CI 07 SC 7.5.6.2 P 122 L # 1052
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
 Symmetric Repeater Channel

SuggestedRemedy
 This clause should be rewritten so that during the repeater operation the up/down channel being repeated by the PNC is symmetric (in terms of passed data frames) so that the PNC does not have to do any buffering when providing the repeater service. This means the slowest PNC link (up or down) will determine the speed of the corresponding

Proposed Response Response Status O

CI 07 SC 7.5.6.2 P 123 L 1 # 345
 Gilb, James Appairnt

Comment Type T Comment Status X
 The last sentence defines functional requirements that are already defined in clause 8. The redundant definition is therefore evil and shall be exorcised.

SuggestedRemedy
 Move the sentence "If the DEV ... next becomes available" to clause 8.11 or delete the sentence.

Proposed Response Response Status O

CI 07 SC 7.5.6.3 P 123 L 12 # 346
 Gilb, James Appairnt

Comment Type T Comment Status X
 The AD-AD should be used instead of the destination device ID.

SuggestedRemedy
 Change "destination device ID" to be "destination AD-AD" in the table and in one place in each of the two paragraphs that follow the figure. Change the field size to 2 octets and the command size to 3 octets.

Proposed Response Response Status O

CI 07 SC 7.5.6.3 P 123 L 34 # 1054
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 6th reason code

SuggestedRemedy
 word should be "handover" and not "hand over"

Proposed Response Response Status O

CI 07 SC 7.5.7 P 123 L 37 # 708
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 The current Power managment commands add an inordinate level of complexity to this protocol to make it unreasonable to implement in a WPAN device. Consequently, they are inappropriate for this protocol.

SuggestedRemedy
 Please remove clauses 7.5.7 through 7.5.7.6.

Proposed Response Response Status O

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CI 07 SC 7.5.7.1 P 123 L 38 # 1108
 Roberts, Richard XtremeSpectrum

Comment Type **TR** Comment Status **X**
 When a DEV who wants to use EPS (the slave) asks the PNC to form an EPS set with a particular DEV who will be the "master", how does the "master" DEV get informed that he is now member of an EPS master/slave set?

SuggestedRemedy
 I'm having trouble following how all this works so I need the power management folks to help me on this one. Refer to power management folks.

Proposed Response Response Status **O**

CI 07 SC 7.5.7.1 P 123 L 41 # 347
 Gilb, James Appairnt

Comment Type **T** Comment Status **X**
 There is a redundant and therefore evil definition of functional requirements in this frame format section.

SuggestedRemedy
 Delete the sentence "When and EPS set is .. for that EPS set." since this requirement is already in clause 8.

Proposed Response Response Status **O**

CI 07 SC 7.5.7.1 P 123 L 41 # 1169
 Roberts, Richard XtremeSpectrum

Comment Type **T** Comment Status **X**

Add reference to a clause for clarity
 SuggestedRemedy
 In the sentence at line 41, a statement is made "When an EPS set is confirmed as created ...". Add in this sentence reference to the clause in the text which describes how EPS sets are created. I need help from the power management folk on this one.

Proposed Response Response Status **O**

CI 07 SC 7.5.7.1 P 124 L # 1313
 Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
 How does a DEV know what EPS sets are out there and which to join?

SuggestedRemedy
 Proponets of this power management scheme need to specify how a device knows what ESP sets are out there, who the members are so it can decide which to join.

Proposed Response Response Status **O**

CI 07 SC 7.5.7.1 P 124 L 19 # 1314
 Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
 "The EPS set value is a octet that is assigned by the PNC to a group of DEVs that share the same EPSTime and EPSNext." Are all DEVs with the same EPSTime and EPSNext in a single EPS set?

SuggestedRemedy
 This needs to be fully clarified.

Proposed Response Response Status **O**

CI 07 SC 7.5.7.1 P 124 L 19 # 832
 Kleindl, Guenter Siemens

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

SuggestedRemedy
 replace 'is a octet' with 'is an octet'

Proposed Response Response Status **O**

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CI 07 SC 7.5.7.1 P 124 L 22 # 1315
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X

It is redundant to say "A value of zero indicates that the DEV is waking for each superframe." and to say "Depending on the value of superframe duration parameter, values of EPSTime that are less than the current value of superframe duration indicate that the DEV wakes for each superframe." Also, it is unclear why saying that "Depending on the value of the superframe duration parameter." These words provide

SuggestedRemedy

It would suffice to replace both those sentences with the following: "Values of EPSTime that are less than the current value of superframe duration indicate that the DEV wakes for each superframe."

Proposed Response Response Status O

CI 07 SC 7.5.7.1 P 124 L 24 # 1057
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
grammatical

SuggestedRemedy

the current value of the superframe ...

Proposed Response Response Status O

CI 07 SC 7.5.7.1 P 124 L 25 # 1316
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X

This is all but unreadable: "Since the wake time is bounded by superframe beacon location, the beacon start point immediately preceding the completion of EPSTime shall be the wake point."

SuggestedRemedy

Replace with: "The wake point is the start of the beacon immediately preceding the completion of EPSTime." I am putting this as a TR because I honestly don't know what was meant by the original sentence and I want to make sure I am not changing the meaning.

Proposed Response Response Status O

CI 07 SC 7.5.7.1 P 124 L 28 # 1059
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
grammatical

SuggestedRemedy

... beacon number as defined in the piconet synchronization ...

Proposed Response Response Status O

CI 07 SC 7.5.7.1 P 124 L 30 # 1317

Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X

"For this command, the value of EPSNext is taken from the EPSSync parameter in the MLME-POWERMGT.request primitive." EPSSync is a boolean value. How can the 2 Octet EPSNext be taken from a boolean parameter?

SuggestedRemedy

The authors need to explain this.

Proposed Response Response Status O

CI 07 SC 7.5.7.1 P 124 L 30 # 1061
Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X

Rewrite sentence as shown below

SuggestedRemedy

The current beacon number, as received by the DME, is used to calculate the beacon number for the next EPSTime event; that is, it is inserted into EPSNext field of the EPS action request command.

Proposed Response Response Status O

CI 07 SC 7.5.7.1 P 124 L 31 # 1060

Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
Reference to SME

SuggestedRemedy

Change to DME

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 07 SC 7.5.7.2 P 124 L 36 # 833
 Kleindl, Guenter Siemens
 Comment Type E Comment Status X
 editorial

SuggestedRemedy
 replace 'action request command' by 'action response command'
 Proposed Response Response Status O

CI 07 SC 7.5.7.2 P 124 L 37 # 348
 Gilb, James Appairant
 Comment Type T Comment Status X
 Again, there is a redundant and evil inclusion of functional description in the frame formats clause.

SuggestedRemedy
 Delete the sentence "When an EPS set is confirmed ... for that EPS set."
 Proposed Response Response Status O

CI 07 SC 7.5.7.3 P 124 L 49 # 349
 Gilb, James Appairant
 Comment Type T Comment Status X
 The sentences "Each DEV in the piconet using either EPS or RPS modes ... as is the priority information." adds no useful information about the frame format. The first sentence is incomplete and is a functional definition that is already in clause 8. (redundancy = evil) The fact that mode and priority are provided is obvious from the

SuggestedRemedy
 Delete the two sentences.
 Proposed Response Response Status O

CI 07 SC 7.5.7.3 P 124 L 50 # 1319
 Shvodian, William XtremeSpectrum
 Comment Type TR Comment Status X

Why should a device have to notify the PNC that it is going to be using RPS mode? RPS just says that you can save power by not listening to GTS slots that are not assigned to you. You will never send or receive frames in a slot that is not assigned to you, so why does the PNC need to know that you won't be listening. Having RPS mode is an unnecessary complication of this protocol.

SuggestedRemedy
 Remove the reference to RPS mode.
 Proposed Response Response Status O

CI 07 SC 7.5.7.3 P 124 L 51 # 1062
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 grammatical ... rewrite sentence as shown below.

SuggestedRemedy
 The command shall be sent prior to the corresponding channel time request command.
 Proposed Response Response Status O

CI 07 SC 7.5.7.3 P 125 L 22 # 350
 Gilb, James Appairant

Comment Type T Comment Status X
 The DEV to PNC PS command shall only be sent by associated devices and therefore shall not be sent during the association process. Heck, it can't be sent before the DEV is associated since it doesn't know its AD-AD yet.

SuggestedRemedy
 Change the sentence "The command ... requirements change" to be "The command may be repeated while a DEV is associated in the piconet if the DEV requirements change."
 Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 07 SC 7.5.7.3 P 125 L 23 # 1171
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
 Add to the existing sentence ending at line 23 the following:

SuggestedRemedy
 If the EPS action response type is #9 (power savings mode not supported) then the DEV to PNC PS information command shall not be sent by a DEV.

Proposed Response Response Status O

CI 07 SC 7.5.7.3 P 125 L 23 # 1063
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 grammatical

SuggestedRemedy
 piconet if the DEV requirements change.

Proposed Response Response Status O

CI 07 SC 7.5.7.3 P 125 L 34 # 1321
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 Why is PowerManagementMode of 1 (rps) allowed but mode 0 (PM_Off) not allowed?
 What will RPS do with EPS actions?

SuggestedRemedy
 Explain why an rps device would send an EPS action, but not a PM_OFF device.

Proposed Response Response Status O

CI 07 SC 7.5.7.3 P 125 L 36 # 1322
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 Use of PowerManagementPriority to specify power sensitivity is open to abuse by manufacturers and should be eliminated.

SuggestedRemedy
 remove PowerManagementPriority completely.

Proposed Response Response Status O

CI 07 SC 7.5.7.4 P 125 L 41 # 31
 Bain, Jay Time Domain

Comment Type T Comment Status X
 There is a possible authentication question with EPS and switch to ACTIVE mode or EPS mode commands. The use of these commands requires agreements between peers (after association and authentication). There may be an opportunity for an unauthorized DEV to control another DEVs power use. Sending DEVs are normally responsible for the mode shift to have the destination DEV react to changes in data transmission flow that the destination is not directly aware of. I am not clear on the security mechanisms to understand if this is an issue or not.

SuggestedRemedy
 This may be as simple as adding a note in this subclause that the destination DEV may reject the operation if not setup in a stream management command sequence. The offended DEV would then send a switch command to the PNC to let the PNC and other network DEVs know its correct state. The intent is to not burden the PNC with filtering unless this is a simple fit into existing PNC filtering operations (e.g., CTRs are not processed unless they match to an existing stream setup). If this is simple then the PNC should reject the operation.

Proposed Response Response Status O

CI 07 SC 7.5.7.4 P 126 L 1 # 1065
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 grammatical

SuggestedRemedy
 ... DEV addresses operating with the same EPS ...

Proposed Response Response Status O

CI 07 SC 7.5.7.4 P 126 L 2 # 1066
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 reference to "self wake"

SuggestedRemedy
 Power management committee needs to supply definition of what a "self wake" is ... I don't understand what is being implied here.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 07 SC 7.5.7.5 P 126 L 16 # 834
 Kleindl, Guenter Siemens

Comment Type E Comment Status X
 2nd sentence is not clear.

SuggestedRemedy
 Delete 'To indicate to the PNC' or clarify what is indicated to the PNC.

Proposed Response Response Status O

CI 07 SC 7.5.7.5 P 126 L 16 # 351
 Gilb, James Appairnt

Comment Type T Comment Status X
 The structure of the command is not stated in formal language (missed in the last

SuggestedRemedy
 Change the sentences "The structure of the ... DEV. The use is to instruct" to be "The switch to EPS CTA mode command shall be formatted as illustrated in Figure 60. The command is used to instruct"

Proposed Response Response Status O

CI 07 SC 7.5.7.5 P 126 L 18 # 1068
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 grammatical

SuggestedRemedy
 ... DEV addresses operating with the same

Proposed Response Response Status O

CI 07 SC 7.5.7.5 P 126 L 19 # 352
 Gilb, James Appairnt

Comment Type T Comment Status X
 A DEV should not be able to force other DEVs to sleep. Thus, the switch to EPS CTA should only apply to the DEV that is sending the command. The PNC already knows which CTAs to change from the information that was given when the CTAs were set up.

SuggestedRemedy
 Delete the sentences "Additional destination... for self sleep only." Delete the field "Destination DEV addresses" from the figure and change the command length to 0. Delete the sentence "The destination DEV ... to EPS mode." on line 30.

Proposed Response Response Status O

CI 07 SC 7.5.7.5 P 126 L 20 # 1069
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Clairification of self sleep

SuggestedRemedy
 Ask power management guys what self sleep is ... I don't understand.

Proposed Response Response Status O

CI 07 SC 7.5.7.5 P 126 L 20 # 1349
 Schrader, Mark Eastman Kodak Co.

Comment Type T Comment Status X
 This applies also to 7.5.7.4., p126, line 3. The use of the Destination DEV address is not arbitrary and should be indicated.

SuggestedRemedy
 A DEV issuing a Switch to EPS (ACTIVE) mode command shall only use the Destination DEV Address if the Destination DEV and the issuing DEV agree among themselves that this is allowed. The mechanism for this negotiation is beyond the scope of this standard. Otherwise a DEV shall issue the command without any Destination DEV addresses indicating that only its own mode will change.

Proposed Response Response Status O

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CI 07 SC 7.5.7.6 P 126 L 32 # 21
 Bain, Jay Time Domain

Comment Type **TR** Comment Status **X**
 Momentary should have had two additional fields in the d0.9 that didn't make it into the draft. The destination DEV address and stream index are required.

SuggestedRemedy
 make the change to figure 61 - Momentary EPS CTA command format. Add the stream index and destination DEV address. The text is correct already.

Proposed Response Response Status **O**

CI 07 SC 7.5.7.6 P 126 L 34 # 353
 Gilb, James Apparent

Comment Type **T** Comment Status **X**
 The command format is specified in formal language (missed in the last round of

SuggestedRemedy
 Change "The structure ... as illustrated in Figure 61." to "The momentary EPS CTA command shall be formatted as illustrated in Figure 61."

Proposed Response Response Status **O**

CI 07 SC 7.5.7.6 P 126 L 35 # 1071
 Roberts, Richard XtremeSpectrum

Comment Type **TR** Comment Status **X**
 The sentence says that the EPS CTR is contained within the EPS CTA.
 SuggestedRemedy

The EPS CTR is NOT contained within the EPS CTA. Clarify what is intended here. (power management subcommittee)

Proposed Response Response Status **O**

CI 07 SC 7.5.7.6 P 126 L 36 # 1072
 Roberts, Richard XtremeSpectrum

Comment Type **TR** Comment Status **X**
 The sentence beginning with "If the wave beacon ..." is poorly written and I don't understand.

SuggestedRemedy
 Please have power management subcommittee rewrite the sentence to clarify the text.

Proposed Response Response Status **O**

CI 07 SC 7.5.7.6 P 126 L 38 # 1641
 Shvodian, William XtremeSpectrum

Comment Type **E** Comment Status **X**
 Need to define null CTA the first time it is used. It is defined in 8.13.3.4, but it is used several times before that.

SuggestedRemedy
 Define null CTA the first time it is used. Also, add it to the definitions.

Proposed Response Response Status **O**

CI 07 SC 7.5.8 P 126 L 48 # 697
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type **TR** Comment Status **X**
 Clauses 7.5.8 through 7.5.8.3 do not belong in the MAC command frame format section of this document. These clauses would be better served being defined as control plane frame formats for the convergence layer defined in the Annex. The data to be requested is better served being passed as a unitdata payload than as part of a MAC

SuggestedRemedy
 See document 01469r3 for details regarding resolution to this comment.

Proposed Response Response Status **O**

CI 07 SC 7.5.8 P 126 L 48 # 683
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type **TR** Comment Status **X**
 The title of clause 7.5.8 Device Information is incorrect. The commands described under this sub clause are commands requesting PNC information or responding with PNC information.

SuggestedRemedy
 Please change this clause title to: PNC information.

Proposed Response Response Status **O**

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CI 07 SC 7.5.8 P 126 L 50 # 684
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 The text between lines 50 and 51 is incorrect.

SuggestedRemedy
 Please change the text between lines 50 and 51 to: "This group of commands is used to request information from the PNC or to enable the PNC to respond with information it uses to manage the piconet."

Proposed Response Response Status O

CI 07 SC 7.5.8.1 P 127 L 1 # 685
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 The title of clause 7.5.8.1 Device Information request command is incorrect. The purpose of this command is to query the PNC regarding the organized information it uses to manage the piconet.

SuggestedRemedy
 Please change the title of this clause to "Probe PNC request command"

Proposed Response Response Status O

CI 07 SC 7.5.8.1 P 127 L 14 # 687
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 The text between lines 14 and 15 is incorrect.

SuggestedRemedy
 Please change to: " The queried device AID is the DeviceAID of the DEV whose information is being requested from the PNC. ..."

Proposed Response Response Status O

CI 07 SC 7.5.8.1 P 127 L 3 # 354
 Gilb, James Appairant

Comment Type T Comment Status X
 The first sentence is a redundant (aka evil) definition of the functional use of the device information request command that already is in clause 8. Also, the AD-AD should be used instead of the device ID

SuggestedRemedy
 Delete the sentence "Only a DEV shall send the device information request command."
 Change "device ID" to be "AD-AD" in the figure, change the field length to 2 and the command length to 2. Change "The queried device ID is the device ID" to be "The queried AD-AD is the address" on line 14.

Proposed Response Response Status O

CI 07 SC 7.5.8.2 P 127 L 17 # 688
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 The title of clause 7.5.8.2 Device information response command is incorrect.

SuggestedRemedy
 Please change the title to PNC information response command.

Proposed Response Response Status O

CI 07 SC 7.5.8.2 P 127 L 19 # 689
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 The text between lines 19 and 22 is incorrect.

SuggestedRemedy
 Please replace all instances of device information with PNC information .

Proposed Response Response Status O

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CI 07 SC 7.5.8.2 P 127 L 22 # 355
 Gilb, James Apparent

Comment Type T Comment Status X
 The command structure is not indicated in formal language. In addition, the introductory paragraph gives a redundant and therefore evil functional description in the frame formats clause that belongs the functional description clause.

SuggestedRemedy
 Replace the sentences "Only the PNC ... all DEVs in the piconet." with "The device information response command shall be formatted as illustrated in Figure 63."

Proposed Response Response Status O

CI 07 SC 7.5.8.2 P 127 L 36 # 1324
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 It is not clear why a DEV would need to know the CTRBs for another DEV.

SuggestedRemedy
 Remove all CTRBs from the device information response command records.

Proposed Response Response Status O

CI 07 SC 7.5.8.2 P 127 L 49 # 1076
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Line 49 says, "The device ID is for the DEV whose allocations are given in the record".

SuggestedRemedy
 How is broadcast mode supported?

Proposed Response Response Status O

CI 07 SC 7.5.8.2 P 127 L 53 # 1077
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Line 54 says, "The number of TX slots is the number of allocated transmission slots for the DEV within each superframe".

SuggestedRemedy
 what is done for the broadcast mode?

Proposed Response Response Status O

CI 07 SC 7.5.8.3 P 128 L 30 # 696
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 Text between lines 30 and 39 is inconsistent with the text on page 131 between lines 26 and 44.

SuggestedRemedy
 Please make consistent.

Proposed Response Response Status O

CI 07 SC 7.5.8.3 P 128 L 31 # 1079
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 KuS seems too coarse

SuggestedRemedy
 Suggest in Figure 66 we make the "duration between time slots" a 2 octet field which would give a resolution of 4 uS.

Proposed Response Response Status O

CI 07 SC 7.5.8.3 P 128 L 34 # 836
 Kleindl, Guenter Siemens

Comment Type TR Comment Status X
 32ms is too long

SuggestedRemedy
 replace '32ms' by '32us'

Proposed Response Response Status O

CI 07 SC 7.5.8.3 P 128 L 34 # 1080
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
 resolution of 32 mS

SuggestedRemedy
 Should this not be 32 uS?

Proposed Response Response Status O

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CI 07 SC 7.5.8.3 P 128 L 4 # 356
 Gilb, James Apparent

Comment Type T Comment Status X

This information response command is out of sync with the CTR and stream management commands. However, there is only one piece of information that is not explicitly given in a regular device information response command, and that is the neighbor PNC device ID. However, this is returned if a DEV requests the device information of a DEV with a neighbor PNC AD-AD. DEVs know when there is a neighbor piconet because of the AD-AD in the CTA blocks in the beacon. Likewise, a private GTS of an associated DEV indicates a child piconet. All of the information in this command is already taken care of with the device information response command. Thus this command is redundant and should be deleted.

SuggestedRemedy

Delete sub-clause 7.5.8.3 and all references to the child or neighbor information response command. If not, the sub-clause needs to be synchronized to use CTRBs like the DEV info response command. Also needs a "shall be formatted".

Proposed Response Response Status O

CI 07 SC 7.5.8.3 P 128 L 6 # 835
 Kleindl, Guenter Siemens

Comment Type E Comment Status X
 editorial

SuggestedRemedy

replace 'same response rules a the device' with 'same response rules as the device'

Proposed Response Response Status O

CI 07 SC 7.5.8.3 P 128 L 6 # 1325
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 "rules a the device" should be "rules as the device"

SuggestedRemedy

Change to "rules as the device"

Proposed Response Response Status O

CI 07 SC 7.5.8.3 P 128 L 6 # 693
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X

The sentence fragment "... the device information response command,..." is incorrect.

SuggestedRemedy

Please change the indicated fragment to: "... the PNC information response

Proposed Response Response Status O

CI 07 SC 7.5.9.1 P 129 L 25 # 1082
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 grammatical

SuggestedRemedy

... 1-octet field that identifies the stream of the ...

Proposed Response Response Status O

CI 07 SC 7.5.9.1 P 129 L 27 # 855
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 grammatical ... remove the comma after the word frame

SuggestedRemedy

frame if more than 32 ...

Proposed Response Response Status O

CI 07 SC 7.5.9.1 P 129 L 32 # 1330
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 Sequence number provides no useful information.

SuggestedRemedy

Remove this sentence about end sequence number.

Proposed Response Response Status O

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CI 07 SC 7.5.9.1 P 129 L 38 # 357
 Gilb, James Apparent
Comment Type T *Comment Status* X
 Informal language defines the field settings.
SuggestedRemedy
 Change "bits set to 1 indicate" to be "bits shall be set to 1 to indicate" in line 38 and
 change "bits set to 0 indicate" to be "bits shall be set to 0 to indicate" in line 39.
Proposed Response *Response Status* O

CI 07 SC 7.5.9.2 P 129 L # 778
 Akahane, Masa Sony
Comment Type E *Comment Status* X
 Length=4*m should be 3*m
SuggestedRemedy
 correct
Proposed Response *Response Status* O

CI 07 SC 7.5.9.2 P 129 L 44 # 1331
 Shvodian, William XtremeSpectrum
Comment Type E *Comment Status* X
 should say "unicast stream with ACK policy of Immediate ACK."
SuggestedRemedy
 Change to "unicast stream with ACK policy of Immediate ACK."
Proposed Response *Response Status* O

CI 07 SC 7.5.9.2 P 130 L 11 # 1084
 Roberts, Richard XtremeSpectrum
Comment Type E *Comment Status* X
 grammatical
SuggestedRemedy
 ... field that identifies the stream that is ...
Proposed Response *Response Status* O

CI 07 SC 7.7.7.1 P 124 L 25 # 1058
 Roberts, Richard XtremeSpectrum
Comment Type E *Comment Status* X
 grammatical
SuggestedRemedy
 time is bounded by the superframe ...
Proposed Response *Response Status* O

CI 07 SC Fig. 74 P 132 L # 1713
 Young, Song-Lin Sharp Labs. of
Comment Type TR *Comment Status* X
 SFNext field also used in CTA elemnet (Fig. 73 & 30), this is redundant.
SuggestedRemedy
 Remove SFNext field
Proposed Response *Response Status* O

CI 07 SC Fig.64 P 127 L # 1717
 Young, Song-Lin Sharp Labs. of
Comment Type TR *Comment Status* X
 What can a requesting DEV use for the pending CTRB information of each stream and
 Number of TX slots, since the channel time allocation is solely determined by PNC? The
 information should provide characteristics about queried device and allow the
 requesting DEV to make decision about whether to initiate communication with a
SuggestedRemedy
 Remove CTRB and no. of TX slot or replace with something else
Proposed Response *Response Status* O

CI 07 SC Figure 11 P 94 L 13 # 153
 DuVal, Mary Texas Instruments
Comment Type T *Comment Status* X
 Where is the PHY preamble and PHY header in this figure?
SuggestedRemedy

Proposed Response *Response Status* O

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CI 07 **SC Figure 15** **P 100** **L 23** **# 1477**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Don't really need two octets for command type. One is more than adequate.
SuggestedRemedy
 Change command type to 1 octet. Update all relevant references to 2 octets.
Proposed Response *Response Status* **O**

CI 07 **SC Figure 18** **P 102** **L** **# 970**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Explicitly provide element ID
SuggestedRemedy
 0x00
Proposed Response *Response Status* **O**

CI 07 **SC Figure 18** **P 102** **L 20** **# 702**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **TR** *Comment Status* **X**
 Device ID field name is incorrect
SuggestedRemedy
 Please change indicated field name to: Device Address and make the necessary change in parameter description following the figure.
Proposed Response *Response Status* **O**

CI 07 **SC Figure 19** **P 102** **L** **# 971**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Explicitly provide element ID
SuggestedRemedy
 0x01
Proposed Response *Response Status* **O**

CI 07 **SC Figure 21** **P 103** **L** **# 978**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Provide explicit element ID
SuggestedRemedy
 0x02
Proposed Response *Response Status* **O**

CI 07 **SC Figure 23** **P 104** **L** **# 975**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Provide explicit element ID
SuggestedRemedy
 0x03
Proposed Response *Response Status* **O**

CI 07 **SC Figure 24** **P 104** **L** **# 976**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Provide explicit element ID
SuggestedRemedy
 0x04
Proposed Response *Response Status* **O**

CI 07 **SC Figure 25** **P 105** **L** **# 974**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Figure 25 indicates that the supported data rates is represented by up to 8 octets, one octet for each data rate. Reference is provided in the text to clause 11.7. In clause 11.7, Table 94 is a 5 bit mapping to a given data rate. How does the 5 bits map to the
SuggestedRemedy
 Suggest the 5 bits of table 94 represent the 5 LSBs and that the upper 3 bits of the octet be zeros.
Proposed Response *Response Status* **O**

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CI 07 SC Figure 25 P 105 L # 979
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 Provide element ID
 SuggestedRemedy
 0x05
 Proposed Response Response Status O

CI 07 SC figure 25 P 105 L 1 # 43
 Bain, Jay Time Domain
 Comment Type T Comment Status X
 The task group has indicated before that 8 supported rates will be sufficient for PHYs other than the current one described in clause 11. However, it would seem that the limit be somewhat higher. 16 seems too high but perhaps that would be a good ceiling.
 SuggestedRemedy
 change Figure 25 in clause 7.4.6 to allow up to 16 supported rates.
 Proposed Response Response Status O

CI 07 SC Figure 26 P 105 L # 981
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 Provide explicit element ID
 SuggestedRemedy
 0x06
 Proposed Response Response Status O

CI 07 SC Figure 27 P 105 L # 984
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 Provide explicit element ID
 SuggestedRemedy
 0x07
 Proposed Response Response Status O

CI 07 SC Figure 28 P 106 L # 986
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 Provide explicit element ID
 SuggestedRemedy
 0x09
 Proposed Response Response Status O

CI 07 SC Figure 29 P 106 L # 987
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 Provide explicit element ID
 SuggestedRemedy
 0x0A
 Proposed Response Response Status O

CI 07 SC Figure 30 P 106 L # 988
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 In figure 30 do two things: 1. name the last column as "slot location field" 2. Add SFNext to acronym list in clause 4
 SuggestedRemedy
 As shown above
 Proposed Response Response Status O

CI 07 SC Figure 30 P 106 L 46 # 164
 DuVal, Mary Texas Instruments
 Comment Type T Comment Status X
 Where is SFNext defined? Did not find reference to it in the following text. Is it a specific value? Or based on system design and is specified in the PIB?
 SuggestedRemedy
 Need more information.
 Proposed Response Response Status O

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CI 07 SC Figure 30 P 106 L 47 # 698
Heberling, Allen XtremeSpectrum, Inc.
Comment Type T Comment Status X
The Source DEV address and Destination DEV Address fields are incorrectly named and inconsistently located in the figure.

SuggestedRemedy
Please change the indicated fields to Source DEV AID and Destination DEV AID. Move the Destination DEV AID to the first field and the Source DEV AID to the second field.
Proposed Response Response Status O

CI 07 SC Figure 30 P 106 L 47 # 699
Heberling, Allen XtremeSpectrum, Inc.
Comment Type TR Comment Status X
Figure 30 is missing a slot duration field.

SuggestedRemedy
Please add the slot duration field to figure 30.
Proposed Response Response Status O

CI 07 SC Figure 32 P 108 L # 993
Roberts, Richard XtremeSpectrum
Comment Type TR Comment Status X
Modifications to Figure 32 as shown below

SuggestedRemedy
element ID = 0x0B use full name "MACPIBMaxAssignedCTAs" use full name "MACPIBMaxProcessedCTAs"
Proposed Response Response Status O

CI 07 SC Figure 33 P 108 L # 995
Roberts, Richard XtremeSpectrum
Comment Type T Comment Status X
Provide explicit element ID
SuggestedRemedy
0x0C
Proposed Response Response Status O

CI 07 SC Figure 34 P 109 L # 996
Roberts, Richard XtremeSpectrum
Comment Type T Comment Status X
Provide explicit ID

SuggestedRemedy
0x0D
Proposed Response Response Status O

CI 07 SC Figure 36 P 109 L # 998
Roberts, Richard XtremeSpectrum
Comment Type T Comment Status X
Explicit element ID

SuggestedRemedy
0x0E
Proposed Response Response Status O

CI 07 SC Figure 37 P 112 L # 1002
Roberts, Richard XtremeSpectrum
Comment Type T Comment Status X
Provide explicit commands types

SuggestedRemedy
0x000B "Alternate PNC announcement command" 0x000C "Alternate PNC pullout command" 0x000D "PNC handover command"
Proposed Response Response Status O

CI 07 SC Figure 37 P 112 L 12 # 669
Heberling, Allen XtremeSpectrum, Inc.
Comment Type T Comment Status X
DeviceID parameter name is incorrect.

SuggestedRemedy
Please change to DeviceAddress.
Proposed Response Response Status O

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CI 07 SC Figure 38 P 113 L # 1004
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 provide explicit command type
 SuggestedRemedy
 0x000E
 Proposed Response Response Status O

CI 07 SC Figure 38 P 113 L 15 # 673
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 PNC-device-id and AC-device-id parm names are incorrect.
 SuggestedRemedy
 please change to PNC-device-address and AC-device-address. Also rename the
 parameter names given in the text to describe the figure 38 parms .
 Proposed Response Response Status O

CI 07 SC Figure 39 P 114 L # 1006
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 Provide explicit command type
 SuggestedRemedy
 0x0012
 Proposed Response Response Status O

CI 07 SC Figure 39 P 114 L 6 # 674
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 DeviceID parm name is incorrect.
 SuggestedRemedy
 Please change to DeviceAddress and its related text describing the parm.
 Proposed Response Response Status O

CI 07 SC Figure 40 P 114 L # 1010
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 explicit command type
 SuggestedRemedy
 0x0013
 Proposed Response Response Status O

CI 07 SC Figure 40 P 114 L 30 # 1517
 Shvodian, William XtremeSpectrum
 Comment Type TR Comment Status X
 Need to specify the security parameters information element in the association
 response so that the DEV knows what cipher suite to use for association.
 SuggestedRemedy
 Add security parameters IE into the association response command.
 Proposed Response Response Status O

CI 07 SC Figure 40 P 114 L 30 # 675
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 Device ID and AD-AD parm names are incorrect.
 SuggestedRemedy
 Please change to DeviceAddress and DeviceAID. Also make the necessary text
 changes in the text describing the parms in this figure.
 Proposed Response Response Status O

CI 07 SC Figure 40 P 114 L 30 # 676
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 DeviceAID (aka AD-AD) is mislocated in the figure.
 SuggestedRemedy
 Please move DeviceAID to the ReasonCode location in the table and the ReasonCode
 to the former DeviceAID table location.
 Proposed Response Response Status O

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CI 07 SC Figure 41 P 115 L # 1012
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 provide explicit command type
 SuggestedRemedy
 0x0014
 Proposed Response Response Status O

CI 07 SC Figure 41 P 115 L 28 # 677
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 The DeviceID, ReasonCode, and Reserved fields of the Disassociation request
 command are unnecessary.
 SuggestedRemedy
 Please remove the indicated fields. Also set the Length parm = 0.
 Proposed Response Response Status O

CI 07 SC Figure 42 P 116 L # 1017
 Roberts, Richard XtremeSpectrum
 Comment Type TR Comment Status X
 DEVPublicKeyObject
 SuggestedRemedy
 In clause 10, provide technical details for the DEVPublicKeyObject
 Proposed Response Response Status O

CI 07 SC Figure 42 P 116 L # 1016
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 Do following to Figure 42
 SuggestedRemedy
 1. explicit command type = 0x001C
 Proposed Response Response Status O

CI 07 SC Figure 43 P 116 L # 1019
 Roberts, Richard XtremeSpectrum
 Comment Type TR Comment Status X
 AuthenticationInfo
 SuggestedRemedy
 In clause 10, please provide details of the AuthenticationInfo - security subcommittee.
 Proposed Response Response Status O

CI 07 SC Figure 43 P 116 L # 1018
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 provide explicit command type
 SuggestedRemedy
 0x001D
 Proposed Response Response Status O

CI 07 SC Figure 44 P 117 L # 1020
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 provide explicit command type
 SuggestedRemedy
 0x001E
 Proposed Response Response Status O

CI 07 SC Figure 44 P 117 L # 1021
 Roberts, Richard XtremeSpectrum
 Comment Type TR Comment Status X
 technical detail
 SuggestedRemedy
 security subcommittee to provide detail of PublicKeyChallenge
 Proposed Response Response Status O

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CI 07 SC Figure 45 P 117 L # 1025
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 see below
 SuggestedRemedy
 provide explicit command type = 0x001F
 Proposed Response Response Status O

CI 07 SC Figure 45 P 117 L # 1026
 Roberts, Richard XtremeSpectrum
 Comment Type TR Comment Status X
 PublicKeyProof
 SuggestedRemedy
 Security subcommittee needs to provide technical detail in clause 10 on the
 Proposed Response Response Status O

CI 07 SC Figure 46 P 118 L # 1028
 Roberts, Richard XtremeSpectrum
 Comment Type TR Comment Status X
 KeyPurpose
 SuggestedRemedy
 Security subcommittee to provide technical detail in clause 10 about the KeyPurpose
 Proposed Response Response Status O

CI 07 SC Figure 46 P 118 L # 1027
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 provide explicit command type
 SuggestedRemedy
 0x0020
 Proposed Response Response Status O

CI 07 SC figure 47 P 118 L # 1032
 Roberts, Richard XtremeSpectrum
 Comment Type TR Comment Status X
 incomplete specification on EncryptedKeyObject
 SuggestedRemedy
 Security subcommittee to provide detailed text in clause 10 about the
 Proposed Response Response Status O

CI 07 SC Figure 47 P 118 L # 1029
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 explicit command type
 SuggestedRemedy
 0x0021
 Proposed Response Response Status O

CI 07 SC figure 48 P 119 L # 1035
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 provide explicit command type
 SuggestedRemedy
 0x0022
 Proposed Response Response Status O

CI 07 SC figure 48 P 119 L # 1036
 Roberts, Richard XtremeSpectrum
 Comment Type TR Comment Status X
 lack of detail on usage
 SuggestedRemedy
 security subcommittee needs to provide details on DistributeKeyFailureTimeout in
 clause 10
 Proposed Response Response Status O

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CI 07 **SC Figure 48** **P 119** **L** **# 1831**
 Rasor, Gregg Motorola

Comment Type **TR** *Comment Status* **X**
 In Figure 48 (Distribute Key Format), the DistributeKeyTimeout parameter is included. I don't think it should be passed in the frames, just used in the MAC to timeout a pending command that may not come back within the allotted time. I don't see any reason why the other MAC could make any use of this value since it the entity which is producing

SuggestedRemedy
 Remove the timeout parameter from the frame.

Proposed Response *Response Status* **O**

CI 07 **SC figure 49** **P 119** **L** **# 1040**
 Roberts, Richard XtremeSpectrum

Comment Type **T** *Comment Status* **X**
 provide explicit command type

SuggestedRemedy
 0x0023

Proposed Response *Response Status* **O**

CI 07 **SC Figure 49** **P 119** **L** **# 1039**
 Roberts, Richard XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 Incomplete command?

SuggestedRemedy
 Security subcommittee to review the command of figure 49 ... seems it is incomplete. Is this all there is to this command? Need reason codes?

Proposed Response *Response Status* **O**

CI 07 **SC Figure 50** **P 120** **L** **# 1041**
 Roberts, Richard XtremeSpectrum

Comment Type **T** *Comment Status* **X**
 provide explicit command type

SuggestedRemedy
 0x0004

Proposed Response *Response Status* **O**

CI 07 **SC Figure 50** **P 120** **L** **# 1042**
 Roberts, Richard XtremeSpectrum

Comment Type **T** *Comment Status* **X**
 No margin on information request

SuggestedRemedy
 From Table 63, there are exactly 15 defined commands to date with 241 element IDs reserved for future use. Yet, in the information request field of the probe request command we only have room for 16 commands. Increase to 3 octets to allow some growth or get rid of the extra 241 element IDs. If this is done then in line 12, replace 15 bits with 23 bits.

Proposed Response *Response Status* **O**

CI 07 **SC Figure 51** **P 120** **L** **# 1045**
 Roberts, Richard XtremeSpectrum

Comment Type **T** *Comment Status* **X**
 provide explicit command type

SuggestedRemedy
 0x0005

Proposed Response *Response Status* **O**

CI 07 **SC Figure 52** **P 121** **L** **# 1047**
 Roberts, Richard XtremeSpectrum

Comment Type **T** *Comment Status* **X**
 explicit command type

SuggestedRemedy
 0x0009

Proposed Response *Response Status* **O**

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CI 07 SC **Figure 52** P **121** L **7** # **1302**
 Shvodian, William XtremeSpectrum
 Comment Type **TR** Comment Status **X**
 The Channel Status request command should specify a window size, not leave it up to the responder
 SuggestedRemedy
 Add channel status request window field and the appropriate descriptive text.

Proposed Response Response Status **O**

CI 07 SC **Figure 53** P **121** L # **1048**
 Roberts, Richard XtremeSpectrum
 Comment Type **T** Comment Status **X**
 explicit command type
 SuggestedRemedy
 0x000A

Proposed Response Response Status **O**

CI 07 SC **Figure 54** P **122** L # **1050**
 Roberts, Richard XtremeSpectrum
 Comment Type **T** Comment Status **X**
 explicit element ID type
 SuggestedRemedy
 0x08 By the way, why is this information element sitting in the middle of the commands. Should it be moved over with the other information element types?

Proposed Response Response Status **O**

CI 07 SC **Figure 55** P **122** L # **1051**
 Roberts, Richard XtremeSpectrum
 Comment Type **T** Comment Status **X**
 Explicit command types
 SuggestedRemedy
 0x0006 = Repeater service request command 0x0007 = Repeater service grant

Proposed Response Response Status **O**

CI 07 SC **Figure 56** P **123** L # **1053**
 Roberts, Richard XtremeSpectrum
 Comment Type **T** Comment Status **X**
 Write in the command type
 SuggestedRemedy
 0x0008

Proposed Response Response Status **O**

CI 07 SC **Figure 57** P **123** L # **1055**
 Roberts, Richard XtremeSpectrum
 Comment Type **T** Comment Status **X**
 Provide the command type number
 SuggestedRemedy
 0x0015 = EPS action request 0x0016 = EPS action response

Proposed Response Response Status **O**

CI 07 SC **Figure 57** P **123** L **48** # **1311**
 Shvodian, William XtremeSpectrum
 Comment Type **E** Comment Status **X**
 The number of octets for EPSTime and EPS next should be 0-2 and 0-4 because they are not always present
 SuggestedRemedy
 Change the number of octets for EPSTime and EPS next should be 0-2 and 0-4.

Proposed Response Response Status **O**

CI 07 SC **Figure 58** P **125** L # **1172**
 Roberts, Richard XtremeSpectrum
 Comment Type **TR** Comment Status **X**
 Question for Power Management folks
 SuggestedRemedy
 How does a DEV desiring RPS mode operation notify the PNC of this desire? Does it just send the DEV to PNC PS information command? Does it have to first send a EPS action request command? I am confused. Please clarify and then I can generate text to prevent future readers from being confused also.

Proposed Response Response Status **O**

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CI 07 SC Figure 58 P 125 L # 1064
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 provide command type
 SuggestedRemedy
 0x0017
 Proposed Response Response Status O

CI 07 SC Figure 59 P 126 L # 1067
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 provide command number
 SuggestedRemedy
 0x0018
 Proposed Response Response Status O

CI 07 SC Figure 60 P 126 L # 1070
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 use command type number
 SuggestedRemedy
 0x0019
 Proposed Response Response Status O

CI 07 SC Figure 61 P 126 L # 1073
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 provide command type number
 SuggestedRemedy
 0x001A
 Proposed Response Response Status O

CI 07 SC Figure 62 P 127 L # 1074
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 use command number
 SuggestedRemedy
 0x000F
 Proposed Response Response Status O

CI 07 SC Figure 62 P 127 L 9 # 686
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type T Comment Status X
 The Queried Device ID field is incorrectly named and reserves to many octets.
 SuggestedRemedy
 Change the Queried Device ID to Queried Device AID and the length of the field to 1 octet. Since there is no need to pass the MAC address or addresses.
 Proposed Response Response Status O

CI 07 SC Figure 63 P 127 L # 1075
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 Use command number
 SuggestedRemedy
 0x0010
 Proposed Response Response Status O

CI 07 SC Figure 63 P 127 L 31 # 690
 Heberling, Allen XtremeSpectrum, Inc.
 Comment Type TR Comment Status X
 The caption for figure 63 is incorrect.
 SuggestedRemedy
 Please change to PNC information response command format.
 Proposed Response Response Status O

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CI 07 **SC Figure 64** **P 127** **L 38** **# 691**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **TR** *Comment Status* **X**
 The AD-AD and Device ID fields are incorrectly named

SuggestedRemedy
 Change the AD-AD field to DeviceAID and the Device ID field to Device Address. Also change references to these fields at lines 44 and 49.

Proposed Response *Response Status* **O**

CI 07 **SC Figure 64** **P 127** **L 41** **# 692**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **E** *Comment Status* **X**
 The caption for figure 64 is incorrect

SuggestedRemedy
 Please change the caption to: Format of a record in the PNC information response command.

Proposed Response *Response Status* **O**

CI 07 **SC Figure 65** **P 128** **L** **# 1078**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Use command number

SuggestedRemedy
 0x001B

Proposed Response *Response Status* **O**

CI 07 **SC Figure 66** **P 128** **L 23** **# 694**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **X**
 The Neighbor PNC Device ID field name is incorrect.

SuggestedRemedy
 Please change the indicated field to: PNC DeviceAddress

Proposed Response *Response Status* **O**

CI 07 **SC Figure 66** **P 128** **L 23** **# 695**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **TR** *Comment Status* **X**
 The Channel Time Request fields (Duration between..., Min.requested chnl time, Requested channel time)in figure 66 are not the same as the Channel Time Request fields(Allocation period, Min GTS time, Desired GTS time, Max Allocation delay) in

SuggestedRemedy
 Please make consistent.

Proposed Response *Response Status* **O**

CI 07 **SC Figure 67** **P 129** **L** **# 1081**
 Roberts, Richard XtremeSpectrum

Comment Type **T** *Comment Status* **X**
 List actual command number

SuggestedRemedy
 0x0000

Proposed Response *Response Status* **O**

CI 07 **SC Figure 69** **P 129** **L** **# 1083**
 Roberts, Richard XtremeSpectrum

Comment Type **T** *Comment Status* **X**
 provide explicit command type

SuggestedRemedy
 0x0001

Proposed Response *Response Status* **O**

CI 07 **SC Figure 71** **P 130** **L** **# 1087**
 Roberts, Richard XtremeSpectrum

Comment Type **T** *Comment Status* **X**
 give command number

SuggestedRemedy
 0x0002

Proposed Response *Response Status* **O**

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CI 07 SC Figure 73 P 132 L # 1092
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 Use command number
 SuggestedRemedy
 0x0003
 Proposed Response Response Status O

CI 07 SC Figure 73 P 132 L # 1335
 Shvodian, William XtremeSpectrum
 Comment Type E Comment Status X
 Grant Status is 3 octets, not 1.
 SuggestedRemedy
 set grant status size to 3 octets.
 Proposed Response Response Status O

CI 07 SC Figure 73 P 132 L 8 # 1334
 Shvodian, William XtremeSpectrum
 Comment Type TR Comment Status X
 We never voted to include a grant status field. What if the grant is queued and either is sent or resent after the beacon number of the SFNext? Then the DEV thins it doesn't have a slot for 2^16 superframes.
 SuggestedRemedy
 Remove grant status from the channel time grant.
 Proposed Response Response Status O

CI 07 SC figure 74 P 132 L 22 # 49
 Bain, Jay Time Domain
 Comment Type E Comment Status X
 in the second field, the range of bits should be b16 to b19
 SuggestedRemedy
 change b9 to b19
 Proposed Response Response Status O

CI 07 SC Figure 75 P 132 L # 1094
 Roberts, Richard XtremeSpectrum
 Comment Type TR Comment Status X
 Width of Stream QoS parameters
 SuggestedRemedy
 Figure 75 shows this field as being 20 octets wide but adding up the octets in Figure 77 we get 23 octets. Which width is correct? Assign to MAC subcommittee.
 Proposed Response Response Status O

CI 07 SC Figure 75 P 132 L # 1095
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 grammatical ... missing left bracket on Del-ACK
 SuggestedRemedy
 add bracket
 Proposed Response Response Status O

CI 07 SC Figure 75 P 132 L # 1093
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 Use command number
 SuggestedRemedy
 0x0011
 Proposed Response Response Status O

CI 07 SC figure 75 P 132 L 46 # 51
 Bain, Jay Time Domain
 Comment Type E Comment Status X
 need right)
 SuggestedRemedy
 add) for max frames (Del-ACK)
 Proposed Response Response Status O

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CI 07 SC Figure 75 P 132 L 47 # 1338
 Shvodian, William XtremeSpectrum
 Comment Type E Comment Status X
 (Del-ACK should be (Del-ACK) - missing)
 SuggestedRemedy
 change (Del-ACK to (Del-ACK)
 Proposed Response Response Status O

CI 07 SC Figure 76 P 133 L 15 # 76
 Barr, John Motorola
 Comment Type TR Comment Status X
 Security field is not required.
 SuggestedRemedy
 Remove Security field from the control information field and shift other fields left
 increasing size of reserved field by 2 bits.
 Proposed Response Response Status O

CI 07 SC Figure 77 P 134 L # 1098
 Roberts, Richard XtremeSpectrum
 Comment Type TR Comment Status X
 Figure 77 lists the QoS parameters but it doesn't implicitly show which order the
 parameters are sent.
 SuggestedRemedy
 Add a figure that shows how to put the QoS VECTOR together and where are the MSBs.
 Proposed Response Response Status O

CI 07 SC Figure 77 P 134 L # 1340
 Shvodian, William XtremeSpectrum
 Comment Type TR Comment Status X
 We should not be negotiation for all of these parameters in the stream management
 command. The PNC cannot control the minimum,peak, rate, average rate, max burst
 size, average frame size. The PNC can only guarantee access to the channel
 SuggestedRemedy
 Remove all of the stream parameters and only request channel time. This will greatly
 simplify the protocol.
 Proposed Response Response Status O

CI 07 SC Figure 77 P 134 L 36 # 170
 DuVal, Mary Texas Instruments
 Comment Type T Comment Status X
 What does "ReTX" mean? It also appears on page 135, line 18.
 SuggestedRemedy
 Need a definition to understand.
 Proposed Response Response Status O

CI 07 SC Figure 78 P 139 L # 174
 DuVal, Mary Texas Instruments
 Comment Type T Comment Status X
 Diagram hard to read. How does this diagram relate to the previous paragraph? Where
 are the terms aCSFrameRepeat and aCSFrameBroadcast in this diagram? I would like
 to see their timing relationships.
 SuggestedRemedy
 See above.
 Proposed Response Response Status O

CI 07 SC Figure11 P 94 L 10 # 1463
 Shvodian, William XtremeSpectrum
 Comment Type E Comment Status X
 Adding a bracket covering the frame body and FCS and saying <aMaxFameSize would
 be helpful.
 SuggestedRemedy
 Add a bracket covering the frame body and FCS and saying <aMaxFameSize would be
 helpful.
 Proposed Response Response Status O

CI 07 SC Figure27 P 105 L 44 # 1484
 Shvodian, William XtremeSpectrum
 Comment Type E Comment Status X
 Length field says "Length(=2)" but there are 3 octets.
 SuggestedRemedy
 Change to "Length(=3)"
 Proposed Response Response Status O

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CI 07 SC Figure30 P 106 L 45 # 1488
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Add Duration field back into the CTA.

SuggestedRemedy

I give in! Duration should be put back into the CTA. Add a 2 octet field to the CTA called slot duration. We agreed on this a while back, but the person who was supposed to provide the text never did. This will allow guard time to be added on a slot by slot basis. I will provide the text since on one else has.

Proposed Response Response Status O

CI 07 SC Figure31 P 107 L 15 # 1490
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
There is no reason for a key change bit to be in the CTA control block. This will only cause problems when a station misses a beacon. Since we have key number in the Piconet Synchronization parameters information element in the Beacon, this bit is not needed in the CTA. It is a bad idea to reserve a bit for possible future use.

SuggestedRemedy

Remove the Key change bit from the CTA control boock, and remove line 36 on page 107 about the key change bit.

Proposed Response Response Status O

CI 07 SC Figure64 P 127 L 38 # 1323
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
The number of TX slots does not necessarily equal the number of channel time request slots. One CTRB can request mulotiple slots per superframe. Conversely, multiple CTRBs can be allocated a single slot.

SuggestedRemedy

Change the name form "number of TX slots" to "Number of active CTRBs"

Proposed Response Response Status O

CI 07 SC Figure65 P 128 L 13 # 1326
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
The figure should have "Record for child or neighbor PNC-1, Record for child or neighbor PNC-2, Record for child or neighbor PNC-n

SuggestedRemedy

Change figure to say "Record for child or neighbor PNC-1, Record for child or neighbor PNC-2, Record for child or neighbor PNC-n

Proposed Response Response Status O

CI 07 SC Figure67 P 129 L 9 # 1329
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
The figure says Record for stream 1, 2, ...,n, but you could have multiple records for the same stream.

SuggestedRemedy

Add text that says that that there could be multiple records for the same stream.

Proposed Response Response Status O

CI 07 SC Figure68 P 129 L 18 # 1328
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Why is End sequence number needed? The start sequence number and the RxStatus bitmap is all that is needed.

SuggestedRemedy

Remove the End Sequence number.

Proposed Response Response Status O

CI 07 SC Table 60 P 98 L # 1474
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Need to add DEV GTS Status ie in table 60. This appears in every beacon.

SuggestedRemedy

Add DEV GTS status to table 60. It appears in every beacon. It is described in 7.4.12

Proposed Response Response Status O

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CI 07 **SC Table 61** **P 99** **L 9** **# 1475**
 Shvodian, William XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 Frage start and frag end should be set to 1, not zero in the beacon. This should follow the rul so it CAN be ignored, rather than breaking the rull so that it MUST be ignored.

SuggestedRemedy
 Change frag-start and frag-end to 1 in the beacon in table 61

Proposed Response *Response Status* **O**

CI 07 **SC Table 61 and 62** **P 99** **L** **# 159**
 DuVal, Mary Texas Instruments

Comment Type **E** *Comment Status* **X**
 Title should read: "Frame and stream control field settings ..."

SuggestedRemedy

Proposed Response *Response Status* **O**

CI 07 **SC Table 62** **P 99** **L 36** **# 1476**
 Shvodian, William XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 Frag start and frag end should be set to 1, not zero in the ACK. This should follow the rule so it CAN be ignored, rather than breaking the rull so that it MUST be ignored.

SuggestedRemedy
 Change frag-start and frag-end bits to "1" in the immediate ACK.

Proposed Response *Response Status* **O**

CI 07 **SC Table 63** **P 101** **L 10** **# 700**
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type **TR** *Comment Status* **X**
 Missing from the Information elements table are these new information elements:
 PicoNet Shutdown and New Associated DEV

SuggestedRemedy
 Please add these information elements to Table 63: Piconet Shutdown (see info element description in 02/037r0) New Associated DEV (see info element description in

Proposed Response *Response Status* **O**

CI 07 **SC Table 63** **P 101** **L 14** **# 701**
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type **TR** *Comment Status* **X**
 The Device Identifier info element is misnamed.

SuggestedRemedy
 Please change to Device Address info element

Proposed Response *Response Status* **O**

CI 07 **SC Table 65** **P 110** **L** **# 999**
 Roberts, Richard XtremeSpectrum

Comment Type **T** *Comment Status* **X**
 Why do we need 16 bit commands?

SuggestedRemedy
 MAC subcommittee needs to justify 16 bit commands ... prefer to replace with 8 bit commands

Proposed Response *Response Status* **O**

CI 07 **SC Table 65** **P 110** **L 31** **# 703**
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type **TR** *Comment Status* **X**
 Probe Request command and Probe response commands are incorrect. Also the xref in the table are incorrect.

SuggestedRemedy
 Please Rename the indicated commands to Probe-PNC-Request command and Probe-PNC-Response command.

Proposed Response *Response Status* **O**

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CI 07 SC Table 65 P 110 L 42 # 705
Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
The Remote-Scan-Request and Remote-Scan-Response commands are missing from this table. These commands are needed to fill in a notable missing capability in the Dynamic Channel Selection function.

SuggestedRemedy
Place the Remote-Scan-Request and Remote-Scan-Response commands into the table entries previously occupied by the deleted Alternate PNC Announcement and PNC pullout commands.

Proposed Response Response Status O

CI 07 SC Table 65 P 110 L 42 # 704
Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
Alternate PNC announcement command and Alternate PNC pull out command are not needed.

SuggestedRemedy
Please remove the indicated commands and their xrefs.

Proposed Response Response Status O

CI 07 SC Table 65 P 110 L 48 # 706
Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
The xrefs for the Device information request and response commands is incorrect.

SuggestedRemedy
Please have the xref point to the clause previously known as Probe request and response respectively.

Proposed Response Response Status O

CI 07 SC Table 65 P 111 L 7 # 707
Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
The power managment frame commands introduce an inordinate amount of complexity into D09. Consequently, they are not needed.

SuggestedRemedy
Remove from this table all references to EPS action request/response, Swith to Active, Switch to EPS, Momentary EPS

Proposed Response Response Status O

CI 07 SC Table 65 P 111 L 8 # 1504
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
6 commands were added just for power management. Something is wrong when so many new commands are needed just for power management.

SuggestedRemedy
SuggestedRemedy
Simplify power management.

Proposed Response Response Status O

CI 07 SC Table 66 P 124 L # 1056
Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
Better terminology

SuggestedRemedy
Instead of saying "place in set" how about instead "add to set". Make a universal replacement.

Proposed Response Response Status O
Proposed Response Response Status O

CI 07 SC Table 67 P 125 L # 1170
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
Add a 9th action type value

SuggestedRemedy
In table 67, add 9th action type value ... Power Saving Modes Not Supported ... 9

Proposed Response Response Status O

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CI 07 SC Table 67 P 125 L 5 # 1320
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
I assume that "release confirm," "New Confirm," "place in set confirm and Return information on the EPS set response" are sent in response to the "release request", "new request", "place in set" and "information request" but that is not clear.

SuggestedRemedy
Add text to clarify that these action types correspond to the corresponding request action types.

Proposed Response Response Status O

CI 07 SC Table64 P 108 L 10 # 1494
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Forcing the receiver to interpret a slot start time of zero as "no GTS" is a complication. This CTA will need to be the first CTA because the previous CTA will use this CTA start time as it's start time.

SuggestedRemedy
Another reason to add the duration field back into the CTA.

Proposed Response Response Status O

CI 07 SC Table66 P 124 L # 1312
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
There is no text to describe what each of these action types mean. In fact, the words "release request", "new request", "place in set" don't even appear in any text in the entire draft. "information request" does not appear in any power management text.

SuggestedRemedy
Need to describe what each of these action types do and when they are used.

Proposed Response Response Status O

CI 08 SC P L # 1542
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
I provided 3 pages of text on Guard Times in document 01/439 that I thought we included in the draft. I don't know how it fell through the cracks. I think it was because we decided to put slot duration back into the CTAs on a Con Call and no one ever

SuggestedRemedy
Add Guard Time Text from 01/439 after I update it to add slot durations back into the channel time request.

Proposed Response Response Status O

CI 08 SC P L # 1573
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
Should point out that the PNC broadcasts the device information table after

SuggestedRemedy
Add the following sentence: "After Disassociation is complete, the PNC broadcasts an update of the device information table as described in 8.2.7."

Proposed Response Response Status O

CI 08 SC P L # 1657
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Can the PNC negotiate EPSTime and EPS N. IF not, and all EPS sets choose a different EPSTime, periodically they will all occur on the same beacon and may use a tremendous amount of channel time.

SuggestedRemedy
Address what happens when all EPS Wake beacons happen together.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 08 SC P L # 1638
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
"Any DEV using the same EPS Set have a WAKE superframe" should say has

SuggestedRemedy
change to "Any DEV using the same EPS Set has a WAKE superframe"

Proposed Response Response Status O

CI 08 SC P L # 1724
Rofheart, Martin XtremeSpectrum

Comment Type TR Comment Status X
The power management method is overly complex and vague.

SuggestedRemedy
Refer to the remedy indicated by Bill Shvodian

Proposed Response Response Status O

CI 08 SC P L # 1653
Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
Need to clearly explain the relationship between The EPS CTRB parameters of slot size and N, and the EPS set time of EPSTime.

SuggestedRemedy
Please clarify the relationship. A picture would be helpful.

Proposed Response Response Status O

CI 08 SC P L # 1594
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
"For EPS channel time requests, N = 0 is a special case in which the PNC shall create all EPS CTA slots with zero length. The zero length, or null CTA identifies that the EPS DEV shall listen to this beacon, and that the EPS DEV does not have GTS time allocated for data transmission." I don't understand this at all. If N=0, then every superframe has a CTA with duration 0? Why make an exception like this and not say channel time =0 and N=1?

SuggestedRemedy
Clarify what is meant by this paragraph.

Proposed Response Response Status O

CI 08 SC P L # 1639
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
If higher layers are setting up the EPS Sets, how does a new DEV find the EPS set to join? Does it have to wake up every single EPS DEV in every EPS set in order to find the DEV with the higher layer "master or peer" that it wants to talk to?

SuggestedRemedy
Need to add text to explain how a new EPS DEV finds the higher layer entity that it wishes to communicate with.

Proposed Response Response Status O

CI 08 SC P L # 1656
Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
Can any DEV that is not a member of an EPS set make a request for active channel time with an EPS DEV?

SuggestedRemedy
Please clarify

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 08 SC P L # 1651
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
How do you know what EPS Sets are active? If you want to interrogate all DEVs in all EPS sets, you first have to know what EPS sets are active. I don't see a way to ask for the set of active EPS sets.

SuggestedRemedy
Need a command and MLME to request which EPS sets are active (in use).

Proposed Response Response Status O

CI 08 SC P L # 1640
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Can the PNC overbook CTAs for DEVs in EPS state? If so, what happens if there is no channel time available when a DEV wants to switch to use teh ACTIVE CTA?

SuggestedRemedy
If this can happen, we need a command to tell the upper layers "Channel tiem not currently available."

Proposed Response Response Status O

CI 08 SC 1 P 137 L 11 # 173
DuVal, Mary Texas Instruments

Comment Type E Comment Status X

"sub-clause 8.2.7." - Shouldn't this be 8.2.4?

SuggestedRemedy

Proposed Response Response Status O

CI 08 SC 11 P 160 L 33 # 188
DuVal, Mary Texas Instruments

Comment Type E Comment Status X
Reference to Figure 8.12 should be a reference to Figure 92.

SuggestedRemedy

Proposed Response Response Status O

CI 08 SC 13.1.1 P 163 L 2630 # 540
GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
This para referes to an "higher layer protocol" that takes the responsibility of tradeoff between multiple slots v/s power saving. Which higher layer protocol that is in existence has this feature? Where is it published? This entire section (8:13.1.1) is an illusion. What happens when there are more than one device that is in EPS? doesn't all the devices except the first one have to wait for their GTS anyway no matter how PNC

SuggestedRemedy
Remove 8.13.1.1 and Remove all references to "slot positioning" (example 8.13.2.2) from the draft Add a line in 8.4.3.1 as follows "PNC shall try its best to allocate the GTSs of all EPS power management devices first and then others. some of the exceptions to this are MTS for PNC commands, some Qos streams that need mulitple GTS within a superframe and requests from child/neighbor piconets"

Proposed Response Response Status O

CI 08 SC 13.2 P 163 L # 541
GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
some more inconsistencies that can potentially lead to non-interoperable

SuggestedRemedy
1. line 48, page 163: change "assigned to it for reception." to "assigned to it for reception, and all the GTSs allocated for BC/MC reception" 2. line 49, page 163: change " within 25 percent of the slot time" to "within 25 percent of the slot time that does not show any channel activity as indicated by CCA"

Proposed Response Response Status O

CI 08 SC 13.2 P 163 L # 1710
Young, Song-Lin Sharp Labs. of

Comment Type TR Comment Status X
RPS mode appears to be an implementation issue. It doesn't require commands exchange with PNC.

SuggestedRemedy
Remove this mode in draft

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 08 SC 13.2 P 163 L # 542
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type E Comment Status X
 lines 11:12, page 164: tool? MTS or GTS is not a tool. it can be used effectively by devices to save power.

SuggestedRemedy
 Please rephrase this

Proposed Response Response Status O

CI 08 SC 13.3 P L # 543
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
 This clause is a standing proof for the complexity of EPS. EPS is affecting control of network, quality of service for all DEVS, adding significant overhead through transactions related to EPS states and most importantly making PNC implementation very complex and an high-cost one. Transactions listed in figure-94, 95 and 96 provide this picture, although not completely. Then there are combinations of EPS devices and additional traffic to EPS devs and exception conditions described in 8.13.3.8, 9 and 10 which further complicate the management of these EPS devices After all this complexity, 1. There is no mechanism described for BC/MC traffic from an RPS/EPS device to another EPS device is handled? 2. There is no mechanism described for isoch or asynch traffic flow from DEVS in one EPS set to DEV in another EPS set? 3. How does a DEV from one EPS set transmit to or receive from DEV from multiple EPS devices each being in different EPS set for other reasons? Answer to this can be one of two things either (a) they use repeater service through PNC and/or (b) PNC, knowing who is asleep, avoids providing a GTS with that DEV as rx-DEV. In either of these case we do not need this highly complex mechanism. As the mechanisms get more complex and affect all the other aspects of the standard, there is an higher risk of creating corner cases which can not be visualized easily at the time of standard, but are certain to haunt us in the field. There are proven examples in this within 802-wireless standards. Let's learn from those examples and avoid any one mechanism to affect deeply all the other mechanism in the standard. OR for any mechanism to be too complex that the implementors do not implement it, but instead they are forced to find some other solution. In any case, I am absolutely convinced that the EPS mechanism asa defined in this draft does not belong in 802.15.3. It has to be absolutely, positively simplified before we move further with this draft.

SuggestedRemedy
 Simplify power management to the following - Request for sleep time by DEV - Accept/Reject by PNC - Broadcast the addresses of sleeping DEV in Beacon - Allocation/modification of GTS by PNC depending on who is awake

Proposed Response Response Status O

CI 08 SC 16 P L # 544
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status R
 Table 73 has some "ms". please make them Kus for ease of implementation

SuggestedRemedy
 Table 73 has some "ms". please make them Kus for ease of implementation

Proposed Response Response Status O
 The committee has decided to change all Kus to ms as previously agreed. It was felt that there is liitle advantage to use Kus (1024) instead of ms (1000) for these values.

CI 08 SC 2 P 137 L # 800
 Kinney, Patrick Invensys

Comment Type T Comment Status X
 There is a possibility of duplicate network id's. A device will check to see if there are any similar ids but this search cannot be 100% sure, additionally, a PAN may walk into another's coverage area. I did not see any detection nor resolution of this event

SuggestedRemedy
 describe the techniques to detect network id duplication and the procedures to resolve it.

Proposed Response Response Status O

CI 08 SC 2.4 P 141 L 2 # 176
 DuVal, Mary Texas Instruments

Comment Type T Comment Status X
 I would like to see an example of the handover process in relationship to other traffic. This should provide a system overview of the timing.

SuggestedRemedy
 Provide new figure.

Proposed Response Response Status O

CI 08 SC 2.5 P L # 531
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
 the restriction for forming child piconet is not clear, although it might have been the

SuggestedRemedy
 Add "Only an AC that is associated to a PNC in an existing piconet shall form a child piconet"

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 08 SC 2.5 P 141 L 22 # 1705
 Young, Song-Lin Sharp Labs. of
Comment Type TR Comment Status X
 What is the meaning of private GTS in terms of various fields in CTRB(Fig. 72) for using channel time request command to setup a child piconet? Suppose stream index=0, what are applicable values for others?

SuggestedRemedy
 Clarify the meaning of "private GTS" and usage of channel time request command for child piconet

Proposed Response Response Status O

CI 08 SC 2.6 P L # 532
 GUBBI, RAJUGOPAL Broadcom, corp
Comment Type TR Comment Status X
 the restriction on transactions with neighboring piconet is not clear, although it might have been the intent.

SuggestedRemedy
 Clearly list all the commands that can be exchanged between the parent and neighbor piconets and state that other commands and frame types shall not be exchanged between them.

Proposed Response Response Status O

CI 08 SC 2.6 P 142 L # 180
 DuVal, Mary Texas Instruments
Comment Type TR Comment Status X
 Need to add a figure similar to Figure 80 to describe a neighbor piconet. What is different? Why are they not the same?

SuggestedRemedy
 Clarification needed on neighbor piconets.

Proposed Response Response Status O

CI 08 SC 2.6 P 142 L 28 # 1704
 Young, Song-Lin Sharp Labs. of
Comment Type TR Comment Status X
 1. It appears that there is not much difference between Neighbor piconet and Child piconet. A DEV can still request to associate with a PNC if it can not find a free channel. 2. Fig. 82 is the same as Fig. 81 if the association process of child piconet is taken into account. 3. Fig. 80 is the same for both child and neighbor piconet. 4. No communication between PNC of neighbor piconet and parent piconet provides doesn't seem to provide additional merits for operations of WPAN 5. What's the reason for limiting the no. of neighbor piconet to 3 special AD-DA?

SuggestedRemedy
 Remove 8.2.6 neighbor piconet and all related materials in the draft standard.

Proposed Response Response Status O

CI 08 SC 2.6 P 142 L 28 # 178
 DuVal, Mary Texas Instruments

Comment Type TR Comment Status X
 During the proposal selection process of the standard process, I remember discussions about the fact that devices operating in an ISM band could not be coordinated. This neighbor piconet seems to be a method for coordinating between different types of devices (such as an 802.11b or g system with 802.15.3 awareness capability - i.e. minimal DEV capability). I thought this was illegal within the FCC part 15 rules. I see this a minimal attempt at coexistence, but will it met the current regulations.

SuggestedRemedy
 This issue needs to be discussed by the group. If it does not met current FCC regulations, an assessment should be presented on current initiatives within the FCC to change rules that will enable this capability.

Proposed Response Response Status O

CI 08 SC 2.6 P 142 L 30 # 533
 GUBBI, RAJUGOPAL Broadcom, corp
Comment Type E Comment Status X
 missing word

SuggestedRemedy
 chnage "no channels" to "no free channels"

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 08 SC 2.6 P 142 L 31 # 179
 DuVal, Mary Texas Instruments

Comment Type **TR** Comment Status **X**
 "... a neighbor piconet within an existing piconet." I thought the neighbor piconet was independent from an existing piconet. How could it be within an existing piconet?

SuggestedRemedy
 This does not present a clear understanding of a neighbor piconet. Clarification needed.

Proposed Response Response Status **O**

CI 08 SC 2.6 P 143 L 30 # 182
 DuVal, Mary Texas Instruments

Comment Type **T** Comment Status **X**
 "... it is neither authenticated nor associated) ..." - but figure 82 shows an association sequence.

SuggestedRemedy
 If diagram is not wrong, paragraph is wrong. Make the two consistent.

Proposed Response Response Status **O**

CI 08 SC 3.2 P 144 L 17 # 183
 DuVal, Mary Texas Instruments

Comment Type **T** Comment Status **X**
 You define what an associated response is not ... "directed frame". So what is an associated response? A broadcast frame?

SuggestedRemedy
 Please clarify

Proposed Response Response Status **O**

CI 08 SC 4 P 146 L 1 # 185
 DuVal, Mary Texas Instruments

Comment Type **E** Comment Status **X**
 "... CAP is used for non-QoS frames." - So what is it used for? Control and asynchronous data frames?

SuggestedRemedy
 State what it is, not just what it is not.

Proposed Response Response Status **O**

CI 08 SC 4.1 P L # 534
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **TR** Comment Status **X**
 Clearly state the relation between SIFS and RIFS

SuggestedRemedy
 change "SIFS < RIFS" to "RIFS = SIFS + aBackoffSlot" change "actual values of IFSS are" to "actual value of aBackoffSlot is"

Proposed Response Response Status **O**

CI 08 SC 4.2 P L # 535
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **TR** Comment Status **X**
 Backoff or IFS for beacon transmission is not clear. Either Beacon tx should be after a small backoff or reasonably long IFS.

SuggestedRemedy
 At the end of line 39, add " instead the beacon is transmitted at the beginning of superframe by the PNC after waiting for the channel to be idle, as indicated by the CCA, for at least RIFS+aBackoffSlot time.

Proposed Response Response Status **O**

CI 08 SC 4.3.3 P 151 L 822 # 536
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **TR** Comment Status **X**
 If SA is broadcast and anybody could start tx, how's collision handled? What is the point in getting devices to collide here instead of making this MTS part of CAP and letting devices freely use CAP as already defined. This is useless and adds

SuggestedRemedy
 Remove lines 8:22 on page 151 and all references to "MTS/GTS with BC/MC-SA" from the draft

Proposed Response Response Status **O**

P802.15.3 Draft 09 Comments

CI 08 SC 4.3.4 P 151 L # 537
GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
What is the point in having slotted aloha access in addition to the backoff in CAP, TDMA in CFP? Why is this complexity being thrust on the implementors of this "low cost", "low complexity" and "low power" standard? I don;t see any justification in having yet another access scheme with WPAN.

SuggestedRemedy
Remove slotted aloha scheme in 8.4.3.4 and all references to it from the draft.

Proposed Response Response Status O

CI 08 SC 6.1, & Fig.88, 89 P 153 L # 1714
Young, Song-Lin Sharp Labs. of

Comment Type T Comment Status X
This paragraph falls short of mentioning that streme connection is not completed until DEV receives Beacon from PNC with CTA. Fig. 3, 4 should be referred instead of using Fig. 88, 89, which do not give the complete process.

SuggestedRemedy
Modify text that matches MSC of Fig. 3 and 4

Proposed Response Response Status O

CI 08 SC 8.1 P 137 L # 1343
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
This clause neweds to be rearranged. Clause 8.6 is mentioned before clause 8.5 Also, Clause 8.9 and 8.3 are not mentioned.

SuggestedRemedy
DEscribe clause 8.5 before 8.6 and add a description of 8.9 and 8.3.

Proposed Response Response Status O

CI 08 SC 8.1 P 137 L 11 # 1100
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
Reference to sub-clause 8.2.7

SuggestedRemedy
Should be sub-clause 8.2.4

Proposed Response Response Status O

CI 08 SC 8.1 P 137 L 11 # 1344
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
Sub Clause 8.2.7 does not exist.

SuggestedRemedy
change to 8.2.4

Proposed Response Response Status O

CI 08 SC 8.1 P 137 L 12 # 841
Kleindl, Guenter Siemens

Comment Type E Comment Status X
editorial

SuggestedRemedy
replace 'If there are no alternate PNCs are available' to 'If there are no alternate PNCs available'

Proposed Response Response Status O

CI 08 SC 8.1 P 137 L 20 # 1101
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
wrong sub-clause reference

SuggestedRemedy
reference to 8.6 but should be 8.4? Have MAC people verify.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 08 SC 8.1 P 146 L 2 # 1346
Schrader, Mark Eastman Kodak Co.

Comment Type T Comment Status X

The text should elaborate on the Non-CAP case, especially with regards to processing time for the beacon. If the CAP is not present there must be a gap or unallocated time slot allocated to allow all devices to process the information in the beacon. If the amount time is not specified, a PNC may assign slots before a device can interpret its CTA.

SuggestedRemedy

Indicate in the text that a minimum size CAP will be assigned even for the MTS only case, where the CAP will serve only as a gap between the Beacon and the GTS slots.

Proposed Response Response Status O

CI 08 SC 8.10 P 159 L 42 # 1158
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X

There are a number of problems with the paragraph starting at line 42, of which the most serious is a reference to a wrong command. I'd suggest the following modifications:

SuggestedRemedy

1. at the end of line 43, put the word "optional" so as to read "support optional rates"
2. at the end of line 44, put the word "optional" so as to read "supported optional data rate"
3. at the end of line 45, put the word "optional" so as to read "supported optional rates"
4. in line 47, change to ... piconet shall use the probe request ...
5. in line 47, the clause reference is 7.5.4.1 (not 7.5.8.1)
6. in line 48, change to ... that it is interested in establishing communications.
7. in line 48, change to ... each DEV shall periodically use the channel ...
8. in line 49, change to ... from other DEVs of interest ... (replace the phrase "that it is interested")
9. in line 50, ... transmissions to those other DEVs.

Proposed Response Response Status O

CI 08 SC 8.10 P 159 L 47 # 714
Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X

The sentence fragment in line 47 is incorrect: "Each DEV in a piconet shall use probe request command,..."

SuggestedRemedy

Please change the sentence fragment to: " Each DEV in a piconet shall use the Device-Information-request command,..." where Device-Information-Request was previously known as Probe-request.

Proposed Response Response Status O

CI 08 SC 8.10 P 159 L 47 # 1571
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X

The DEV should not have to do a probe to determine the PHY capability for the DEV it wants to communicate with. That is in the DEV info table that is broadcast by the

SuggestedRemedy

Change as follows: "Each DEV in a piconet shall check the DEV capabilities from the device information table that is broadcast by the PNC when a DEV associates to obtain the supported rates from other DEV(s) that it is interested in communicating.

Proposed Response Response Status O

CI 08 SC 8.10 P 159 L 47 # 1157
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X

There are a number of problems with the paragraph starting at line 42, of which the most serious is a reference to a wrong command.

SuggestedRemedy

On line 47 the probe request command is found at clause 7.5.4.1, not at 7.5.8.1.

Proposed Response Response Status O

CI 08 SC 8.10 P 159 L 48 # 389
Gilb, James Apparent

Comment Type T Comment Status X

Should not require the DEV to check the channel status.

SuggestedRemedy

Change "each DEV shall periodically" to "each DEV may periodically"

Proposed Response Response Status O

CI 08 SC 8.10 P 159 L 50 # 1575
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X

"to that other DEVs" should be "to the other DEVs."
"to that other DEVs" should be "to the other DEVs."

SuggestedRemedy

Change to "to the other DEVs"

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 08 SC 8.10 P 159 L 50 # 1576
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 ACK feedback can be used to determine if rate or power change is required.

SuggestedRemedy
 Add the following sentence: "Additionally, the channel quality can be judged by the presence of ACKs on transmitted frames. This ACK feedback can be used to determine if rate of transmsion or the power level needs to change."

Proposed Response Response Status O

CI 08 SC 8.10 P 159 L 52 # 390
 Gilb, James Appairnt

Comment Type T Comment Status X
 The first sentence is redundant and therefore evil since the requirement is in the table.

SuggestedRemedy
 Delete the sentence "All group ... receive these frames."

Proposed Response Response Status O

CI 08 SC 8.10 P 160 L 14 # 392
 Gilb, James Appairnt

Comment Type T Comment Status X
 We should allow the lower rate modes to be used in the CAP for more reliable communications.

SuggestedRemedy
 Change in 2 places: "In a GTS or MTS: ... the base rate." to be "Any rate supported by both the source and destination." Second location is at line 20.

Proposed Response Response Status O

CI 08 SC 8.10 P 160 L 5 # 391
 Gilb, James Appairnt

Comment Type T Comment Status X
 Group addressed frames are not supported in the standard.

SuggestedRemedy
 Change "group addressed" to "broadcast" in table 69.

Proposed Response Response Status O

CI 08 SC 8.11 P L # 1581
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 "If the decision is made by the PNC to change the channel, the PNC shall keep the piconet quiet by not transmitting any beacon for one or more beacon interval." The quiet command was eliminatd before pseudo-static GTS slots were introduced. With pseudo-static GTS a DEV is allowed to transmit even if it does not hear a limited number of beacons. The quiet command should be added back.

SuggestedRemedy
 Add back the quiet command.

Proposed Response Response Status O

CI 08 SC 8.11 P 160 L # 1579
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 There is no mention of what happens to repeater service when handover occurs. Since there is no reasona ble way to know if the new PNC link will be adequate, all repeater service should be dropped when PNC handover occurs.

SuggestedRemedy
 Add the following sentence: "When PNC handover occurs, all repeater service is discontinued and must be renegotiated with the new PNC."

Proposed Response Response Status O

CI 08 SC 8.11 P 160 L # 1580
CI 08 SC 8.11 P 160 L # 1580
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 It is not clear how a DEV or the PNC knows what rate to transmit at when Repeater Service is used. If the DEV is transmitting to BOTH the DEV and the PNC as is described here, It may choose the lowest rate, even though the link to the PNC may be very clear. This will waste resources. Likewise, the PNC won't get ACKs from the receiving DEV, so it will not be able to monitor the quality of the link from the PNC to

SuggestedRemedy
 Delete repeater service althgether because it will be too complex to implement. Repeater service should be left to the upper layers to implement. That way immediate ACK can be used between the devices and the PNC.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 08 SC 8.11 P 160 L 26 # 711
Heberling, Allen XtremeSpectrum, Inc.
Comment Type TR Comment Status X
The text in clause 8.11 between lines 28 and 41 leaves out essential functional information required to establish a repeater function among DEV-2, PNC/DEV-1, and
SuggestedRemedy
See the repeater function clause in doc 02/037 for a detailed resolution.

Proposed Response Response Status O

CI 08 SC 8.11 P 160 L 31 # 393
Gilb, James Appairnt
Comment Type T Comment Status X
The current text does not give the PNC the option of rejecting the repeater service
SuggestedRemedy
change "The PNC shall" to be "If the PNC wishes to grant the repeater service, it shall" and change "the DEVs. The sequence" to be "If the PNC does not grant the service it shall send the repeater service reject command, 7.5.6.3, to the DEV with the appropriate result code set."

Proposed Response Response Status O

CI 08 SC 8.11 P 160 L 33 # 847
Kleindl, Guenter Siemens
Comment Type E Comment Status X
wrong figure number
SuggestedRemedy
replace 'Figure 8.12' with 'Figure 92'

Proposed Response Response Status O

CI 08 SC 8.11 P 160 L 33 # 1159
Roberts, Richard XtremeSpectrum
Comment Type TR Comment Status X
Wrong Figure number
SuggestedRemedy
Figure 92, not figure 8.12
Proposed Response Response Status O

CI 08 SC 8.11 P 160 L 37 # 394
Gilb, James Appairnt
Comment Type T Comment Status X
It is not specified what the SA and DA of the repeated frames is. To avoid confusion (e.g. the DEV and the PNC ACKing the same packet), the addressing should go through the PNC (see resolution).

SuggestedRemedy
Change "its frames as before." to be "its frames as before except that the DA of the frames is set to the PNC's address." and change "and repeat them in the time slot" with "and repeat them with the SA set to the PNC's address in the time slot" Also need to check the impact on 7.5.6.x

Proposed Response Response Status O

CI 08 SC 8.11 P 160 L 45 # 1160
Roberts, Richard XtremeSpectrum
Comment Type T Comment Status X
Add clause reference

SuggestedRemedy
... repeater service reject command (7.5.6.3) to the PNC.

Proposed Response Response Status O

CI 08 SC 8.11 P 161 L 4 # 395
Gilb, James Appairnt
Comment Type T Comment Status X
The current repeater service request commands do not support the establishment of streams. The DEV needs to request the channel time first and then the repeater

SuggestedRemedy
Change the MSC in Figure 92 to indicate that the channel time has already been negotiated prior to the repeater service setup.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 08 SC 8.12 P 161 L 37 # 1161
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 grammatical ... delete the phrase "in return"

SuggestedRemedy
 ... provide their channel status via the channel status ...

Proposed Response Response Status O

CI 08 SC 8.12 P 161 L 40 # 396
 Gilb, James Appairent

Comment Type T Comment Status X
 The PNC cannot keep the piconet quiet since psuedostatic timeslots still operate even without the beacon.

SuggestedRemedy
 Change "The PNC shall keep the piconet quiet by not" to "The PNC shall not" on line 40, change "The PNC may change" to "The PNC shall change" on line 41, change "beacon to cancel the quiet state of the piconet." to "beacon." on line 46, change "beacon following the cancellation of quiet state of the piconet." to "beacon."

Proposed Response Response Status O

CI 08 SC 8.12 P 161 L 41 # 1162
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 In the opening line of the paragraph starting at line 41, we are informed of a desire to quiet the piconet.

SuggestedRemedy
 The scheme to quiet the piconet, by stopping beacons, will not quiet pseudo-static GTS slots. MAC committee to clarify if this is a problem and modify text if needed.

Proposed Response Response Status O

CI 08 SC 8.12 P 161 L 41 # 28
 Bain, Jay Time Domain

Comment Type T Comment Status X
 The dynamic channel selection text does not mention the pseudo-static operation allows a DEV to continue to operate for up to 4 superframes without seeing a beacon. I don't think that this is a problem because the pseudo-static is limited to the peer-to-peer transfer in a CTR or stream setup and does not extend to commands to the PNC.

SuggestedRemedy
 Make mention that specific DEV to DEV operations are allowed during the quiet time but that no DEV to PNC traffic is allowed

Proposed Response Response Status O

CI 08 SC 8.12 P 161 L 41 # 1163
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 grammatical ... add an s onto the word interval.

SuggestedRemedy
 ... for one or more beacon intervals.

Proposed Response Response Status O

CI 08 SC 8.12 P 161 L 41 # 710
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 The text between lines 41 and 47 describing how the PNC determines the availability of a more suitable channel is incorrect.

SuggestedRemedy
 See text in doc 02/037 for details regarding a more reasonable approach to determining the suitability of another channel.

Proposed Response Response Status O

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CI 08 SC 8.12 P 161 L 42 # 1164
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 The sentence starting on line 42 to 43 needs to be rewrite, as shown below.

SuggestedRemedy
 Within that quiet time the PNC may change to one or more other channels to check if one of the other channels are better than the current, after which it returns to the current channel.

Proposed Response Response Status O

CI 08 SC 8.12 P 161 L 44 # 1165
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 add reference to the association response command

SuggestedRemedy
 ... association response command (7.5.2.2), the DEVs ...

Proposed Response Response Status O

CI 08 SC 8.12 P 161 L 49 # 1166
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 The sentence on line 49, starting with "The DEVs that ...", indicates a channel switch can take place.

SuggestedRemedy
 What happens to those devices that are in a power save mode. Is this going to be a problem for them? Power management to comment.

Proposed Response Response Status O

CI 08 SC 8.13 P L # 1629
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 A complex power management solution has been specified, but we need a very simple approach that will be useful for very low power devices that are not. If the current approach stays it could be optional, and we should add a low-complexity solution as an

SuggestedRemedy
 I will be proposing a low complexity power management solution.

Proposed Response Response Status O

CI 08 SC 8.13 P 162 L # 1584
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 How is broadcast traffic handled when a device is in EPS mode? Is the PNC forced to perform repeater service to every DEV that is in EPS

SuggestedRemedy
 Need to decide how to handle broadcast traffic when devices are in EPS mode since TCP/IP uses broadcast.

Proposed Response Response Status O

CI 08 SC 8.13 P 162 L # 767
 Huang, Bob Sony Electronics

Comment Type TR Comment Status X
 Comment Type TR Comment Status X
 General comment: I believe that the power management section is confusing and overly complicated. While low power consumption is a key goal of 802.15.3, the ability to reliably interoperate using a power save mode is dependent on a clear and concise

SuggestedRemedy
 Clarity needs to be brought to the text before technical merit can be adequately

Proposed Response Response Status O

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CI 08 SC 8.13 P 162 L # 1586
Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
Remove this sentence "ACTIVE mode devices may use the capabilities defined in RPS mode to provide a modest power reduction." This only proves that ACTIVE mode and EPS mode are one and the same.

SuggestedRemedy
Remove this sentence (along with RPS mode).

Proposed Response Response Status **O**

CI 08 SC 8.13 P 162 L # 1585
Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
If anything RPS should be a state, not a mode. No DEV should ever listen to GTS slots that are not assigned to it, so there is no difference between EPS and ACTIVE

SuggestedRemedy
Remove all references to EPS mode.

Proposed Response Response Status **O**

CI 08 SC 8.13 P 162 L 29 # 1168
Roberts, Richard XtremeSpectrum

Comment Type **TR** Comment Status **X**
A general comment about power management. I can not support power management being mandatory; in other words, power management must be an optional mode ... not only for a DEV but also for a PNC. A method must be included that allows a piconet to indicate that power management is not supported. A DEV already has the option to not support power management. One method to "not support power management" at the PNC level is: 1. In table 67, add a 9th action type value for the EPS action response command, and that is "EPS mode not supported"

SuggestedRemedy
Modify table 67 as shown above and then add text to 8.13 at the end of line 31 that says: In the case where a PNC does not support any power management mode, the EPS action response command "action type value" (Table 67) shall be value 9, "EPS mode not supported". Those DEVs desiring RPS mode will not get slot assignments friendly to RPS mode of operation.

Proposed Response Response Status **O**

CI 08 SC 8.13 P 162 L 29 # 709
Heberling, Allen XtremeSpectrum, Inc.

Comment Type **TR** Comment Status **X**
The current power management clauses 8.13 through 8.13.3.12 introduce a level of complexity to make them unsuitable for implementation in a WPAN.

SuggestedRemedy
Remove clauses 8.13 through 8.13.3.12.

Proposed Response Response Status **O**

CI 08 SC 8.13 P 162 L 29 # 1173
Roberts, Richard XtremeSpectrum

Comment Type **TR** Comment Status **X**
In general, I can not support a power savings mode where a DEV "must" "pair up" with another DEV in some power savings "master-slave" mode of operation. A DEV needs to have the option of telling another DEV "I don't want to do a power management mode pairing with you".

SuggestedRemedy
I need input from the power management folks and then I'll be happy to generate the required text to indicate how a DEV declines power mode pairing with another DEV. This text should be added to the introductory clause, 8.13.

Proposed Response Response Status **O**

CI 08 SC 8.13 P 162 L 4344 # 263
Gifford, Ian Self

Comment Type **E** Comment Status **X**
The sentence "The table information will be described in sub-clauses of the power management clause." and the text reference to a unique 'power management clause' seems incorrect. I can not find a clause titled power management, however, I do note that this sentence is in subclause 8.13 Power management.

SuggestedRemedy
Correct text reference and possibly add a cross-reference for the reader.

Proposed Response Response Status **O**

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CI 08 **SC 8.13.1** **P 162** **L 51** **# 1587**
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 I asked many hardware designers both at XtremeSpectrum at other companies if the position of the GTS close to the beacon would have any impact at all on power savings. The answer I got was a unanimous "Any power savings from GTS slot location in the superframe will be negligible."

SuggestedRemedy
 Delete all of 8.13.1 and 8.13.1.1

Proposed Response *Response Status* **O**

CI 08 **SC 8.13.1** **P 162** **L 51** **# 1174**
 Roberts, Richard XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 Reference to CAP without reference to associate MTS

SuggestedRemedy
 I need some help here from the MAC folks ... in paragraph 8.13.1, we reference an event relative to the CAP (lines 50 and 51). Should this be rewritten to include the MTS ... for example, replace the two instances of CAP with CAP --> CAP or associate MTS

Proposed Response *Response Status* **O**

CI 08 **SC 8.13.1** **P 163** **L 56** **# 740**
 Huang, Bob Sony Electronics

Comment Type **E** *Comment Status* **X**
 SRC and DST are not defined.

SuggestedRemedy
 Define.

Proposed Response *Response Status* **O**

CI 08 **SC 8.13.1.1** **P 163** **L 2830** **# 70**
 Barr, John Motorola
Comment Type **T** *Comment Status* **X**
 PNC does not negotiate nor allocate bandwidth. Use of bandwidth in this paragraph does not match other parts of the specification.

SuggestedRemedy
 Replace 'bandwidth' with 'channel time' in this paragraph. Bandwidth occurs twice.

Proposed Response *Response Status* **O**

CI 08 **SC 8.13.1.1** **P 163** **L 47** **# 1175**
 Roberts, Richard XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 Reference to CAP without reference to associate MTS

SuggestedRemedy
 I need some help here from the MAC folks ... in paragraph 8.13.2, we reference an event relative to the CAP (line 47). Should this be rewritten to include the MTS ... for example, replace the instance of CAP with CAP --> CAP or associate MTS

Proposed Response *Response Status* **O**

CI 08 **SC 8.13.12** **P 171** **L 25** **# 411**
 Gilb, James Appairant

Comment Type **T** *Comment Status* **X**
 The sentence "It is the responsibility ... is to wake." is redundant, adds no new information or requirements and is evil.

SuggestedRemedy
 Delete the sentence.

Proposed Response *Response Status* **O**

CI 08 **SC 8.13.2** **P 163** **L** **# 1588**
 Shvodian, William XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 Delete all of clauses 8.13.2, 8.13.2.1.1 and 8.13.2.2. There is no need to have an RPS mode since it is identical to PM_OFF mode.

SuggestedRemedy
 Remove all of 8.13.2, 8.13.2.1.1 and 8.13.2.2.

Proposed Response *Response Status* **O**

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CI 08 **SC 8.13.2.1** **P 164** **L 14** **# 397**
 Gilb, James Appairent
Comment Type **T** *Comment Status* **X**
 What is changed is not listed here.
SuggestedRemedy
 Change "Latency to change is" to "Latency to change channel time allocations is"
Proposed Response *Response Status* **O**

CI 08 **SC 8.13.2.1** **P 164** **L 14** **# 1176**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 Completely delete the sentence locate between lines 14 and 15.
SuggestedRemedy
 Delete as shown above.
Proposed Response *Response Status* **O**

CI 08 **SC 8.13.2.1** **P 164** **L 14** **# 264**
 Gifford, Ian Self
Comment Type **E** *Comment Status* **X**
 The term "net" in the sentence "...searching for this net or attempting to locate an empty channel." is jargon.
SuggestedRemedy
 Change "net" to "piconet".
Proposed Response *Response Status* **O**

CI 08 **SC 8.13.2.2** **P 164** **L 20** **# 398**
 Gilb, James Appairent
Comment Type **T** *Comment Status* **X**
 Redundant and therefore icky description of slot positioning.
SuggestedRemedy
 Delete the text "Slot positioning ... used by RPS and EPS DEVs." (lines 20 through 23).
Proposed Response *Response Status* **O**

CI 08 **SC 8.13.2.2** **P 164** **L 23** **# 1177**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 Delete the line contained in line 23, the one that begins as "This is provided ...".
SuggestedRemedy
 Delete as shown above.
Proposed Response *Response Status* **O**

CI 08 **SC 8.13.3** **P 164** **L 33** **# 399**
 Gilb, James Appairent
Comment Type **T** *Comment Status* **X**
 The sentence "When DEVs exit EPS mode ... as dictated by the DEV-host." does not add any useful information and does not make sense.
SuggestedRemedy
 Delete the sentence.
Proposed Response *Response Status* **O**

CI 08 **SC 8.13.3** **P 164** **L 34** **# 1178**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Reference to "power resources as dictated by the DEV-host".
SuggestedRemedy
 I don't understand what this means (see above). Please clarify the sentence, perhaps with an example. Assigned to power management folks.
Proposed Response *Response Status* **O**

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CI 08 SC 8.13.3.1 P 164 L # 1590
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
"When both initialization and channel time allocation is complete, then clause 8.13.3.5 describes the operations that allow data transfer for EPS DEVs." Does this mean that clause 8.13.3.5 does not describe anything until both initialisation and channel time allocation is complete?

SuggestedRemedy
Change to: "Clause 8.13.3.5 describes the operations that allow data transfer for EPS DEVs when both initialization and channel time allocation is complete."

Proposed Response Response Status O

CI 08 SC 8.13.3.1 P 164 L 36 # 1185
Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
We talk about EPS sets ... but this is still vague. Perhaps a figure should be added to illustrate the concept. This figure should go into clause 8.13.3.1.

SuggestedRemedy
The figure can be generated with help from the Power Management subcommittee

Proposed Response Response Status O

CI 08 SC 8.13.3.1 P 164 L 36 # 1188
Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
In clause 8.13.3.3 we see terms such as WAKE beacon and WAKE superframe. In clause 8.13.3.1 a figure needs to be generated that helps visualize how these beacons & superframes are used in the EPS mode

SuggestedRemedy
Help is needed by the power management committee to generate this figure.

Proposed Response Response Status O

CI 08 SC 8.13.3.1 P 164 L 39 # 1644
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
"wake beacon" is discussed without being defined. It is defined in the definitions, but it needs an introduction in the text

SuggestedRemedy
add an introduction to wake beacon

Proposed Response Response Status O

CI 08 SC 8.13.3.1 P 164 L 45 # 1645
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
EPS mode has states ACITVE and EPS. ACTIVE is not a mode according to Table 2. This type of inconsistency makes this clause unreadable.

SuggestedRemedy
Be consistent: ACTIVE and EPS are EPS States. They are not modes. EPS and PM_OFF ate PowerManagementModes.

Proposed Response Response Status O

CI 08 SC 8.13.3.1 P 164 L 46 # 1589
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
"For DEVs configured for EPS mode of operation, specific operation of channel time allocation is necessary for both EPS mode and when EPS DEVs operate in ACTIVE mode." According to Table 2, ACTIVE is an EPS status not a mode. Modes are EPS (RPS) and PM_OFF. Mixing the terminology makes this cluse impossible to read.

SuggestedRemedy
Remove all references to "ACTIVE mode" and replace with "ACTIVE state"

Proposed Response Response Status O

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CI 08 SC 8.13.3.11 P 171 L 10 # 1210
 Roberts, Richard XtremeSpectrum
 Comment Type TR Comment Status X
 Line 10 indicates that the EPS DEVs recognize an error condition.
 SuggestedRemedy
 How is this done? Via Table 2 ReasonCode? The ReasonCodes in Table 2 are not defined. Refer to Power Management folks.
 Proposed Response Response Status O

CI 08 SC 8.13.3.11 P 171 L 12 # 1213
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 Line 12 refers to a "recovery operation"
 SuggestedRemedy
 Where is this recovery operation described. Supply reference clause.
 Proposed Response Response Status O

CI 08 SC 8.13.3.11 P 171 L 12 # 1212
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 add definite article
 SuggestedRemedy
 ... defines the recovery operation ...
 Proposed Response Response Status O

CI 08 SC 8.13.3.11 P 171 L 12 # 1211
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 Reference to a clause
 SuggestedRemedy
 Reference to clause6.3.1 should be 6.3.1.1.
 Proposed Response Response Status O

CI 08 SC 8.13.3.11 P 171 L 13 # 1214
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 remove the word "a"
 SuggestedRemedy
 ... recover from an error ...
 Proposed Response Response Status O

CI 08 SC 8.13.3.11 P 171 L 13 # 42
 Bain, Jay Time Domain
 Comment Type E Comment Status X
 extra "a"
 SuggestedRemedy
 drop extra "a"
 Proposed Response Response Status O

CI 08 SC 8.13.3.11 P 171 L 18 # 41
 Bain, Jay Time Domain
 Comment Type T Comment Status X
 Should provide clarification on recovery from incorrect beacon.
 SuggestedRemedy
 Add: This may as simple as dealing with a PNC that is checking another channel for better rf conditions. It may also be that the PNC has changed the superframe duration while a DEV was not awake. Procedures outside of EPS power management process are used to recover.
 Proposed Response Response Status O

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CI 08 SC 8.13.3.2 P 164 L 53 # 1179
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 The sentence starting at 53 is very wordy. It can be improved as shown below.

SuggestedRemedy
 EPS devices operate either in an ACTIVE mode, where the EPS DEV is receiving each superframe, or in an EPS mode, where the EPS DEV receives information at a very much reduced rate.

Proposed Response Response Status O

CI 08 SC 8.13.3.2 P 164 L 54 # 40
 Bain, Jay Time Domain

Comment Type E Comment Status X
 channel time allocation command rather than channel time request.

SuggestedRemedy
 change allocation to request

Proposed Response Response Status O

CI 08 SC 8.13.3.2 P 164 L 54 # 1646
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 change ACTIVE mode to ACTIVE state.

SuggestedRemedy

Proposed Response Response Status O

CI 08 SC 8.13.3.2 P 165 L 11 # 400
 Gilb, James Appairant

Comment Type T Comment Status X
 The formal definition here is redundant and therefore evil.

SuggestedRemedy
 Change "operation shall use the" to "operation uses the"

Proposed Response Response Status O

CI 08 SC 8.13.3.2 P 165 L 12 # 1647
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 change EPS mode to EPS state.

SuggestedRemedy
 Do a global change to be consistent what is EPS mode, and what is EPS state. Be consistent: ACTIVE and EPS are EPS States. They are not modes. EPS and PM_OFF ate PowerManagementModes.

Proposed Response Response Status O

CI 08 SC 8.13.3.2 P 165 L 2 # 1180
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 Delete the line contained in line 2 and replace with alternate text

SuggestedRemedy
 Delete the line starting with "There are three ..." and replace with "Three illustrative usage scenarios are:"

Proposed Response Response Status O

CI 08 SC 8.13.3.2 P 165 L 4 # 1631
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 If the ACTIVE bandwidth needs to be reserved for these EPS devices, why complicate the protocol by adding these mechanisms? Just allocate the channel time, and let the DEVs not use it until they need it.

SuggestedRemedy
 Simplyfy power management by just allocating the needed channel time and then letting the DEVs not use it if response time is absolutely critical.

Proposed Response Response Status O

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CI 08 SC 8.13.3.2 P 165 L 4 # 1182
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
In the three paragraphs between lines 4 and 16, delete the following sentences:

SuggestedRemedy
At line 6, delete the sentence beginning with "Both the transmitting ..." At line 10, delete the sentence beginning with "This doesn't suggest ..." At line 14, delete the sentence beginning with "This uses the EPS ..."

Proposed Response Response Status O

CI 08 SC 8.13.3.2 P 165 L 4 # 1181
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
Enumerate the three parameters contained between lines 4 and 15 as shown below

SuggestedRemedy
1. The first is a scenario where ... 2. A Second requirement is an application ... 3. A third application is for a persistent ... (note: include the numeric bullets)

Proposed Response Response Status O

CI 08 SC 8.13.3.3 P L # 1632
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
I don't see anything in Annex B about how the EPS-Hosts provide anything through the MLME interface.

SuggestedRemedy
Fix this or remove this statement.

Proposed Response Response Status O

CI 08 SC 8.13.3.3 P L # 1634
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
This could be better written: "Once configuration as defined in this clause, and presented in Figure 94, Illustration of EPS control process is complete, DEVs shall..."

SuggestedRemedy
"Once configuration of the EPS control process is complete, as defined in this clause and presented in Figure 94, DEVs shall... "

Proposed Response Response Status O

CI 08 SC 8.13.3.3 P 165 L 20 # 1630
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
"The information in this primaiive" does not agree with the previous sentence which was taling about primitives.

SuggestedRemedy
change to "The information in these primaiives"

Proposed Response Response Status O

CI 08 SC 8.13.3.3 P 165 L 20 # 1183
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
Delete the sentence starting in line 20 as "The information in this ..."

SuggestedRemedy
see above

Proposed Response Response Status O

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CI 08 SC 8.13.3.3 P 165 L 23 # 1184
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 For the paragraph contained between lines 23 and 26, rewrite as shown below.

SuggestedRemedy
 DEVs, operating as EPS "sets", determine the basic operating EPS parameters at a peer-to-peer level and configure the PNC so that it provides the necessary timekeeping operations. Annex B provides informative text on how EPS-hosts provide setup information through the MLME interface.

Proposed Response Response Status O

CI 08 SC 8.13.3.3 P 165 L 25 # 754
 Huang, Bob Sony Electronics

Comment Type TR Comment Status X
 What is an EPS set? How is it defined? When does it come into existence: when the Dev makes or send the PNC configuration operations or when the PMC established the basic timekeeping operations?

SuggestedRemedy
 Clarify

Proposed Response Response Status O

CI 08 SC 8.13.3.3 P 165 L 28 # 1186
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 delete the phrase "the occurrence"

SuggestedRemedy
 ... time base for periodic EPS time slots.

Proposed Response Response Status O

CI 08 SC 8.13.3.3 P 165 L 34 # 1187
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 grammatical ... incomplete command name

SuggestedRemedy
 in line 34 ... using the EPS Action request command ...

Proposed Response Response Status O

CI 08 SC 8.13.3.3 P 165 L 35 # 1633
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 The beacon count of the next awake beacon for every member of the EPS set will not be synchronized. By the time the requestor gets the information, the Beacon pointed to may already have passed. The requesting DEV will think that it has to wait for 2^16 cycles of the beacon counter.

SuggestedRemedy
 Find a way to eliminate the need to use a frame request that ties to real time data like a beacon number.

Proposed Response Response Status O

CI 08 SC 8.13.3.3 P 165 L 39 # 1189
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 The paragraph between line 39 to 47 needs to be rewritten. A suggestion is shown

SuggestedRemedy
 Figure 94 is an illustration of the EPS control process. The EPS action request command (7.5.7.1), and EPS action response (7.5.7.2), initiate the configuration process. The EPS action request command parameters are EPS set, EPSTime and EPSNext. A DEV which wants to form an EPS set shall issue the EPS action request command using the EPS set parameter to request a new set and provide the parameters of EPSTime and EPSNext. The EPS action response command from the PNC shall provide an EPS set value that is not in use. Following this exchange, additional EPS set members may request and receive acknowledgement that they have joined the EPS set. This is followed by use of the DEV to PNC PS information command (7.5.7.3) to provide the parameters PowerManagementMode and PowerManagementPriority to the

Proposed Response Response Status O

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CI 08 SC 8.13.3.3 P 165 L 40 # 401
 Gilb, James Appairnt
 Comment Type T Comment Status X
 The sentence "The EPS action command ... and EPSNext parameters." is redundant an therefore really annoying.
 SuggestedRemedy
 Delete the sentence.
 Proposed Response Response Status O

CI 08 SC 8.13.3.3 P 165 L 48 # 402
 Gilb, James Appairnt
 Comment Type T Comment Status X
 DEVs should be able to enter EPS mode when they finish configuration and should not have to wait for a command.
 SuggestedRemedy
 Delete the sentence "Once configuration ... further commands."
 Proposed Response Response Status O

CI 08 SC 8.13.3.3 P 165 L 49 # 752
 Huang, Bob Sony Electronics
 Comment Type E Comment Status X
 Not clear
 SuggestedRemedy
 Change 'configuration' to 'configured' change 'process' to 'process,'
 Proposed Response Response Status O

CI 08 SC 8.13.3.3 P 165 L 49 # 1190
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 Modify the sentence between lines 49 to 53.
 SuggestedRemedy
 Once the configuration process is complete, DEVs shall remain in the ACTIVE mode awaiting further commands. A single DEV may select EPS mode as described in
 Proposed Response Response Status O

CI 08 SC 8.13.3.3 P 165 L 50 # 1635
 Shvodian, William XtremeSpectrum
 Comment Type TR Comment Status X
 "awaiting further commands." Are they waiting for command frames or for MLME.requests from the DME?
 SuggestedRemedy
 Clarify what type of commands they are waiting for.
 Proposed Response Response Status O

CI 08 SC 8.13.3.3 P 165 L 5153 # 1636
 Shvodian, William XtremeSpectrum
 Comment Type TR Comment Status X
 It is not clear that the lone DEV creates and uses its own EPSSet.
 SuggestedRemedy
 Clarify if a lone DEV creates it's own EPSSet.
 Proposed Response Response Status O

CI 08 SC 8.13.3.3 P 165 L 5153 # 1637
 Shvodian, William XtremeSpectrum
 Comment Type TR Comment Status X
 If a DEV goes into it's own EPSSet, how doesn anyone else ever communicate with it? Do they have to request a GTS to put them into AWAKE state so they can interroget them? What happens if a broadcast message like an ARP comes in? Doe EPS DEVs ignore broadcast?
 SuggestedRemedy
 Need to explain how another DEV communicates with a Solo EPS dev. Does it as for a CTA to each Solo EPS DEV?
 Proposed Response Response Status O

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CI 08 SC 8.13.3.3 P 165 L 53 # 265
 Gifford, Ian Self
 Comment Type E Comment Status X
 The following sentence does not end in a period: information command, it may select EPS mode as described in 8.13.3.6
 SuggestedRemedy
 Add the period.
 Proposed Response Response Status O

CI 08 SC 8.13.3.3 P 166 L 1 # 1191
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 The text between lines 1 to 9 need to be rewritten. Suggest text is shown below.
 SuggestedRemedy
 EPS configuration between DEVS occurs following association as required by changing requirements. DEVS requiring a change in EPS operation that will change EPSTime and EPSNext shall return to ACTIVE mode during the renegotiation operation. An EPS action request command requesting EPS set termination shall be issued by the last DEV in an EPS set using the parameters EPSTime and EPSNext. A DEV requiring EPSTime and EPSNext information for a specific EPS set may use the EPS action request
 Proposed Response Response Status O

CI 08 SC 8.13.3.3 P 166 L 13 # 1649
 Shvodian, William XtremeSpectrum
 Comment Type T Comment Status X
 Is renegotiation N-way, if there are N DEVS in the EPS set? N way negotiation will be very complex.
 SuggestedRemedy
 Describe if this is just peer to peer negotiation, N way negotiation with the N DEVS in the EPS set.
 Proposed Response Response Status O

CI 08 SC 8.13.3.3 P 166 L 3 # 753
 Huang, Bob Sony Electronics
 Comment Type T Comment Status X
 This speaks of 'during the renegotiation operation'. I find the negotiation in Annex B (informative). The negotiation should be in the main text.. Confusing.
 SuggestedRemedy
 Clarify
 Proposed Response Response Status O

CI 08 SC 8.13.3.3 P 166 L 56 # 1650
 Shvodian, William XtremeSpectrum
 Comment Type T Comment Status X
 "An EPS action command requesting release shall be used by the last DEV in an EPS set to remove the EPS set time keeping of EPSTime and EPSNext from PNC activities." I am not quite sure what this is trying to say.
 SuggestedRemedy
 Here is my attempt to simplify: An EPS action command requesting release shall be used by the last DEV in an EPS set. The free the PNC from the EPS set time keeping of EPSTime and EPSNext.
 Proposed Response Response Status O

CI 08 SC 8.13.3.4 P 166 L 45 # 32
 Bain, Jay Time Domain
 Comment Type T Comment Status X
 Much of the EPS operation is predicated on CTR operation to establish EPS and ACTIVE channel times that are keep in "memory" by the PNC. What is lacking is a relationship to the stream operation in the standard. The stream command does not have the same parameters as the CTR.
 SuggestedRemedy
 Update the stream command in clause 7 and clause 6 primitives to provide a match between the stream operations and CTR.
 Proposed Response Response Status O

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CI 08 SC 8.13.3.4 P 166 L 51 # 1193
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 Rewrite the paragraph between lines 51 to line 2 on page 167.

SuggestedRemedy
 A DEV shall be a member of at least one EPS set prior to the creation of the EPS CTA.
 A DEV, which is a member of an EPS set, may issue an EPS CTR indicating the number of the EPS set to which it belongs.

Proposed Response Response Status O

CI 08 SC 8.13.3.4 P 166 L 5152 # 1652
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 "by the PNC" doesn't add any value. All Beacons are from the PNC.

SuggestedRemedy
 Eliminate "by the beacon" from both line 51 and 52

Proposed Response Response Status O

CI 08 SC 8.13.3.4 P 167 L 10 # 1196
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 Rewrite the sentence that starts with "If instead, the value of N ..."

SuggestedRemedy
 Suggest the following ... "Likewise, if the value of N is 4 then 1 EPS ..."

Proposed Response Response Status O

CI 08 SC 8.13.3.4 P 167 L 15 # 1197
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 Rewrite as shown below ...

SuggestedRemedy
 ... or null CTA identifies that the EPS DEV shall listen to this beacon and that ...

Proposed Response Response Status O

CI 08 SC 8.13.3.4 P 167 L 18 # 1198
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 Replace word "After" with the word "If"

SuggestedRemedy
 see above

Proposed Response Response Status O

CI 08 SC 8.13.3.4 P 167 L 21 # 1199
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 grammatical

SuggestedRemedy
 at the end of line 21, rewrite as shown ... a member of the specified EPS set,

Proposed Response Response Status O

CI 08 SC 8.13.3.4 P 167 L 23 # 1200
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 rewrite fragment as shown below ...

SuggestedRemedy
 ... containing the reject code indicating "not a member of the requested EPS set" as shown in clause 7.5.10.3.

Proposed Response Response Status O

CI 08 SC 8.13.3.4 P 167 L 6 # 267
 Gifford, Ian Self

Comment Type E Comment Status X
 The following sentence does not end in a period: 1) The size of the EPS time slots used for data

SuggestedRemedy
 Add the period.

Proposed Response Response Status O

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CI 08 SC 8.13.3.4 P 167 L 6 # 1642
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
"The size of teh EPS time slots used for data" - what does "used for data add to this sentence? Id there part of the EPS time slot that is not used for data?

SuggestedRemedy
Change to "The size of the EPS time slots"

Proposed Response Response Status O

CI 08 SC 8.13.3.4 P 167 L 7 # 1194
Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
On bullet number 2 ... what is meant bu N such that a proportion 1:N?

SuggestedRemedy
Power management to clarify and rewrite this sentence.

Proposed Response Response Status O

CI 08 SC 8.13.3.4 P 167 L 7 # 1592
Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
I am not sure what this is supposed to mean: "The value of N such that a proportion 1:N of EPS time slots that will be of that length."

SuggestedRemedy
Reword so that it is readable: "The value of N specifies the fraction of EPS time slots (1/N) that will be of that length."

Proposed Response Response Status O

CI 08 SC 8.13.3.4 P 167 L 9 # 1195
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
Rewrite the sentence that begins with "If the value of N ..."

SuggestedRemedy
Replace with ... "For example, if the value of N ..."

Proposed Response Response Status O

CI 08 SC 8.13.3.5 P L # 1655
Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
"If a DEV does not have an ACTIVE or EPS slot in a particular superframe," Does this mean a slot where it is the source or destination, or only where it is the source.

SuggestedRemedy
Please clarify.

Proposed Response Response Status O

CI 08 SC 8.13.3.5 P 168 L 15 # 1203
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
add a definite article

SuggestedRemedy
... CTA blocks that have the time-beacon

Proposed Response Response Status O

CI 08 SC 8.13.3.5 P 168 L 17 # 1204
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
modify sentence as shown below

SuggestedRemedy
in line 17 ==> ... EPS mode, the EPS set ... in line 18 ==> ... create the EPS CTSs and time slots ...

Proposed Response Response Status O

CI 08 SC 8.13.3.5 P 168 L 24 # 404
Gilb, James Appairment

Comment Type T Comment Status X
DEV-A should not be able to switch DEV-B to sleep mode. Instead the PNC should only switch DEV-A/DEV-B slots to EPS sleep, not all of DEV-B's slots.

SuggestedRemedy
Change the text to indicate that only the DEV-A/DEV-B slots are put into EPS sleep

Proposed Response Response Status O

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CI 08 SC **8.13.3.5** P **168** L **3** # **403**
 Gilb, James Appairment
Comment Type T *Comment Status* X
 The sentence "The PNC shall create ... their slot time." is redundant, evil and adds no new information.
SuggestedRemedy
 Delete the sentence, the PNC is already required to do this.
Proposed Response *Response Status* O

CI 08 SC **8.13.3.5** P **168** L **33** # **1205**
 Roberts, Richard XtremeSpectrum
Comment Type E *Comment Status* X
 add a definite article
SuggestedRemedy
 ... DEV by sending it in the superframe
Proposed Response *Response Status* O

CI 08 SC **8.13.3.5** P **168** L **34** # **405**
 Gilb, James Appairment
Comment Type T *Comment Status* X
 The PNC should not be required to create the EPS CTA if the piconet is too busy.
SuggestedRemedy
 Change "The PNC shall create" to be "If the channel time is available, the PNC shall
Proposed Response *Response Status* O

CI 08 SC **8.13.3.5** P **168** L **8** # **1202**
 Roberts, Richard XtremeSpectrum
Comment Type E *Comment Status* X
 add a comma
SuggestedRemedy
 after the word "network", place a comma member of the network, that has missed
Proposed Response *Response Status* O

CI 08 SC **8.13.3.7** P **170** L **18** # **406**
 Gilb, James Appairment
Comment Type T *Comment Status* X
 The paragraph "The MLME-POWERMGT.request ... to its DEV-host." describes layer management operation and does not belong here. It is also redundant and nasty.
SuggestedRemedy
 Delete the paragraph.
Proposed Response *Response Status* O

CI 08 SC **8.13.3.8** P **170** L **36** # **407**
 Gilb, James Appairment
Comment Type T *Comment Status* X
 Master and slave are not defined in this context and the sentence does not add useful information.
SuggestedRemedy
 Delete the sentence "Likely combinations ... and is an EPS DEV."
Proposed Response *Response Status* O

CI 08 SC **8.13.3.8** P **170** L **36** # **1208**
 Roberts, Richard XtremeSpectrum
Comment Type T *Comment Status* X
 In clause 8.13.3.8 new terminology is used to describe combinations of EPS DEV; that is, master and slave. This concept needs to be introduced in clause 8.13.3.1 with prehaps a figure.
SuggestedRemedy
 Power Management committee to provide introductory figure.
Proposed Response *Response Status* O

CI 08 SC **8.13.3.9** P **170** L **43** # **408**
 Gilb, James Appairment
Comment Type T *Comment Status* R
 Multicast is not supported in this standard.
SuggestedRemedy
 Change "piconet wide multicast and broadcast to" to be "broadcast frames to"
Proposed Response *Response Status* C
 PROPOSED REJECT.

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CI 08 **SC 8.13.3.9** **P 170** **L 44** **# 1209**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 In line 170, reference is made that the "PNC shall save these for the next superframe".
SuggestedRemedy
 Does this mean these have to be buffered by the PNC? Refer to the power management folks. How is the size limit of this buffer specified?
Proposed Response *Response Status* **O**

CI 08 **SC 8.13.3.9** **P 170** **L 46** **# 409**
 Gilb, James Appairent
Comment Type **T** *Comment Status* **X**
 The sentence "The EPS DEV shall interpret ... directed to it." is redundant and annoying. This is already required of all DEVs.
SuggestedRemedy
 Delete the sentence.
Proposed Response *Response Status* **O**

CI 08 **SC 8.13.3.9** **P 170** **L 48** **# 410**
 Gilb, James Appairent
Comment Type **T** *Comment Status* **X**
 A formal requirement is listed without listing all of the required activity.
SuggestedRemedy
 Change the sentence to read "if network wide ... from the PNC." to be "if the DEV receives a channel change indication or PNC handover command from the PNC." List any more commands that would require this action.
Proposed Response *Response Status* **O**

CI 08 **SC 8.14** **P 171** **L 32** **# 1595**
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 fixed maximum power applies to the CAP, and to shared and association MTSs.
SuggestedRemedy
 Change to: "systems, a fixed maximum power in the CAP and shared and association MTSs, and adjustable power in the GTS."
Proposed Response *Response Status* **O**

CI 08 **SC 8.14.1** **P 171** **L 37** **# 1597**
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 Title should be "Fixed maximum transmitter power for CAP and beacon and Shared
SuggestedRemedy
 Change title to "Fixed maximum transmitter power for CAP and beacon and Shared
Proposed Response *Response Status* **O**

CI 08 **SC 8.14.2** **P 171** **L 49** **# 1596**
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 "Communicating with the GTS" should be "communicating within the GTS."
SuggestedRemedy
 Change "Communicating with the GTS" should be "communicating within the GTS."
Proposed Response *Response Status* **O**

CI 08 **SC 8.14.2** **P 172** **L 1** **# 1598**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 the chosen power level should be the closest on that is greater than the requested one.
SuggestedRemedy
 Change to "change is not supported by the other DEV, it shall use the closest implemented TX power level that is greater than the requested level provided that is within the allowable range."
Proposed Response *Response Status* **O**

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CI 08 SC 8.14.2 P 172 L 6 # 1599
Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
This exxample fails to point out that rate and power level are related. If the power level is significantly higher than required, the first thing that should happen is that the receiver should ask the transmitter to tranmit at a higher rate to conserve resources.

SuggestedRemedy
In this example, point out that the transmitting DEV is already transmitting at the highest PHY rate supported by both DEVs before reduucing power.

Proposed Response Response Status **O**

CI 08 SC 8.15 P 172 L 20 # 24
Bain, Jay Time Domain

Comment Type **E** Comment Status **X**
A specific reference to tables 71 and 72 should be included. Although the text refers to tables below, table 72 has floated to a point after the next section (8.16) and the "tables below" could refer to table 73 as well.

SuggestedRemedy
change "tables below" to "tables 71 and 72"

Proposed Response Response Status **O**

CI 08 SC 8.15 P 172 L 20 # 1215
Roberts, Richard XtremeSpectrum

Comment Type **T** Comment Status **X**
provide explicit reference to the tables.

SuggestedRemedy
A list of the rules are specified in Tables 71 and 72.

Proposed Response Response Status **O**

CI 08 SC 8.15 P 172 L 30 # 412
Gilb, James Appairent

Comment Type **T** Comment Status **X**
Association response has no ACK.

SuggestedRemedy
Delete the reference to the ACK and change the number of frames to be 1.

Proposed Response Response Status **O**

CI 08 SC 8.15 P 172 L 36 # 413
Gilb, James Appairent

Comment Type **T** Comment Status **X**
Group addressed frames are not supported in this standard.

SuggestedRemedy
Change "Group addressed" to be "Broadcast" in figures 71 and 72

Proposed Response Response Status **O**

CI 08 SC 8.16 P 173 L 26 # 1216
Roberts, Richard XtremeSpectrum

Comment Type **E** Comment Status **X**
Put a page break after Table 72

SuggestedRemedy
Keep Table 73 all on the same page.

Proposed Response Response Status **O**

CI 08 SC 8.16 P 173 L 46 # 414
Gilb, James Appairent

Comment Type **T** Comment Status **X**
The aProbeResonseDelay is too short, a DEV should have at least 1 superframe to respond.

SuggestedRemedy
Change 8 ms to be aMaxSuperframeDuration.

Proposed Response Response Status **O**

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CI 08 SC 8.16 P 173 L 48 # 415
 Gilb, James Apparent

Comment Type T Comment Status X
 aFragThreshold is not a constant and should be defined earlier in 8 as indicated in another comment.

SuggestedRemedy
 Delete the constant.

Proposed Response Response Status O

CI 08 SC 8.16 P 174 L 8 # 416
 Gilb, James Apparent

Comment Type T Comment Status X
 aBroadcastDEVInfoDuration is repeated twice, use first definition.

SuggestedRemedy
 Delete the definition on line 8, page 174.

Proposed Response Response Status O

CI 08 SC 8.2 P 137 L 44 # 37
 Bain, Jay Time Domain

Comment Type TR Comment Status X
 It is not clear as to the optionality of a DEV to not offer PNC services. It is not acceptable for the standard to effectively allow DEVs to not support PNC roles. There must be a provision to allow certain classes of DEVs the opportunity to be free of PNC burden base on their requirement for low complexity. However, specific language and a SHALL statement would require that a PNC-less character must be matched by having a partner in an application that SHALL provide PNC capability.

SuggestedRemedy

Add in 8.2 as a distinct subclause: Responsibility to assure that a piconet may be formed. -- Classes of simple devices may be implemented without providing support for PNC role in a piconet. These classes are permitted if the device is required to be used in conjunction with a device that shall support PNC operation.

Proposed Response Response Status O

CI 08 SC 8.2.1 P 137 L 50 # 724
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 Text between lines 50 and 54 of page 137 and lines 1 and 22 of page 138 describing the scanning and piconet startup process is broken.

SuggestedRemedy
 The scanning clause and the Start Piconet clause of doc 02/037 describes in detail the resolution to this problem.

Proposed Response Response Status O

CI 08 SC 8.2.1 P 137 L 51 # 1522
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 DEVs use passive scan to detect an active piconet, but they COULD also use passive scan to detect interferers like 802.11. This would help coexistence.

SuggestedRemedy
 Add the mechanism to scan for interference as well as just scanning for piconets.

Proposed Response Response Status O

CI 08 SC 8.2.1 P 138 L 13 # 1102
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Comment Type T Comment Status X
 add some words to exclude open scan mode ... as shown below

SuggestedRemedy
 While searching, and not in open scan mode, if the DEV receives ... (the reason is we need to prevent our equipment from joining the neighbors piconet)

Proposed Response Response Status O

CI 08 SC 8.2.1 P 138 L 17 # 1523
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 PNID is should be are (frames are)

SuggestedRemedy
 change is to are

Proposed Response Response Status O

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CI 08 SC 8.2.1 P 138 L 19 # 29
Bain, Jay Time Domain

Comment Type E Comment Status X
A clarification that the a new piconet should be started in a vacant channel rather than an occupied. Although, it would seem that some tie in to child piconet should also be mentioned

SuggestedRemedy
add the word "vacant" between "choose a" and "channel"

Proposed Response Response Status O

CI 08 SC 8.2.1 P 138 L 7 # 30
Bain, Jay Time Domain

Comment Type TR Comment Status X
The text that relates to staying on the channel of a desired PNID should be changed. The idea that a random number would be of interest is hard to grasp. The text should omit the PNID reference. Also, and this is the TR reason, there is no clear guidance on how to "really" decide what channel is the correct one. Maybe I missed it!

SuggestedRemedy
Change the text to read: ... received, the searching DEV next: add text either at this point in clause 8 or elsewhere that provides some guidance on how a DEV might determine what piconet to join.

Proposed Response Response Status O

CI 08 SC 8.2.2 P 138 L 27 # 1524
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Piconet randomization does not address if the PNID is the same each time the piconet starts, or if it chooses a different random PNID each time.

SuggestedRemedy
Clarify if each PNC calculates the same random number each time they generate a PNID, or if it is different each time.

Proposed Response Response Status O

CI 08 SC 8.2.2 P 138 L 2728 # 1675
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
If we are not specifying randomization, we should not have a shall in the section.

SuggestedRemedy
The section should read "The seed for generating a randomized PNID should include the 48-bit PNC device ID in order to aid in the likelihood of a unique PNID, however the randomization process required to choose a unique PNID is beyond the scope of this standard." Comment via Ari Singer.

Proposed Response Response Status O

CI 08 SC 8.2.2 P 145 L 40 # 1572
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
Should point out that the PNC broadcasts the device information table after association.

SuggestedRemedy
Add the following sentence: "After Association is complete, the PNC broadcasts an update of the device information table as described in 8.2.7."

Proposed Response Response Status O

CI 08 SC 8.2.3 P 138 L # 1526
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Why bother with PNC selection at all? Now that we can do handover if a better PNC shows up, Just wait a random time and start sending out beacons. This would be a much simpler process. Also, the odds of turning on a bunch of machines all at the exact time is small

SuggestedRemedy
Eliminate PNC selection and simplify by just waiting a reandom amount of time then start sending out beacons. Then, handover if more qualified PNC.

Proposed Response Response Status O

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CI 08 SC 8.2.3 P 138 L 30 # 36
 Bain, Jay Time Domain

Comment Type E Comment Status X
 We need to reference where the fields are defined. aCSFrameRepeat and aCSFrameBroadcast

SuggestedRemedy
 add the xrefs

Proposed Response Response Status O

CI 08 SC 8.2.3 P 138 L 30 # 723
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 The PNC selection process described between lines 32 and 38 on p138, lines 26 and 33 of page 139, and lines 1 and 11 of page 140 is inefficient and broken.

SuggestedRemedy
 the PNC challenge and handover clause in doc 02/037r0 contains detailed text describing a more efficient approach.

Proposed Response Response Status O

CI 08 SC 8.2.3 P 138 L 30 # 38
 Bain, Jay Time Domain

Comment Type TR Comment Status X
 At least one of the table 68 entries, designated mode bit, seems to require more than a two-state value. As I understand it, an AC with the Des-mode set is the winner, but more than a single device type may believe that it qualifies to be the Designated PNC. I clearly believe that a video distribution AC such as a settop box with the implication of great demands on the piconet should be the highest priority. Below that would be other important devices such as cablemodem/DSL internet distribution device.

SuggestedRemedy
 Make the Des-mode be a two-bit field and set guidelines on the classes of device for at least three of the values.

Proposed Response Response Status O

CI 08 SC 8.2.3 P 138 L 32 # 297
 Gilb, James Appairment

Comment Type T Comment Status X
 The PNC selection process does not define a channel access method for the ACs that are broadcasting their messages.

SuggestedRemedy
 Change the text in 8.2.3 to require the ACs to use the backoff procedure defined in 8.4.2.1 for channel access during the PNC selection process.

Proposed Response Response Status O

CI 08 SC 8.2.3 P 138 L 3234 # 842
 Kleindl, Guenter Siemens

Comment Type E Comment Status X
 editorial

SuggestedRemedy
 replace 'PNC selection command' with 'PNC announcement command'

Proposed Response Response Status O

CI 08 SC 8.2.3 P 138 L 35 # 1525
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 Should clarify that aCSFrameRepeat is an integer.

SuggestedRemedy
 change from "command for at least aSCFrameRepeat" to "command at least aCSFrameRepeat times"

Proposed Response Response Status O

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CI 08 SC 8.2.3 P 139 L # 769
 Akahane, Masa Sony

Comment Type E Comment Status X
 It is difficult to understand that the following sentence A is described after the sentence B. A: Indicated coordinator-announcement timeout B: First Beacon transmission time after the indicated timeout The figure seems correct but 3 kinds of "timeout" including "Indicated Timeout", "Indicated new Timeout" and "Indicated coordinator-announcement Timeout" confuse the situation.

SuggestedRemedy
 Clarify the description as well as replace "coordinator" to "PNC".

Proposed Response Response Status O

CI 08 SC 8.2.3 P 139 L 31 # 363
 Gilb, James Apparent

Comment Type T Comment Status X
 Informal language use for required action.

SuggestedRemedy
 Change "selection command and wait for the piconet" to "selection command and shall wait for the piconet"

Proposed Response Response Status O

CI 08 SC 8.2.3 P 139 L 7 # 728
 Huang, Bob Sony Electronics

Comment Type E Comment Status X
 In the first column, the word 'alternate' is misspelled.

SuggestedRemedy
 correct.

Proposed Response Response Status O

CI 08 SC 8.2.4 P L # 1529
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 What happens if the PNC wants to shut down, but there is no other alternate PNC available. Does the PNC just go away?

SuggestedRemedy
 Add a PNC shutdown command or IE in the beacon to inform the piconet the at the PNC is shutting down.

Proposed Response Response Status O

CI 08 SC 8.2.4 P 140 L 15 # 1527
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 "If during the life of a piconet the PNC decides to leave the piconet," should say "If during the life of a piconet the PNC decides to leave the piconet or a more capable PNC joins the piconet,"

SuggestedRemedy
 "If during the life of a piconet the PNC decides to leave the piconet or a more capable PNC joins the piconet,"

Proposed Response Response Status O

CI 08 SC 8.2.4 P 140 L 17 # 1105
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
 line 17 (going into line 18) refers to a table in clause 7.5.8. There is no table in clause 7.5.8.

SuggestedRemedy
 MAC folks ... where is this table?

Proposed Response Response Status O

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CI 08 SC 8.2.4 P 140 L 20 # 1123
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 line 20 refers to aMinHandOvrTO

SuggestedRemedy

I don't understand why we need a aMinHandOvrTO ... have MAC folks verify it is needed. If not then delete.

Proposed Response Response Status O

CI 08 SC 8.2.4 P 140 L 21 # 1124
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 In line 21 we have a parameter aMaxHandOvrTO

SuggestedRemedy

Question is what happens if aMaxHandOverTO occurs. Refer to the clause in the text where the next action is indicated after a time out. MAC folks.

Proposed Response Response Status O

CI 08 SC 8.2.4 P 140 L 24 # 734
 Huang, Bob Sony Electronics

Comment Type T Comment Status X
 As stream transmission need not be interrupted during coordinator handover, it would be useful to add that the PNID remains the same.

SuggestedRemedy

insert text ', using the original PNID,' between the words 'beacon at'.

Proposed Response Response Status O

CI 08 SC 8.2.4 P 140 L 26 # 364
 Gilb, James Appairant

Comment Type T Comment Status X
 Need clarification of when the new PNC begins using the PNC address.

SuggestedRemedy

Change "The new PNC shall begin using address of 0x00 for all" to be "Following its first beacon, the new PNC shall use the PNC address, 7.2.3, for all"

Proposed Response Response Status O

CI 08 SC 8.2.4 P 140 L 28 # 755
 Huang, Bob Sony Electronics

Comment Type TR Comment Status X
 Says that reassociation is not required (after successful PNC handover). However, 10.3.3.3 (page 184) says that after PNC handover 'each device shall authenticate'. Authentication comes before association, therefore reassociation is required. Note: contradiction.

SuggestedRemedy
 Fix

Proposed Response Response Status O

CI 08 SC 8.2.4 P 140 L 29 # 1125
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
 On a coordinator handover, do all the authentication certificates also transfer or does each DEV need to re-authenticate?

SuggestedRemedy

Add text after line 29 to clarify. Security folks. (BTW - I hope all the certificates

Proposed Response Response Status O

CI 08 SC 8.2.4 P 141 L # 1530
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 What happens when two piconets wander withing range of each other? They will not know that the other PNC is there.

SuggestedRemedy

Need to have the PNCs do a periodic scann to look for traffic from other piconets including beacons in their channel.

Proposed Response Response Status O

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CI 08 SC 8.2.4 P 141 L # 1528
 Shvodian, William XtremeSpectrum
 Comment Type **TR** Comment Status **X**
 What happens to repeater traffic when a handover takes place? Is it all dropped?
 SuggestedRemedy
 All repeater traffic should be dropped and renegotiated when a PNC handover takes
 Proposed Response Response Status **O**

CI 08 SC 8.2.4 P 141 L 10 # 783
 Akahane, Masa Sony
 Comment Type **E** Comment Status **X**
 coordinator should be PNC
 SuggestedRemedy
 correct
 Proposed Response Response Status **O**

CI 08 SC 8.2.4 P 141 L 10 # 1127
 Roberts, Richard XtremeSpectrum
 Comment Type **TR** Comment Status **X**
 The paragraph starting at line 10 and ending at line 17 is not consistent. The first two
 lines of this paragraph set down conditions under which a PNC SHALL handover control.
 But then in the last sentence, we have this "re-authentication issue" that says a PNC
 running security, under some conditions, "should not" perform a PNC handover. Can't
 have it both ways folks ... need to fix this paragraph.
 SuggestedRemedy
 Refer to Security/MAC committees for resolution.
 Proposed Response Response Status **O**

CI 08 SC 8.2.4 P 141 L 12 # 784
 Akahane, Masa Sony
 Comment Type **E** Comment Status **X**
 coordinator should be PNC
 SuggestedRemedy
 correct
 Proposed Response Response Status **O**

CI 08 SC 8.2.4 P 141 L 13 # 1128
 Roberts, Richard XtremeSpectrum
 Comment Type **TR** Comment Status **X**
 Wrong table reference.
 SuggestedRemedy
 Should be Table 68, NOT table 79.
 Proposed Response Response Status **O**

CI 08 SC 8.2.4 P 141 L 7 # 1126
 Roberts, Richard XtremeSpectrum
 Comment Type **TR** Comment Status **X**
 Line 7 refers to a "DEV information table" in clause 7.5.1.4
 SuggestedRemedy
 Clause 7.5.1.4 does not contain any tables. Where is the table located? Assign to
 MAC subcommittee.
 Proposed Response Response Status **O**

CI 08 SC 8.2.4 P 141 L 7 # 843
 Kleindl, Guenter Siemens
 Comment Type **E** Comment Status **X**
 There is no DEV information table in 7.5.1.4
 SuggestedRemedy
 Correct reference
 Proposed Response Response Status **O**

CI 08 SC 8.2.5 P 141 L 21 # 779
 Akahane, Masa Sony
 Comment Type **E** Comment Status **X**
 There are 2 descriptions of "alternative coordinator". They should be AC.
 SuggestedRemedy
 correct
 Proposed Response Response Status **O**

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Cl 08 **SC 8.2.5** **P 141** **L 21** **# 1350**
 Schrader, Mark Eastman Kodak Co.
Comment Type **E** *Comment Status* **X**
 Term AC not correct.
SuggestedRemedy
 The term AC should be changed to child piconet PNC or child PNC for all instances. If this is confusing, then the term child piconet representative might be considered.
Proposed Response *Response Status* **O**

Cl 08 **SC 8.2.5** **P 142** **L 11** **# 365**
 Gilb, James Apparent
Comment Type **T** *Comment Status* **X**
 The directed frame with Private GTS is optional and should be noted as such in Figure
SuggestedRemedy
 Add the word "Optional" to "Directed frame with Private GTS". Also, change the direction of the child beacon, it is not sent to the Parent PNC. Add to the paragraph ending "its capabilities and security policy." the following: "If the PNC allocates the private GTS, it may also send a directed channel time grant to the child PNC to confirm the allocation." Make the same changes with Figure 82. On page 142, 8.4.2, line 46, change "destination addresses. After receiving" to be "destination addresses. The PNC may also send a directed channel time grant to the neighbor PNC to confirm the
Proposed Response *Response Status* **O**

Cl 08 **SC 8.2.6** **P 142** **L 30** **# 780**
 Akahane, Masa Sony
Comment Type **E** *Comment Status* **X**
 neighbor alternate coordinator should be neighbor AC.
SuggestedRemedy
 correct
Proposed Response *Response Status* **O**

Cl 08 **SC 8.2.6** **P 142** **L 32** **# 739**
 Huang, Bob Sony Electronics
Comment Type **E** *Comment Status* **X**
 Clarify wording.
SuggestedRemedy
 Insert 'new client' before 'association address...'.
Proposed Response *Response Status* **O**

Cl 08 **SC 8.2.6** **P 142** **L 33** **# 1129**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 It will help to clarify by adding the actual address
SuggestedRemedy
 association address (0xFE), 7.2.3, as the ...
Proposed Response *Response Status* **O**

Cl 08 **SC 8.2.6** **P 142** **L 39** **# 1130**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 In the line straddling line number 39, we are instructed what the PNC is to do if the request is not accepted.
SuggestedRemedy
 MAC folks ... add a sentence to indicate what the neighbor is suppose to if the request is not accepted.
Proposed Response *Response Status* **O**

Cl 08 **SC 8.2.6** **P 143** **L** **# 1532**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 In a neighbor piconet, hwo does the parent decide how much time to allocate to the neighbor? Does it have to allocat any?
SuggestedRemedy
 Need to figure out a policy for allocation bandwidth to neighbor piconets and how to enforce the rules.
Proposed Response *Response Status* **O**

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CI 08 SC 8.2.6 P 143 L 21 # 844

Kleindl, Guenter Siemens

Comment Type E Comment Status X
wrong text in Figure 82

SuggestedRemedy
replace 'Child' by 'Neighbor'

Proposed Response Response Status O

CI 08 SC 8.2.6 P 143 L 4 # 258

Gifford, Ian Self

Comment Type E Comment Status X
The xref field in FrameMaker has the 'Figure n' in the field but the Editor has also typed "figure" i.e., "...shown in figure Figure 82."

SuggestedRemedy
Either delete the first occurrence or edit the FrameMaker field, thus requiring a Clause 8 global edit on the paragraph tag for figure cross-reference formats.

Proposed Response Response Status O

CI 08 SC 8.2.7 P 143 L 34 # 720

Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
The title of this clause is incorrect.

SuggestedRemedy
Please change to Broadcasting PNC information.

Proposed Response Response Status O

CI 08 SC 8.2.7 P 143 L 41 # 1574

Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
The PNC should wait until after the authentication if authentication is required for the piconet.

SuggestedRemedy
Add the following sentence: "If authentication is required for the piconet, the PNC shall wait until after authentication is complete to broadcast the device information table."

Proposed Response Response Status O

CI 08 SC 8.3.1 P 143 L 46 # 1131

Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
There is no point in having a reference to authentication in clause 8.3 that simply says "go see clause 10".

SuggestedRemedy
Please remove the words "and authentication" from the 8.3 clause heading and completely delete clause 8.3.1. Add the appropriate clause to the security section; that is, in clause 10.0

Proposed Response Response Status O

CI 08 SC 8.3.1 P 143 L 48 # 1534

Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
Authentication clause should follow association (and probably disassociation).

SuggestedRemedy
Move authentication clause to after association and disassociation.

Proposed Response Response Status O

CI 08 SC 8.3.2 P 144 L # 786

Akahane, Masa Sony

Comment Type E Comment Status X
2 pieces of coordinator should be PNC

SuggestedRemedy
correct

Proposed Response Response Status O

CI 08 SC 8.3.2 P 144 L 10 # 367

Gilb, James Apparent

Comment Type T Comment Status X
Need to clarify how the PNC acknowledges the association request commands.

SuggestedRemedy
Change "an Imm-ACK frame." to be "an Imm-ACK frame with the DA set to the association address."

Proposed Response Response Status O

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CI 08 SC 8.3.2 P 144 L 17 # 719
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type **TR** Comment Status **X**
 The text between lines 17 and 33 describe an broken Association process.

SuggestedRemedy
 Text in the Association clause of doc 02/037r0 provides a detailed resolution to this problem.

Proposed Response Response Status **O**

CI 08 SC 8.3.2 P 144 L 33 # 368
 Gilb, James Appairment

Comment Type **T** Comment Status **X**
 There is no exit criteria for the PNC in doing an association response and directed rame.

SuggestedRemedy
 Limit it to an integer number of attempts, I suggest 10. Change text from "the PNC shall repeat the sequence of association response and directed frame as illustrated in Figure 83." to be "the PNC shall repeat the sequence of association response and directed frame as illustrated in Figure 83 up to aMaxAssocRespRepeat times. If the PNC does not receive an ACK after aMaxAssocRespRepeat attempts, it shall consider the association process for the DEV to have failed." Add aMaxAssocRespRepeat to the table at the end of clause 8 with a value of 10.

Proposed Response Response Status **O**

CI 08 SC 8.3.2 P 144 L 5 # 1535
 Shvodian, William XtremeSpectrum

Comment Type **E** Comment Status **X**
 Association can be sent in an association MTS.

SuggestedRemedy
 Change sentence to "An unassociated DEV initiates the association process by sending an association request command, defined in 7.5.2.1, during the CAP or association MTS of an existing piconet. "

Proposed Response Response Status **O**

CI 08 SC 8.3.2 P 144 L 5 # 1132
 Roberts, Richard XtremeSpectrum

Comment Type **TR** Comment Status **X**
 Need to indicate that the MTS can also be used for association. Modify as shown

SuggestedRemedy
 ... during the CAP or MTS of an existing piconet.

Proposed Response Response Status **O**

CI 08 SC 8.3.2 P 144 L 5 # 366
 Gilb, James Appairment

Comment Type **T** Comment Status **X**
 Association may happen in the CAP or in an association MTS.

SuggestedRemedy
 Change "during the CAP of an existing piconet." to be "during the CAP or association MTS of an existing piconet."

Proposed Response Response Status **O**

CI 08 SC 8.3.2 P 144 L 5 # 845

Kleindl, Guenter Siemens
 Comment Type **E** Comment Status **X**
 editorial

SuggestedRemedy
 replace 'a association request' by 'an association request'

Proposed Response Response Status **O**

CI 08 SC 8.3.2 P 144 L 6 # 39
 Bain, Jay Time Domain

Comment Type **E** Comment Status **X**
 "... and its AD-AD or that the request has been rejected ..." doesn't read well.

SuggestedRemedy
 not sure how it should read! perhaps that " its AD-AD has been assigned or that the ..."

Proposed Response Response Status **O**

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CI 08 **SC 8.3.2** **P 145** **L 29** **# 1537**
 Shvodian, William XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 "The addresses (AD-ADs)" should be "The allocated addresses (AD-ADs)"
SuggestedRemedy
 Change "The addresses (AD-ADs)" to "The allocated addresses (AD-ADs)"
Proposed Response *Response Status* **O**

CI 08 **SC 8.3.2** **P 145** **L 32** **# 787**
 Akahane, Masa Sony
Comment Type **E** *Comment Status* **X**
 coordinator should be PNC
SuggestedRemedy
 correct
Proposed Response *Response Status* **O**

CI 08 **SC 8.3.2** **P 145** **L 35** **# 788**
 Akahane, Masa Sony
Comment Type **E** *Comment Status* **X**
 coordinator should be PNC
SuggestedRemedy
 correct
Proposed Response *Response Status* **O**

CI 08 **SC 8.3.2** **P 145** **L 38** **# 789**
 Akahane, Masa Sony
Comment Type **E** *Comment Status* **X**
 coordinator should be PNC
SuggestedRemedy
 correct
Proposed Response *Response Status* **O**

CI 08 **SC 8.3.3** **P 145** **L 41** **# 716**
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **T** *Comment Status* **X**
 The text between lines 42 and 45 contains these sentence fragments which are no longer needed "... with a reason code."
SuggestedRemedy
 Remove the indicated sentence fragments from clause 8.3.3.
Proposed Response *Response Status* **O**

CI 08 **SC 8.3.3** **P 145** **L 48** **# 1538**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Are Disassociation requests retried?
SuggestedRemedy
 Specify that association requests are retried 3 times.
Proposed Response *Response Status* **O**

CI 08 **SC 8.3.4** **P 141** **L 13** **# 785**
 Akahane, Masa Sony
Comment Type **E** *Comment Status* **X**
 coordinator should be PNC
SuggestedRemedy
 correct
Proposed Response *Response Status* **O**

CI 08 **SC 8.4** **P 145** **L** **# 1628**
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Need to add a text on how asynchronous data will be efficiently handled.
SuggestedRemedy
 Need to aspecify how asynchronous data will be handled in a scheme that is both power and bandwidth efficient.
Proposed Response *Response Status* **O**

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CI 08 SC 8.4 P 145 L 54 # 1539
Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
Should mention that the CAP is optional

SuggestedRemedy

Change sentence to say "The superframe is composed of three major parts: the beacon, the optional CAP and the CFP,"

Proposed Response Response Status O

CI 08 SC 8.4 P 146 L # 1544
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
In clause 11 it says SIFS = aRXTXTurnAourndTime. Yet, aRXTXTurnAroundTime is a range of between 10 and 11 us. SIFS is never talked of as being a range in clause 8. Should it be?

SuggestedRemedy

Clarify if SIFS is a range or a single value.

Proposed Response Response Status O

CI 08 SC 8.4 P 146 L 2 # 1540
Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
Change "CAP is used for non-QoS frames." to "CAP can be used for non-QoS frames as regulated by the PNC."

SuggestedRemedy

Change "CAP is used for" to "CAP can be used for"

Proposed Response Response Status O

CI 08 SC 8.4 P 146 L 22 # 1543
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Figure 84 says AKC at the END of a SIFS, but line 22 says "Both in the CAP and the CFP, a response frame (ACK) transmission over the medium shall start within a SIFS duration after the end of the transmission of the previous frame for which the response is intended." Which is it? Does the ACK come before a SIFS or after a SIFS?

SuggestedRemedy

Need to decide on the exact timing of a SIFS and document it carefully.

Proposed Response Response Status O

CI 08 SC 8.4 P 157 L # 493
GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
Allowing the use of Del-Ack Req bit set in a frame that has ack-policy set to implied-ack to obtain the del-acks is an efficient use of implied-ack policy.

SuggestedRemedy

Remove the restriction of "only data" in 8.8.4 and add the following at the beginning. When directed frame has ack-policy bits set to implied-ack, the intended receiver can respond with a command frame or data frame that may or may need immediate-ack or

Proposed Response Response Status O

CI 08 SC 8.4.1 P 146 L 22 # 1110
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
Both in the CAP and the CFP, a response frame (ACK) transmission over the medium shall start within a SIFS duration after the end of the transmission of the previous frame for which the response is intended. From table 76, the SIFS is between 10 uS

SuggestedRemedy

The above sentence from line 22 is not clear. Does it mean the ACK has to start between 10 uS to 11 uS after the previous frame - or - does it mean the ACK has to start <10 uS after the previous frame. If the meaning is the latter than this becomes the RX-to-TX turnaround time that should be used in clause 11.2.6.2. MAC & PHY

Proposed Response Response Status O

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CI 08 SC 8.4.1 P 146 L 22 # 1133
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 grammatical
 SuggestedRemedy
 Replace the words "Both in" with "In both"
 Proposed Response Response Status O

CI 08 SC 8.4.1 P 146 L 27 # 1545
 Shvodian, William XtremeSpectrum
 Comment Type E Comment Status X
 "an RIFS" should be "a RIFS."
 SuggestedRemedy
 change "an RIFS" to "a RIFS" in line 27 and 28
 Proposed Response Response Status O

CI 08 SC 8.4.2 P 146 L 39 # 790
 Akahane, Masa Sony
 Comment Type E Comment Status X
 coordinator should be PNC
 SuggestedRemedy
 correct
 Proposed Response Response Status O

CI 08 SC 8.4.2 P 146 L 41 # 1546
 Shvodian, William XtremeSpectrum
 Comment Type TR Comment Status X
 If each DEV is only allowed to transit one frame at a time during the CAP with backoff time applied to every frame, then what is the "CAP MaxBurstDuration" in 6.3.12.1 used
 SuggestedRemedy
 Get rid of CAP MaxBurstDuration in clause 6.3.12.1
 Proposed Response Response Status O

CI 08 SC 8.4.2 P 146 L 46 # 1547
 Shvodian, William XtremeSpectrum
 Comment Type TR Comment Status X
 Transmitting station needs to allow for Guard Time.
 SuggestedRemedy
 Change sentence to "If an Imm-ACK is expected for that frame, the remaining time in CAP needs to be large enough to accommodate the current frame, 2 SIFS periods and the Imm-ACK frame at the same PHY rate as the transmitted frame and the guard
 Proposed Response Response Status O

CI 08 SC 8.4.2 P 146 L 52 # 1134
 Roberts, Richard XtremeSpectrum
 Comment Type TR Comment Status X
 Line 52 refers to a "CAP mode field" that is in clause 7.4.2
 SuggestedRemedy
 There is not CAP mode field reference in clause 7.4.2. What is meant here? Refer to MAC folks.
 Proposed Response Response Status O

CI 08 SC 8.4.2.1 P 147 L 1214 # 259
 Gifford, Ian Self
 Comment Type E Comment Status X
 The following sentences do not end in a period: — backoff_window(retry_count): A table which has values [7, 15, 31, 63] ... channel. For the 2.4 GHz PHY, this is defined in
 SuggestedRemedy
 Add the period.
 Proposed Response Response Status O

CI 08 SC 8.4.2.1 P 147 L 1525 # 846
 Kleindl, Guenter Siemens
 Comment Type E Comment Status X
 bw_random(retry_count) is there two times
 SuggestedRemedy
 combine the 2 descriptions or delete one
 Proposed Response Response Status O

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CI 08 SC 8.4.2.1 P 147 L 21 # 1550
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
The pseudo random sequence consists of integers and not bits.

SuggestedRemedy
Change to: "Note that the current state of the PRNG should be maintained and subsequent backoffs should use subsequent integers in the pseudo-random sequence."

Proposed Response Response Status O

CI 08 SC 8.4.2.1 P 147 L 23 # 369
Gilb, James Appairant

Comment Type T Comment Status X
bw_random(retry_count) is defined twice.

SuggestedRemedy
Delete "-- bw_random(retry_count): A pseudorandom integer ... [0,backoff_windo(retry_count)]." Move the sentence "It is important that ... among DEVs." to the end of the previous paragraph.

Proposed Response Response Status O

CI 08 SC 8.4.2.1 P 147 L 47 # 1551
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
When is the retry counter decremented?

SuggestedRemedy
Specify when retry counter is decremented. I think there is disagreement about this.

Proposed Response Response Status O

CI 08 SC 8.4.3.1 P 148 L 1 # 53
Bain, Jay Time Domain

Comment Type T Comment Status X
maybe not the correct location but it seems that there should be mention that for pseudo-static, that the PNC shall not change the superframe duration while devices are presuming a location for their slot don't get confused.

SuggestedRemedy
Add wording: The PNC shall not vary any paramters, such as superframe length, that would invalidate the pseudo-static GTS assigned to one or more DEVs in the piconet.

Proposed Response Response Status O

CI 08 SC 8.4.3.1 P 148 L 22 # 1552
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
coordinate should be coordinates

SuggestedRemedy
Change to: "However, the PNC uses the channel time grant command and coordinates the channel time grants with the CTAs in the beacon."

Proposed Response Response Status O

CI 08 SC 8.4.3.2 P 149 L 30 # 370
Gilb, James Appairant

Comment Type T Comment Status X
The sentence "In addition to this the PNC ... connection process." does not add any information to the present discussion. In addition, the PNC is supposed to make use of this, but we don't say how. For example, an implementation may use the information as an input to a PRNG to generate the slot assignments and still be considered

SuggestedRemedy
Delete the sentence.

Proposed Response Response Status O

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CI 08 SC 8.4.3.2 P 149 L 33 # 371
 Gilb, James Apparent
 Comment Type T Comment Status X
 The sentences "The slot assignments ... as described in 8.4.3.1" is a repeat of earlier requirements and so is an evil redundancy.
 SuggestedRemedy
 Delete the sentences since this behavior has already been adequately defined.

Proposed Response Response Status O

CI 08 SC 8.4.3.2 P 149 L 43 # 791
 Akahane, Masa Sony

Comment Type E Comment Status X
 coordinator should be PNC

SuggestedRemedy
 correct

Proposed Response Response Status O

CI 08 SC 8.4.3.2 P 149 L 44 # 792
 Akahane, Masa Sony

Comment Type E Comment Status X
 coordinator should be PNC

SuggestedRemedy
 correct

Proposed Response Response Status O

CI 08 SC 8.4.3.2 P 149 L 45 # 793
 Akahane, Masa Sony

Comment Type E Comment Status X
 coordinator should be PNC

SuggestedRemedy
 correct

Proposed Response Response Status O

CI 08 SC 8.4.3.2 P 149 L 46 # 794
 Akahane, Masa Sony

Comment Type E Comment Status X
 coordinator should be PNC

SuggestedRemedy
 correct

Proposed Response Response Status O

CI 08 SC 8.4.3.2 P 149 L 53 # 1135
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 grammatical - add definitve article two places

SuggestedRemedy
 Rewrite as ... for that channel-time with the PNC. When the PNC grants ...

Proposed Response Response Status O

CI 08 SC 8.4.3.2 P 15 L 12 # 1555
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 Need to be clear that a DEV that does not hear the Beacon cannot transmit during dynamic GTS, but it can still listen.

SuggestedRemedy
 Change the sentence as follows: "If a DEV did not receive the beacon, it shall not transmit in any dynamic GTSs during the CFP but it can still receive."

Proposed Response Response Status O

CI 08 SC 8.4.3.2 P 150 L 10 # 1554
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 Random Noise will also cause Beacons to be received in error.

SuggestedRemedy
 Chang esentence as follows:"This may not happen to the same DEV all the time but may happen to different DEVs at different times depending upon their location and type of interference to which they are subjected, as well as random nooise."

Proposed Response Response Status O

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CI 08 SC 8.4.3.2 P 150 L 16 # 372
 Gilb, James Appairnt

Comment Type T Comment Status X
 The channel time grant does not enable a DEV to access its GTS if it loses the beacon. The previous paragraph clearly states that a DEV shall not access a dynamic GTS if it misses the beacon. Likewise, a psuedostatic GTS does not need a channel time grant to access its slot. All of the text in the draft makes the beacon the one authoritative indication of channel time allocation.

SuggestedRemedy
 Delete the entire paragraph. If we want to keep the usefulness of the channel time grant supplementing the beacon, then the text in other places needs to be modified to allow this. For example, this would require changes in the prior paragraph of the sort: "did not receive the beacon, it shall not" changed to "did not receive either the beacon or a directed channel time grant command, it shall not"

Proposed Response Response Status O

CI 08 SC 8.4.3.2 P 150 L 1623 # 1556
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 Remove this entire paragraph. The use of channel time grants for stations that cannot hear the NC well is no longer needed. It has been replaced by pseudostatic GTS slots.

SuggestedRemedy
 Remove the paragraph

Proposed Response Response Status O

CI 08 SC 8.4.3.2 P 150 L 2 # 1553
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 Using the CAP for delayed ACK is a bad idea. Should allocate a GTS.

SuggestedRemedy
 Always allocate a GTS for delayed ACK frames.

Proposed Response Response Status O

CI 08 SC 8.4.3.2 P 150 L 2 # 1136
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Is believe that line 2 also needs to reference the MTS slot but I need the MAC folks to verify this.

SuggestedRemedy
 Should line 2 read ... DEV shall use only the CAP or MTS for sending ... (If this still is not correct then how do we fix this sentence?)

Proposed Response Response Status O

CI 08 SC 8.4.3.2 P 150 L 2531 # 1557
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 Guard time is not mentioned here.

SuggestedRemedy
 We need to explicitly state how guard time is used or teh TDMA scheme will not work.

Proposed Response Response Status O

CI 08 SC 8.4.3.2 P 150 L 46 # 1558
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 Private GTSs will always be pseudo-static.

SuggestedRemedy
 Change to "Private GTSWs will always be pseudo-static GTSs,"

Proposed Response Response Status O

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CI 08 SC 8.4.3.3 P 150 L 50 # 57
Bain, Jay Time Domain

Comment Type T Comment Status X
In the absence of CAP, the first GTS is bumped against the end of the beacon. The development of real implementations of this standard may be hindered if the parsing of the beacon body must occur in the very few microseconds available.

SuggestedRemedy
Provide guidance to implementers but also place a minimum time till the beginning of the first GTS in the absence of CAP. If a PNC to DEVs MTS is always present, then this would not be a problem.

Proposed Response Response Status O

CI 08 SC 8.4.3.3 P 150 L 50 # 55
Bain, Jay Time Domain

Comment Type T Comment Status X
I will put the comment here but it may impact other clauses. If the CAP is reduced to zero length and MTS used in its place, some of the text that we still may have regarding use of the CAP for small amounts of data are not correct.

SuggestedRemedy
correct the data in a non-existent CAP issue in this clause with a note that in this case, data must be handled in GTS only.

Proposed Response Response Status O

CI 08 SC 8.4.3.3 P 150 L 52 # 1348
Schrader, Mark Eastman Kodak Co.

Comment Type T Comment Status X
There does not appear to be a guarantee that MTS only mode will have the same performance as a network with a CAP

SuggestedRemedy
Either a minimum latency in superframes must be specified or some equivalent to the CAP should be provided to insure that devices can communicate with the PNC in a timely fashion.

Proposed Response Response Status O

CI 08 SC 8.4.3.3 P 151 L 1 # 56
Bain, Jay Time Domain

Comment Type T Comment Status X
Is there a case where an open MTS is less than one per superframe? If so, is there appropriate wording to change the responsiveness of the PNC to requests for change. I believe that up to 4 superframes may pass from CTR till CTA reflecting the change. The 4 superframe lag is long already. It should not go beyond that.

SuggestedRemedy
put the appropriate SHALL to keep the lag from CTR (or Stream) till CTA from getting higher than 4 superframes when MTS is used.

Proposed Response Response Status O

CI 08 SC 8.4.3.3 P 151 L 18 # 373
Gilb, James Appairant

Comment Type T Comment Status X
Uplink MTS has not been defined.

SuggestedRemedy
Change "uplink MTS within" to "MTS with the new DEVs AD-AD as the SA within". Else, define uplink and downlink MTSS where they are first referred to (i.e. around line 3 on page 151).

Proposed Response Response Status O

CI 08 SC 8.4.3.3 P 151 L 6 # 54
Bain, Jay Time Domain

Comment Type T Comment Status X
Considering that the aMTSAssocPeriod is 0.6 milliseconds, there is a question that the sub 1 second begin scan to payload ready interval may be attained. The unspecified authentication must be considered as well as the extensive number of message exchanges necessary for the typical DEV to get ready to deliver payload.

SuggestedRemedy
Understand the numbers and then set the aMTSAssocPeriod accordingly.

Proposed Response Response Status O

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CI 08 **SC 8.4.3.4** **P 151** **L 38** **# 1138**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 The paragraph between lines 38 and 45 implies that the DEV knows where the MTS's are located by passive monitoring. Should this be explicitly stated?
SuggestedRemedy
 refer to MAC folks.
Proposed Response *Response Status* **O**

CI 08 **SC 8.4.3.4** **P 151** **L 39** **# 374**
 Gilb, James Apparent
Comment Type **T** *Comment Status* **X**
 Should clarify what sort of RNG is to be used.
SuggestedRemedy
 Re-use the text from the backoff algorithm. Replace "While the random number generator is not specified, it is important" with "The method for choosing the random integer should be unique for each DEV and use the random number generator resident on the DEV. If the DEV does not possess a random number source, the random integer should be generated using its unique 48-bit device ID (and any other information that the implementer wishes to use) and a pseudo-random number generator (PRNG) such as MGF1 as defined in IEEE Std 1363-2000. Note that the current state of the PRNG should be maintained and subsequent backoffs should use subsequent bits in the pseudo-random sequence. It is important"
Proposed Response *Response Status* **O**

CI 08 **SC 8.4.3.4** **P 151** **L 48** **# 375**
 Gilb, James Apparent
Comment Type **T** *Comment Status* **X**
 The variable r_a is overloaded. It means both the random number that is to be counted up to as well as the current MTS count.
SuggestedRemedy
 Either use r for the count variable (i.e. r=1 rather than r_a=1 for the start and r=r_a for the access slot) or replace "r_a=1" with "1"
Proposed Response *Response Status* **O**

CI 08 **SC 8.5** **P 152** **L 28** **# 1139**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 modify line 28 to reflect a tolerance and not an absolute
SuggestedRemedy
 ... to be less than or equal to +- 25 ppm.
Proposed Response *Response Status* **O**

CI 08 **SC 8.5** **P 152** **L 3** **# 1559**
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Devs are synchronized to the Beacon interval, not the PNC's clock.
SuggestedRemedy
 Change to "All DEVs within a single piconet shall be synchronized to the Beacon"
Proposed Response *Response Status* **O**

CI 08 **SC 8.5** **P 152** **L 9** **# 376**
 Gilb, James Apparent
Comment Type **T** *Comment Status* **X**
 All DEVs need to reset their clocks based on the best estimate of the beacon timing if they did not hear the beacon.
SuggestedRemedy
 Change "it should reset" to "it shall reset"
Proposed Response *Response Status* **O**

CI 08 **SC 8.5.4** **P 152** **L 36** **# 1140**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 grammatical
 grammatical
SuggestedRemedy
 ... allocations contained in the beacon to start ...
Proposed Response *Response Status* **O**

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CI 08 SC 8.5.4 P 152 L 46 # 1560
 Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
 This sentence makes it sound like a DEV only needs to stop transmitting once no beacon is heard for ATP duration. The DEV still needs to follow the rules for dynamic or pseudostatic GTS.

SuggestedRemedy
 Add the following sentence between "PNC." and "If a DEV": If a Beacon is not correctly received, a DEV shall forllow the rules for transmitting in a GTS, depending on whether it is a dynamic or pseudo-static GTS.

Proposed Response Response Status **O**

CI 08 SC 8.5.4 P 152 L 48 # 1561
 Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
 Need to add that the DEV will send a Beacon Lost MLME to the DME to indicate that the Beacon is lost and the DEV is disassociated.

SuggestedRemedy
 Add the following: "The DEV shall send the BeaconLost.indication MLME to the DME to indicate that the Beacon has been lost.

Proposed Response Response Status **O**

CI 08 SC 8.6 P 153 L 2 # 1141
 Roberts, Richard XtremeSpectrum

Comment Type **E** Comment Status **X**
 grammatical ... add comma

SuggestedRemedy
 ... desires to source and sink, including those ...

Proposed Response Response Status **O**

CI 08 SC 8.6 P 153 L 4 # 379
 Gilb, James Appairnt

Comment Type **T** Comment Status **X**
 The roles and terms for the stream negotiation are not clear. They should be clarified

SuggestedRemedy
 Add the following text at the end of 8.6 prior to 8.6.1. "In the negotiation of stream connection, the following entities and roles are used: - PNC: the arbiter of channel time allocation - originator/originating DEV: The DEV that initiates the stream negotiation process. The originator may be either the source or the receiving DEV. - target/target DEV: the DEV (or broadcast address) with which the originator wants to open communications. The targe may be either the source or receiving DEV. - sending DEV: The DEV that provides the source of the data in the stream. - receiving DEV: The DEV that will receive the data in the stream."

Proposed Response Response Status **O**

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CI 08 SC 8.6.1 P 153 L 12 # 1120
 Schrader, Mark Eastman Kodak Co.

Comment Type T Comment Status X

This comment supplements as suggestion for adding stream management command in section 7.5.10.3, page 133 for final confirmation or acceptance of stream connection. One of the primary purposes of the stream connection process is to determine if the originator and the target agree on a single set of QoS parameters. As currently proposed the communication flow is: Originator->PNC->Target->PNC->Originator. The originator will then reply to only to the PNC only if it rejects the Targets modified QoS values. The trigger that starts PNC generation of time slots should be a response from the Originator to the PNC conThe stream connection process involves the PNC to determine if it can provide the GTS slot allocation requested, and the two peers must agree on a set of QoS parameters. As currently proposed the communication flow is Originator->PNC->Target->PNC->Originator. The originator will then reply to only to the PNC if it rejects the Targets modified QoS values. The trigger for PNC generation of time slots should be a response from the Target to the PNC confirming acceptance of the final QoS parameters relayed from the Target, not the absence of any negative response.

SuggestedRemedy

The following is a rewrite of lines 12-27 on page 153. Either the sending DEV or the intended recipient DEV for the new stream may send a stream management command with the request for stream connection. The process of stream connection is illustrated in Figure 88. In this figure, DEV A is the originator of stream connection request and DEV B is the target, consistent with the stream management command section 7.5.10.3. In all stream management communications from the PNC to the other involved DEV, the PNC appropriately changes the value of the direction field to imply the same direction of the stream as originally requested. The values for direction, security, stream type and priority shall be non negotiable and are decided by the DEV A that is sending the stream connection request. These values shall not be changed anytime after the first transmission of the command frame containing the request for that stream. The target DEV B responding to the forwarded stream connection request may modify the remaining QoS parameters including bandwidth and latency requirements. All the bandwidth and latency related requirements of the stream shall be confirmed or rejected by the originator of the stream connection request in response to the final PNC acceptance message. The PNC decision on the values of the stream QoS parameters that are supported in the piconet shall be final. If the originating DEV A does not accept the PNCs final stream parameters, then DEV A shall send a stream management command to the PNC with action type set to disconnection/rejection as specified in 7.5.10.3. Then the PNC shall then send a stream management command to the target DEV B with action type set to disconnection/rejection. Otherwise, DEV A shall send a stream management command with a final confirm/accept action type, and the PNC shall then begin generating ACTIVE type CTA elements and GTS timeslots as specified upon receipt of this command.

Proposed Response Response Status O

CI 08 SC 8.6.1 P 153 L 14 # 378
 Gilb, James Appairnt

Comment Type T Comment Status X

Since the direction field is constant during the negotiation (since the target and originator addresses are now included), this sentence is incorrect.

SuggestedRemedy

Delete the sentence "In all stream management ... as originally requested."

Proposed Response Response Status O

CI 08 SC 8.6.1 P 153 L 18 # 68
 Barr, John Motorola

Comment Type TR Comment Status X

This sentence references values that are not defined in the frame commands used to establish stream connections.

SuggestedRemedy

Change "The values for direction, security, stream type and priority ..." to "The values for direction, stream type, priority, and GTS type ...".

Proposed Response Response Status O

CI 08 SC 8.6.1 P 153 L 22 # 69
 Barr, John Motorola

Comment Type T Comment Status X

'Bandwidth' is not specifically negotiated, channel time is negotiated.

SuggestedRemedy

Change "All the bandwidth and latency ..." to "All the channel time and latency ...".

Proposed Response Response Status O

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CI 08 SC 8.6.1 P 153 L 24 # 1563
Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
"All the bandwidth and latency related requirements of the stream shall be negotiated between the sender of the stream and the PNC. The PNC decision on the values of the stream QoS parameters that are supported in the piconet shall be final."

SuggestedRemedy
The PNC knows nothing about bandwidth. It only knows about channel time. I don't think these QoS parameters should be negotiated at the MAC, but if they are the other DEV should have the opportunity to negotiate the values down.

Proposed Response Response Status **O**

CI 08 SC 8.6.1 P 153 L 8 # 377
Gilb, James Appairnt

Comment Type **T** Comment Status **R**
There is no multicast capabilities in the current standard, so only broadcast should be referenced. In addition, the implication of negotiating a broadcast slot is not indicated.

SuggestedRemedy
Delete "or multicast" Change "is precluded." to be "is precluded and so the negotiation is bipartite."

Proposed Response Response Status **C**
PROPOSED REJECT.

CI 08 SC 8.6.1 P 153 L 9 # 1142
Roberts, Richard XtremeSpectrum

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

SuggestedRemedy
... the involvement of the intended receiver ...

Proposed Response Response Status **O**

CI 08 SC 8.6.1 P 155 L 2 # 1145
Roberts, Richard XtremeSpectrum

Comment Type **E** Comment Status **X**
... for the connection of the stream.
R_ALFVIN-NOTE: THIS COMMENT WAS SUBMITTED INCOMPLETE AS SHOWN.

R_ALFVIN-NOTE: THE COMMENT TYPE WAS NOT SELECTED BY THE SUBMITTER.

SuggestedRemedy
R_ALFVIN-NOTE: NO REMEDY WAS SUBMITTED WITH THIS COMMENT.

Proposed Response Response Status **O**

CI 08 SC 8.6.1 P 155 L 2 # 260
Gifford, Ian Self

Comment Type **E** Comment Status **X**
The following sentence does not end in a period: This is illustrated in Figure 89

SuggestedRemedy
Add the period.

Proposed Response Response Status **O**

CI 08 SC 8.6.1 P 155 L 26 # 380
Gilb, James Appairnt

Comment Type **T** Comment Status **X**
The use of the channel time request and channel time grant to get non-stream CTAs is not described.

SuggestedRemedy
Add a short description of the frames that are exchanged to get a non-stream CTA via the channel time request and channel time grant commands. Also, the commands that are exchanged to disconnect a non-stream CTA.

Proposed Response Response Status **O**

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CI 08 SC **8.6.1 Fig 88** P **154** L **5** # **795**
 Akahane, Masa Sony
Comment Type **E** *Comment Status* **X**
 coordinator should be PNC
SuggestedRemedy
 correct
Proposed Response *Response Status* **O**

CI 08 SC **8.6.1 Fig.89** P **155** L **4** # **796**
 Akahane, Masa Sony
Comment Type **E** *Comment Status* **X**
 coordinator should be PNC
SuggestedRemedy
 correct
Proposed Response *Response Status* **O**

CI 08 SC **8.6.2** P **155** L **38** # **1147**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 grammatical
SuggestedRemedy
 ... to the othre DEV via the same command.
Proposed Response *Response Status* **O**

CI 08 SC **8.7** P **156** L **1** # **1564**
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Fragmentation ad defragmentation should not be in the MAC. It will overly complicate
 the designs and require large per-stream buffers. Fragmentation should be done at the
 convergence layer.
SuggestedRemedy
 Move Fragmenation to the convergence layer.
Proposed Response *Response Status* **O**

CI 08 SC **8.7** P **156** L **11** # **1148**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 add a reference to clause 7.2.1 ... suggested text below.
SuggestedRemedy
 ... in the frame control field (clause 7.2.1) set to "1".
Proposed Response *Response Status* **O**

CI 08 SC **8.7** P **156** L **31** # **382**
 Gilb, James Appairment
Comment Type **E** *Comment Status* **X**
 The sentence "If the stream does not ... is No-ACK" is redundant.
SuggestedRemedy
 Delete the sentence.
Proposed Response *Response Status* **O**

CI 08 SC **8.7** P **156** L **31** # **1149**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 grammatical ... replace the phrase "at all" with the word "then"
SuggestedRemedy
 see above
Proposed Response *Response Status* **O**

CI 08 SC **8.7** P **156** L **34** # **1150**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 grammatical
SuggestedRemedy
 ... reception of a new frame ...
Proposed Response *Response Status* **O**

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CI 08 SC 8.7 P 156 L 5 # 381
 Gilb, James Apparent

Comment Type T Comment Status X
 aFragThreshold is not a constant and so should loose the a and the reference in the table at the end of Clause 8. Also, we need to require that FragThreshold shall be less than the biggest allowed frame.

SuggestedRemedy
 Change aFragThreshold to FragThreshold. Delete aFragThreshold from Table 73.
 Change "and change them as desired." to be "and change them as desired provided that FragThreshold shall be less than aMaxFrameSize."

Proposed Response Response Status O

CI 08 SC 8.8.1 P 157 L 1 # 383
 Gilb, James Apparent

Comment Type T Comment Status X
 No group addressing is supported in this standard.

SuggestedRemedy
 Change "group addressed" to "broadcast"

Proposed Response Response Status O

CI 08 SC 8.8.2 P 157 L 8 # 1565
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 "within a SIFS" needs clarification. In some places it says that ACK comes before a SIFS and others it says after a SIFS.

SuggestedRemedy
 Throroughly describe be the ACK timing with a detailed description including SIFS complete with drawings.

Proposed Response Response Status O

CI 08 SC 8.8.3 P 157 L 18 # 1151
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 In general, this paragraph deals with sending the delayed ack. The sentence at line 18 that beguns "However the recipient ..." since it implies a DEV should send a delayed ACK at the expiration of the retransmission window. My question is this ... do you sent this at the expiration only if not previously send or do you send it again regardless.

SuggestedRemedy
 MAC committee to comment and clarify text if necessary.

Proposed Response Response Status O

CI 08 SC 8.8.3 P 157 L 22 # 1566
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 Need to specify that non-stream data cannot used delayed ACK

SuggestedRemedy
 Add the following sentence: "Non Stream data cannot use the delayed ACK policy for a couple of reasons. There is no opportunity for the reeiving DEV to negotiate the window size. Also, since all non stream data uses stream number zero, they all use the same sequence number counter so delayed ACK is not possible."

Proposed Response Response Status O

CI 08 SC 8.8.4 P 157 L 30 # 1567
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 "The start of transmission of the response data frame shall start at the end of a SIFS, like an Imm-ACK frame transmission." This is inconsistent with the previous section which says that Immediate ACK is sent within a SIFS.

SuggestedRemedy
 Need to clarify the use of SIFS.

Proposed Response Response Status O

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CI 08 SC 8.8.5 P 158 L 35 # 385
 Gilb, James Appairment

Comment Type T Comment Status X
 The retransmission for Imm-ACK is defined with in two incompatible methods.

SuggestedRemedy
 Either: 1) Delete "either Imm-ACK or the" from line 35. Here, the Imm-ACK retransmission starts after the Imm-ACK would have been finished. 2) Delete the sentence "When and Imm-ACK is ... attempting another transmission." Here, the Imm-ACK retransmission begins with the same timing as for implied-ACK, i.e. when the channel has been idle for the wait time.

Proposed Response Response Status O

CI 08 SC 8.8.5 P 158 L 38 # 384
 Gilb, James Appairment

Comment Type T Comment Status X
 The text "at the end of RIFS" only partially describe the timing for the re-transmission and neglects to mention the SIFS that is indicated further down.

SuggestedRemedy
 Delete the text "at the end of RIFS" since it is better described at the end of the

Proposed Response Response Status O

CI 08 SC 8.8.5 P 158 L 41 # 1569
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 Transmitting station must wait for immediate ACK time plus 2 SIFS to retransmit

SuggestedRemedy
 Change the sentence as follows: "it shall wait for the duration of Imm-ACK frame plus two SIFs before attempting another transmission."

Proposed Response Response Status O

CI 08 SC 8.8.5 P 158 L 43 # 386
 Gilb, James Appairment

Comment Type T Comment Status X
 Clarify when the retransmission begins.

SuggestedRemedy
 After "of the time slot." add the sentence "That is, the retransmission begins RIFS+SIFS following the last transmission."

Proposed Response Response Status O

CI 08 SC 8.8.5 P 158 L 46 # 1152
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 In line 46, reference is made to "the negotiated retransmission window".

SuggestedRemedy
 Please add to the sentence reference to the clause where this negotiation is described. (assigned to MAC committee)

Proposed Response Response Status O

CI 08 SC 8.8.5 P 158 L 50 # 387
 Gilb, James Appairment

Comment Type T Comment Status X
 Redundant (and therefore evil) information on collision detection that is better defined in 8.4.2.

SuggestedRemedy
 Delete the sentence "A collision during the ... for that frame."

Proposed Response Response Status O

CI 08 SC 8.8.5 P 158 L 50 # 1568
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 Move this sentence: "A collision during the transmission of a directed frame in the CAP is detected by the absence of the acknowledgement for that frame." to the first paragraph is 8.8.5

SuggestedRemedy
 Move the sentence.

Proposed Response Response Status O

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CI 08 SC 8.8.5 P 159 L 2 # 1153
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 grammatical ... add a comma as shown below.
SuggestedRemedy
 However, a DEV might ...
Proposed Response *Response Status* **O**

CI 08 SC 8.8.5 P 45 L 45 # 1570
 Shvodian, William XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 DEVS cannot reject a delayed ACK. This must be from when we were calling them "retransmission requests"
SuggestedRemedy
 Change the paragraph as follows: "When Del-ACK is used for a stream, the DEV transmitting the data frame may abort retransmission attempts once the negotiated retransmission window for the stream has been reached. When retransmissions are aborted, the DEV transmitting the stream shall send transmission sequence sync command, as defined in 7.5.9.2, to the recipient of the stream in order to synchronize the delayed-ACKs."
Proposed Response *Response Status* **O**

CI 08 SC 8.9 P 159 L 17 # 715
 Heberling, Allen XtremeSpectrum, Inc.
Comment Type **TR** *Comment Status* **X**
 All references to Probe-request/response between lines 17 and 38 are incorrect.
SuggestedRemedy
 Please replace all references to Probe-request/response between lines 17 and 38 with DEVICE-INFORMATION-REQUEST/RESPONSE.
Proposed Response *Response Status* **O**

CI 08 SC 8.9 P 159 L 18 # 1154
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 Grammatical ... modify the sentence as shown below.
SuggestedRemedy
 In addition, the DEV may use the probe request ...
Proposed Response *Response Status* **O**

CI 08 SC 8.9 P 159 L 26 # 1155
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 This sentence describes an algorithm with an exponential increasing time interval.
SuggestedRemedy
 Does this algorithm need an upper limit on the time delay. MAC committee to provide comment.
Proposed Response *Response Status* **O**

CI 08 SC 8.9 P 159 L 32 # 1156
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Add reference to text
SuggestedRemedy
 Power management ... what is the reference that describes the process of returning a DEV to the EPS mode.
Proposed Response *Response Status* **O**

CI 08 SC 8.9 P 159 L 34 # 388
 Gilb, James Appairnt
Comment Type **T** *Comment Status* **X**
 This paragraph should list the commands that are used to wake and sleep DEVs.
SuggestedRemedy
 Change "into ACTIVE mode" to "into ACTIVE mode using the switch to ACTIVE CTA mode command, 7.5.7.4" and change "to EPS mode after" to be "to EPS mode using switch to EPS CTA mode command, 7.5.7.5, after"
Proposed Response *Response Status* **O**

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CI 08 SC 9 P 159 L 2938 # 538
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
 Another "special case" as admitted in line 29. Why should power management create a special case for every corner of this standard? What justification is there to add this mega-complex scheme into the so called low-cost standard?

SuggestedRemedy
 Remove lines 29:38 on page 159 Simplify power management to the following - Request for sleep time by DEV - Accept/Reject by PNC - Broadcast the addresses of sleeping DEV in Beacon - Allocation/modification of GTS by PNC depending on who is awake

Proposed Response Response Status O

CI 08 SC 9 P 159 L 2938 # 538
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status X
 Another "special case" as admitted in line 29. Why should power management create a special case for every corner of this standard? What justification is there to add this mega-complex scheme into the so called low-cost standard?

SuggestedRemedy
 Remove lines 29:38 on page 159 Simplify power management to the following - Request for sleep time by DEV - Accept/Reject by PNC - Broadcast the addresses of sleeping DEV in Beacon - Allocation/modification of GTS by PNC depending on who is awake

Proposed Response Response Status O

CI 08 SC Equation 1 P 151 L 35 # 1137
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 Palce a white space before number 256

SuggestedRemedy
 see above

Proposed Response Response Status O

CI 08 SC Figure 69 P 160 L 7 # 1578
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 Immediate ACK has no frame body, only a header. Since the header is always transmitted at the base rate, the table should say that Imm. ACK is transmitted at base

SuggestedRemedy
 Change to base rate.

Proposed Response Response Status O

CI 08 SC Figure 78 P L # 530
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type E Comment Status X
 caption is inconsistent

SuggestedRemedy
 Change "coordination" to "PNC"

Proposed Response Response Status O

CI 08 SC Figure 78 P 139 L # 1103
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 Several editorial problems with Figure 78 ... see below

SuggestedRemedy
 1. In the first column, the word "alternate" is misspelt 2. in the 4th column, relace "New" with "new" 3. In last column, the arrows are too long, shorten the arrows

Proposed Response Response Status O

CI 08 SC Figure 79 P 140 L # 175
 DuVal, Mary Texas Instruments

Comment Type T Comment Status X
 Diagram hard to read. Where are the terms aMinHandOvrTo, aMaxHandOvrTo, aCHFrameRepeat and aBroadcastDEVInfoDuration in this diagram? I would like to see their timing relationships.

SuggestedRemedy
 See above

Proposed Response Response Status O

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CI 08 SC Figure 79 P 140 L 32 # 722
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type T Comment Status X
 The PNC handover process illustrated in this figure is poorly represented.

SuggestedRemedy
 The MLME-Handover message sequence chart in doc 01410r1 provides a much clearer representation of the handover function.

Proposed Response Response Status O

CI 08 SC Figure 81, 82 P 142 L 10 # 177
 DuVal, Mary Texas Instruments

Comment Type T Comment Status X
 What is a directed frame? The allocated private GTS response?

SuggestedRemedy
 Need clarification.

Proposed Response Response Status O

CI 08 SC Figure 82 P 143 L # 181
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 Child beacon referenced here.

SuggestedRemedy
 Should be referencing the neighbor beacon.

Proposed Response Response Status O

CI 08 SC Figure 82 P 143 L 21 # 1531
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 The last arrow should say "Neighbor Beacon" not "Child Beacon"

SuggestedRemedy
 Change to Neighbor Beacon.

Proposed Response Response Status O

CI 08 SC Figure 83 P 144 L # 184
 DuVal, Mary Texas Instruments

Comment Type T Comment Status X
 The section words do not indicate a SIFS time before an ACK

SuggestedRemedy
 State what is intended consistently in words and figure.

Proposed Response Response Status O

CI 08 SC Figure 83 P 144 L 38 # 717
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 The message sequence chart in figure 83 illustrates a broken association protocol.

SuggestedRemedy
 The MLME-ASSOCIATION message sequence chart in clause 6.3 illustrates a validatable association protocol.

Proposed Response Response Status O

CI 08 SC Figure 83 P 144 L 44 # 1536
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 Figure 83 shows a SIFS between Association request and ACK. Is this a time that is at least 1 SIFS, Less than 1 SIFS or equal to 1 SIFS +/- some delta (like .11 does). In clause 11, SIFS may actually a range (aTXRXTurnAroundTime = between 10 and 11 us)??? This same comment applies to Figure 84

SuggestedRemedy
 Decided exactly what 1 SIFS means and document it. I think it will be =1 SIFs +/- some delta.

Proposed Response Response Status O

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CI 08 **SC Figure 84** **P 145** **L 1** **# 718**
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type **TR** *Comment Status* **X**
 The message sequence chart in figure 84 provides another perspective of the broken association protocol.

SuggestedRemedy
 The MLME-ASSOCIATION message sequence chart in clause 6.3 illustrates a validatable association protocol.

Proposed Response *Response Status* **O**

CI 08 **SC Figure 86** **P 149** **L** **# 186**
 DuVal, Mary Texas Instruments

Comment Type **T** *Comment Status* **X**
 It is hard to know what this figure represents. Is there a legend on the shade meanings? Are TX and RX the same slots? What is the difference in each frame? Is it an advance of time?

SuggestedRemedy
 Clarify what the figure is showing.

Proposed Response *Response Status* **O**

CI 08 **SC Figure 88** **P** **L** **# 1562**
 Shvodian, William XtremeSpectrum

Comment Type **E** *Comment Status* **X**
 The font is hard to read in Figure 88

SuggestedRemedy
 Choose a more readable font

Proposed Response *Response Status* **O**

CI 08 **SC Figure 88** **P 153** **L 29** **# 261**
 Gifford, Ian Self

Comment Type **E** *Comment Status* **X**
 The following sentence in Figure 88 does not end in a period: suggested value for size of Retx window

SuggestedRemedy
 Add the period.

Proposed Response *Response Status* **O**

CI 08 **SC Figure 88** **P 154** **L** **# 1144**
 Roberts, Richard XtremeSpectrum

Comment Type **T** *Comment Status* **X**
 In general Figure 88 is in poor shape. The font appears distorted and the arrows are falling on top of text. This figure needs to be corrected.

SuggestedRemedy
 reformat drawing

Proposed Response *Response Status* **O**

CI 08 **SC Figure 88** **P 154** **L 3** **# 1143**
 Roberts, Richard XtremeSpectrum

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

SuggestedRemedy
 ... retransmission window, the samller of ...

Proposed Response *Response Status* **O**

CI 08 **SC Figure 89** **P 155** **L** **# 187**
 DuVal, Mary Texas Instruments

Comment Type **E** *Comment Status* **X**
 The grayed box seems to attempt to tell the reader to reference the previous figure

SuggestedRemedy
 State reference explicitly.

Proposed Response *Response Status* **O**

CI 08 **SC Figure 89** **P 155** **L** **# 1146**
 Roberts, Richard XtremeSpectrum

Comment Type **T** *Comment Status* **X**
 In the shaded box at the bottom of Figure 89, modify the text as shown below

SuggestedRemedy
 Rest of the sequence follows as if the sender of the stream initiated the stream connection process, as shown in Figure 88.

Proposed Response *Response Status* **O**

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CI 08 SC Figure 89 P 155 L 1519 # 262
 Gifford, Ian Self

Comment Type E Comment Status X
 The following sentences in Figure 89 do not end in a period: Use all-zero stream index in the request ... Rest of the sequence follows as if the sender of the stream initiating the stream connection process also I would drop the grey color in the box at the bottom of the figure.

SuggestedRemedy
 Add the period and delete the color from the box at the bottom of the figure.
 Proposed Response Response Status O

CI 08 SC Figure 92 P 161 L 4 # 712
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 The message sequence chart in figure 92 is inadequately illustrates the Repeater function protocol.

SuggestedRemedy
 The Message sequence chart provided in the MLME_REPEATER MSC clause of doc 01/410r1 provides a much clearer illustration.

Proposed Response Response Status O

CI 08 SC Figure 93 P 162 L # 1167
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 The fonts in the figure are distorted.

SuggestedRemedy
 Reformat the figure.

Proposed Response Response Status O

CI 08 SC Figure 93 P 162 L # 1583
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 Instead of "PNC stops sending beacons" should say "PNC issues quiet command and stops sending beacons"

SuggestedRemedy
 Change "PNC stops sending beacons" to "PNC issues quiet command and stops sending beacons"

Proposed Response Response Status O

CI 08 SC Figure 93 P 162 L 4 # 713
 Heberling, Allen XtremeSpectrum, Inc.

Comment Type TR Comment Status X
 The message sequence chart in figure 93 illustrates a Dynamic channel selection process that is broken.

SuggestedRemedy
 The MLME-CHANNEL-STATUS, MLME-REMOTE-SCAN, and MLME-CHANGE-CHANNEL msc clause in doc 01/410r1 provides a much better Dynamic channel selections process that does not require the PNC beacon to go silent while devices are transitioning to the new channel.

Proposed Response Response Status O

CI 08 SC Figure 94 P 166 L 1 # 1192
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 Figure 94 needs to be reformatted. Also, replace the "place in set" with "add to set".

SuggestedRemedy
 See above

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 08 SC Figure 94 P 166 L 38 # 266
 Gifford, Ian Self

Comment Type E Comment Status X
 The Editor might want to consider Figure 94 and the sentence "Note: PNC will begin..." most of the notes up to this page in the D09 are "Note that..." vs. "Note: ...". The issue is normative vs. informative; respectively.

SuggestedRemedy
 I defer to the Editor but it is likely that it should be changed to "Note that...". If you choose to leave as-is then remember - Notes always start with the word "NOTE" in capital letters, followed by a dash, and are set in 9-point type.

Proposed Response Response Status O

CI 08 SC Figure 95 P 167 L # 1201
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Figure needs to be reformatted to remove change bars. Also, in the second phrase on the right is the word "[repeating] ... what does this mean?"

SuggestedRemedy
 What does [repeating] mean? Refer to Power Management committee.

Proposed Response Response Status O

CI 08 SC Figure 95 P 167 L 31 # 1654
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 "DEVs are associated and operations of Figure 95 have been completed." This is in Figure 95

SuggestedRemedy
 I think that this should be Figure 94, but who knows.

Proposed Response Response Status O

CI 08 SC Figure 95 P 167 L 4748 # 268
 Gifford, Ian Self

Comment Type E Comment Status X
 The Editor might want to consider Figure 95 and the sentence "Note: DEVs do not enter EPS operation at this point" most of the notes up to this page in the D09 are "Note that..." vs. "Note: ...". The issue is normative vs. informative; respectively. Also, adding a period completes the sentence.

SuggestedRemedy
 I defer to the Editor but it is likely that it should be changed to "Note that...". If you choose to leave as-is then remember - Notes always start with the word "NOTE" in capital letters, followed by a dash, and are set in 9-point type.

Proposed Response Response Status O

CI 08 SC Figure 96 P 169 L # 1207
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 In figure 96, on the last message exchange

SuggestedRemedy
 should the last message go from the PNC and terminate at DEV B instead of DEV A. Refer to Power Management committee.

Proposed Response Response Status O

CI 08 SC Figure 96 P 169 L # 1206
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 Reformat to remove change bars

SuggestedRemedy
 see above

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 08 SC Figure93 *P* *L* **# 1582**
 Shvodian, William XtremeSpectrum
Comment Type E *Comment Status X*
 Fonts is hard to read
SuggestedRemedy
 Change the font in Figure 93.
Proposed Response *Response Status O*

CI 08 SC General *P* *L* **# 1648**
 Shvodian, William XtremeSpectrum
Comment Type TR *Comment Status X*
 EPS is so complex that I am afraid that no one will implement it. Also, the number of commands, MLME parameters, states, etc is overwhelming. The complexity is overkill for a WPAN. I will propose something that meets the requirements with much lower complexity.
SuggestedRemedy
 Adopt a new power management Scheme.
Proposed Response *Response Status O*

CI 08 SC Table73 *P 174* *L 12* **# 1605**
 Shvodian, William XtremeSpectrum
Comment Type TR *Comment Status X*
 If we change aMaxSuperframeDuration to 65535 us, then we can use 1 uS resolution.
SuggestedRemedy
 Change a MaxSuperframeDuration to 65535 uS
Proposed Response *Response Status O*

CI 08 SC Table 68 *P 139* *L* **# 1104**
 Roberts, Richard XtremeSpectrum
Comment Type T *Comment Status X*
 Need to add two acronyms to clause 4
SuggestedRemedy
 1. PSRC 2. PSAVE
Proposed Response *Response Status O*

CI 08 SC Table 70 *P 163* *L* **# 189**
 DuVal, Mary Texas Instruments
Comment Type T *Comment Status X*
 Where is RPS listed? It seems to be missing. Does this mean the definition of RPS is incomplete?
SuggestedRemedy
 Complete RPS definition
Proposed Response *Response Status O*

CI 08 SC Table 73 *P 173* *L* **# 1217**
 Roberts, Richard XtremeSpectrum
Comment Type TR *Comment Status X*
 Wrong reference
SuggestedRemedy
 For the SIFS parameter, the value is defined in 11.2.6.1 (not 11.2.6.2)
Proposed Response *Response Status O*

CI 08 SC Table 73 *P 173* *L* **# 1218**
 Roberts, Richard XtremeSpectrum
Comment Type T *Comment Status X*
 Add clause reference for clarity
SuggestedRemedy
 For the parameter aMinTPCLevel, the value is defined in 11.5.9
Proposed Response *Response Status O*

CI 08 SC Table 73 *P 173* *L* **# 1219**
 Roberts, Richard XtremeSpectrum
Comment Type TR *Comment Status X*
 Add an item to MAC PIB?
SuggestedRemedy
 In Table 73, for the parameter aFragThreshold, the value is shown to be "DEV chooses this value". In this case, this should be added to the MAC PIB in clause 6.5 as MACPIBFragThreshold.
Proposed Response *Response Status O*

P802.15.3 Draft 09 Comments

CI 08 **SC Table 73** **P 173** **L 45** **# 1601**
 Shvodian, William XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 A AssocRespConfirmTime of 5 ms is too short. There may not be any CAP or GTS slot time to respond and the PNC may be busy.

SuggestedRemedy
 Change AssocRespConfirmTime to 2 superframe durations.

Proposed Response *Response Status* **O**

CI 08 **SC Table 73** **P 174** **L** **# 1220**
 Roberts, Richard XtremeSpectrum

Comment Type **T** *Comment Status* **X**
 PHY dependent parameters that should be defined in clause 11

SuggestedRemedy
 The following three items should have values that are PHY dependent and should be defined in clause 11 as added clauses 11.2.9, 11.2.10, and 11.2.11.

Proposed Response *Response Status* **O**

CI 08 **SC Table 73** **P 174** **L 5** **# 1603**
 Shvodian, William XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 8196 octet aMaxTransferUnitSize of 8196 octets may sound like a lot, but we should increase it to 65536 octets for future PHYs.

SuggestedRemedy
 change aMaxTransferUnitSize to 65536 octets

Proposed Response *Response Status* **O**

CI 08 **SC Table73** **P 173** **L 31** **# 1600**
 Shvodian, William XtremeSpectrum

Comment Type **T** *Comment Status* **X**
 aMinChannelScan should probably be twice the MaxSuperframeDuration

SuggestedRemedy
 Change aMinChannelScan to 2*MaxSuperframeDuration

Proposed Response *Response Status* **O**

CI 08 **SC Table73** **P 173** **L 46** **# 1602**
 Shvodian, William XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 aProbeResponseDelay of 8 ms is too short. Should be at least 2 superframe durations. But, responding DEV may have no channel time.

SuggestedRemedy
 Increase aProbeResponseDelay to 5 superframes.

Proposed Response *Response Status* **O**

CI 08 **SC Table73** **P 174** **L 10** **# 1604**
 Shvodian, William XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 512 us is too short for aMinSuperframeDuration.

SuggestedRemedy
 Change aMinSuperframeDuration 1 ms

Proposed Response *Response Status* **O**

CI 09 **SC** **P** **L** **# 1729**
 Liang, Jie Texas Instruments

Comment Type **T** *Comment Status* **R**
 QoS is very important for the applications intended for this standard, however is very lacking in details. Clause 9 needs to be beefed up in terms of details.

SuggestedRemedy
 Additional work to provide the details needed to support QoS.

Proposed Response *Response Status* **C**
 PROPOSED REJECT. Clause 9 has been deleted. SSCS's will be added as a follow on to the draft to clarify how 802.15.3 capabilities can be used to provide QoS.

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CI 09 SC P L # 545
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status A
 This clause seems to be standing by itself with no support from other clauses, neither is it seem to be supporting any other clause in the draft. BTW, it also uses lot of terms that are not used anywhere else (example SFID)

SuggestedRemedy
 There are two options here. 1. Remove this clause 2. For every description (flow, paramter, mechanism) connect them with its relavant counterpart in clauses 6, 7 and 8 (most importantly 7 and 8).

Proposed Response Response Status W
 PROPOSED ACCEPT. Clause 9 will be removed. Remove references to SFID in Figure A.3 and other occurrences.

CI 09 SC P 175 L # 1740
 Chen, Kwang-Cheng InProComm, Inc.

Comment Type E Comment Status X
 The QoS policy is not clearly defined in this section.

SuggestedRemedy
 Please address the QoS policy clearly.

Proposed Response Response Status O

CI 09 SC P 175 L # 1749
 Chen, Hung-Kun InProComm, Inc.

Comment Type E Comment Status X
 The QoS policy is not clearly defined in this section.

SuggestedRemedy
 Please address the QoS policy clearly.

Proposed Response Response Status O

CI 09 SC P 175 L # 1766
 Maa, Yeong-Chang InProComm, Inc.

Comment Type E Comment Status X
 The QoS policy is not clearly defined in this section.

SuggestedRemedy
 Please address the QoS policy clearly.

Proposed Response Response Status O

CI 09 SC P 175 L # 1784
 Liu, Shawn InProComm, Inc.

Comment Type E Comment Status X
 The QoS policy is not clearly defined in this section.

SuggestedRemedy
 Please address the QoS policy clearly.

Proposed Response Response Status O

CI 09 SC P 175 L 3 # 1354
 Seals, Michael Intersil

Comment Type T Comment Status A
 How QoS is maintained during PNC handover or an abrupt termination of PNC functions (e.g. PNC unplugged)?

SuggestedRemedy
 Think about this and propose a solution or point me to it.

Proposed Response Response Status C
 PROPOSED ACCEPT. In case of PNC handover, streams are maintained as defined in 8.2.4. In case of PNC unplugged, there is no remaining piconet so QoS is lost. See 5.5.6. Section 8.5 defines what a DEV does when it fails to see a beacon.

CI 09 SC 00 P 175 L # 190
 DuVal, Mary Texas Instruments

Comment Type E Comment Status X
 A figure showing the elements of the QoS parameter set would be helpful for a reader trying to determine parameters that will be set.

SuggestedRemedy
 Include frame format figure for QoS parameter set

Proposed Response Response Status O

CI 09 SC 1 P 175 L 31 # 1353
 Seals, Michael Intersil

Comment Type TR Comment Status A
 The stream index is undefined and of an unknown length.

SuggestedRemedy
 At a minimum, define the length of the stream index.

Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE. Clause 9 has been deleted. The length of stream index is defined in 7.2.4.

P802.15.3 Draft 09 Comments

CI 09 SC 9 P 175 L 1 # 417
 Gilb, James Apparent

Comment Type T *Comment Status* A
 The clause on QoS policies is incomplete and provides little useful information that is not already present in other clauses. In addition, it relies on an SFID which occurs in only one other place in the draft (in a figure in Annex A.) In addition, although provisioned service flows are indicated, none are defined. This entire process should be left to the implementer anyway.

SuggestedRemedy
 Since the definition is incomplete and relies on a non-existent parameter, the clause should be deleted.

Proposed Response PROPOSED ACCEPT. *Response Status* C

CI 09 SC 9.0 P 175 L 1 # 33
 Bain, Jay Time Domain

Comment Type T *Comment Status* R
 This is a general comment on the Quality of service clause. There is a lack of introduction, relationships to rest of draft, helpful diagrams, and mention of EPS power management QoS.

SuggestedRemedy
 Provide additional text on introduction, relationships to rest of draft, helpful diagrams, and if possible at least a xref to power management QoS of 8.13.

Proposed Response PROPOSED REJECT. Clause 9 has been deleted. SSCS's will be added as a follow on to the draft to clarify how 802.15.3 capabilities can be used to provide QoS. *Response Status* C

CI 09 SC 9.0 P 175 L 1 # 1734
 Karaoguz, Jeyhan Broadcom Corp.

Comment Type T *Comment Status* R
 QoS section is far from complete for implementation.

SuggestedRemedy
 Provide necessary detail to implement the QoS policy

Proposed Response PROPOSED REJECT. Clause 9 has been deleted. SSCS's will be added as a follow on to the draft to clarify how 802.15.3 capabilities can be used to provide QoS. *Response Status* C

CI 09 SC 9.1 P 175 L 29 # 1606
 Shvodian, William XtremeSpectrum

Comment Type T *Comment Status* A
 The difference between service flow ID and Stream Index is not clear. Why do we need both.

SuggestedRemedy
 Clarify the difference between service flow ID and Stream Index.

Proposed Response PROPOSED ACCEPT IN PRINCIPLE. Clause 9 has been deleted. *Response Status* C

CI 09 SC 9.1 P 175 L 31 # 1221
 Roberts, Richard XtremeSpectrum

Comment Type TR *Comment Status* A
 TBD to be resolved

SuggestedRemedy
 MAC committee needs to resolve the TBD in line 31

Proposed Response PROPOSED ACCEPT IN PRINCIPLE. Clause deleted. Defined in 7.2.4. *Response Status* C

CI 09 SC 9.1 P 175 L 31 # 80
 Barr, John Motorola
 Barr, John Motorola

Comment Type T *Comment Status* A
 Stream index should be 8-bits in length, not TBD.

SuggestedRemedy
 Change TBD to 8.

Proposed Response PROPOSED ACCEPT IN PRINCIPLE. Clause deleted. Defined in 7.2.4. *Response Status* C

CI 09 SC 9.1 P 175 L 31 # 298
 Gilb, James Apparent

Comment Type T *Comment Status* R
 TBD in "b) Stream index: A unique value, TBD bits in length, used to identify a connection and to associate it with an active service flow." needs to be changed to 16 bits. Was supposed to be changed in D09, but got missed.

SuggestedRemedy
 Change "TBD" to "16 bits"

Proposed Response PROPOSED REJECT. Clause 9 deleted. *Response Status* C

P802.15.3 Draft 09 Comments

CI 09 SC 9.2 P 175 L 39 # 1222
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 remove stray comma
 SuggestedRemedy
 provisioned and active. (no comma after provisioned)
 Proposed Response Response Status O

CI 09 SC 9.2.1 P 175 L 43 # 1223
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 remove stray comma
 SuggestedRemedy
 remove commma as shown below ... service flow is one which has been ...
 Proposed Response Response Status O

CI 09 SC 9.2.1 P 175 L 44 # 1224
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 rewrite as shown below
 SuggestedRemedy
 ... the PNC has not yet reserved the QoS ...
 Proposed Response Response Status O

CI 09 SC 9.2.1 P 175 L 46 # 1225
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 rewrite sentence lin line 46 as shown below ...
 SuggestedRemedy
 ... QoS parameters, the benefit of which ...
 Proposed Response Response Status O

CI 09 SC 9.2.2 P 176 L 12 # 1228
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 remove American English idiom
 SuggestedRemedy
 instead of "created from scratch" use "originated"
 Proposed Response Response Status O

CI 09 SC 9.2.2 P 176 L 7 # 1226
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 rewrite as shown below
 SuggestedRemedy
 An active service flow is one which has ...
 Proposed Response Response Status O

CI 09 SC 9.2.2 P 176 L 7 # 1227
 Roberts, Richard XtremeSpectrum
 Comment Type E Comment Status X
 Rewrite sentence as shown below
 SuggestedRemedy
 In addition, an active service flow is one which has a non-NULL set of
 ActiveQoSParameters and one which indicates that the PNC has reserved the piconet
 resources requested.
 Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 10 SC P L # 1830
Razor, Gregg Motorola

Comment Type TR Comment Status X

Symmetric keys of a particular type shall be used for the associated usage only, e.g., keys intended for securing the exchange of data keys shall not be used for securing the exchange of user data, and vice versa. Symmetric keys of a particular usage type shall be used for the associated usage only, e.g., keys intended for usage with an encryption algorithm shall not be used with a keyed hash function, and vice versa. Public keys of a particular type shall be used for the intended usage only, e.g., public keys intended for securing the establishment of symmetric keying material shall not be used for authenticity verification purposes, and vice versa. Expired or archived keys should not be used for, e.g., encryption and for the provision of data integrity any more, but might still be used for, e.g., decryption and for the verification of data integrity. The type of keying material, its intended usage, and the status as to its life cycle should become available during the generation or during the transfer of the key. Subsequent versions of the same key should be distinguishable via a key sequence number, such as to prevent the usage of old keys, when new keys have been issued, or vice versa. At any moment of time, the binding between the key value and all the key aspects discussed above should be stored in an authentic way.

SuggestedRemedy

Incorporate a classification of key life cycle and key usage aspects, both for public keying material and for symmetric keying material, and adapt key data objects

Proposed Response Response Status O

CI 10 SC P L # 1362
Shellhammer, Steve Symbol Technologies

Comment Type TR Comment Status X

The standard does not include a specification for either authentication or encryption.

SuggestedRemedy

Add a specification for both authentication and encryption.

Proposed Response Response Status O

CI 10 SC P L # 781
Akahane, Masa Sony

Comment Type TR Comment Status X

As it is well understood, security is one of the most sensitive subjects in the wireless communications. Even though the mechanism using security suites is described in the current draft but there is no clear default mode description. Secured environment is made by a solid description including the very first association. Otherwise, it may fall another prey of criticism from the industry.

SuggestedRemedy

Need to specify a default security mode.

Proposed Response Response Status O

CI 10 SC P L # 1832

Razor, Gregg Motorola

Comment Type TR Comment Status X

Currently, the mapping of roles to devices that is in effect is static in nature (see 10.3.2.2 on Page 182). Moreover, the role of the security manager is identified with that of the current piconet controller. This approach, although simple, has its drawbacks, since it assumes each device to trust the piconet controller and, more importantly, to trust each subsequent piconet controller for its security needs. This might be especially undesirable in the event of an automatic piconet hand over, since the devices constituting the piconet exercise no control over the election process of the new piconet controller. From an implementation viewpoint, the drawback is that each change of the piconet controller now invokes by definition a change of security manager, thus potentially requiring an expensive re-establishment of keying relationships between all

SuggestedRemedy

Incorporate a more flexible security model. Currently, all trust in the piconet is concentrated in a single device, the PNC, which poses some restrictions one should be very well aware of. A more general security model will be presented during the Dallas meeting, January 2-25, 2002. (Document No: 02029r0, 02030r0). This more general security model prevents the disadvantages of the approach we had to take in draft D09, while still allowing that approach, as a special case. The general security model allows for a relaxation of the amount of trust that needs to be concentrated in a single device while at the same time allowing a speed up of authentication and a more robust architecture, if the PNC changes.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

Cl 10 SC P L # 1833
 Rasor, Gregg Motorola

Comment Type **TR** Comment Status **X**
 Currently, only the broadcast communication scenario is being elaborated upon. This conflicts with Sub-clause 10.1.1, Page 177, lines 25-26 (which specifies both peer-to-peer and broadcast communications); this should be corrected.

SuggestedRemedy
 Incorporate a mechanism for secure multicasting within the piconet setting. A general solution the multicasting communication scenario (i.e., communication for any specified subset of the devices that constitute the piconet) will be presented during the Dallas meeting, January 2-25, 2002. (Document No: 02029r0, 02030r0).

Proposed Response Response Status **O**

Cl 10 SC P L # 1823
 Rasor, Gregg Motorola

Comment Type **TR** Comment Status **X**
 Keying material should be handled at the MAC layer only, unless this is technically unfeasible. Comment: Currently, all cryptographic operations seem to be handled outside the MAC layer (hence, all the MLME interfaces required). It seems that public key verification and execution of cryptographic protocols could be handled in the MAC layer only, thus making for a very thin interface with other layers (and allows use of 802.15.3 services without changes to the hardware and/or software at different layers).

SuggestedRemedy
 An example security architecture that allows for handling of all keying material and cryptographic operations at the MAC/PHY layer will be presented during the Dallas meeting, January 2-25, 2002. (Document No: 02029r0, 02030r0).

Proposed Response Response Status **O**

Cl 10 SC P L # 1725
 Rofheart, Martin XtremeSpectrum

Comment Type **TR** Comment Status **X**
 The security clause lacks encryption detail for the default cipher algorithm.

SuggestedRemedy
 Refer to the remedy indicated by Rick Roberts

Proposed Response Response Status **O**

Cl 10 SC P L # 547
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **TR** Comment Status **X**
 This section is described as if this is a requirement without any details, whatsoever, on the actual algorithm used for authentication and privacy. Without those two mechanisms the reader can not comment on the description provided in this clause since depending on the algorithm these descriptions ought to change.

SuggestedRemedy
 Specify authentication and privacy algorithms.

Proposed Response Response Status **O**

P802.15.3 Draft 09 Comments

CI 10 SC P L # 1835
 Rasor, Gregg Motorola
Comment Type TR **Comment Status** X
 Admission to a piconet is now based on evidence regarding the true identity (device Id) of a communicating party only (via an authentic public key). Since this is the Id of a chip that could potentially be used in a wide variety of devices (invisible to the user), the user is left pretty much in the dark on what device capabilities are present in the piconet and whom (i.e., which human operators of the devices) it is actually talking to. This might lead to inclusion of devices one does not want to participate in communications. Instead, access control should be based on the actual user or usages

SuggestedRemedy
 Incorporate a more refined access control mechanism than presently described in the draft. One also has to associate users or usages with the device Id, rather than just a public key. Moreover, one has to incorporate access control lists based on these. I will try and sketch how the user or the usage of a device could be securely associated with the Id of the device, thus defining the relationship User/usage - Device Id - Public key in a more explicit way. This would also allow access control lists to be implemented based on the user's attributes associated with the device Id in question. One distinguishes the following entities: number of anonymity issues, including (1) tracking of devices and thereby their users; (2) trace-ability of the manufacturer of the the device level: to passively monitoring which devices are owned by prevent identity theft) User & device: binding between the device and its user, via authentication techniques (e.g., PIN code, password, biometrics) key: cryptographic binding of the device Id to the public key (e.g., via a public key certificate). Bluetooth). Investigate how this could be realized technically, if at all, and personalization attributes (e.g., via attribute certificate) framework and of binding between a user and personalization attributes hereof (e.g., via attribute certificate). Within the current specification, authentication is based on the proper Id of the device only. If each device has some device and user attributes associated with it, one can achieve a more refined access control as follows: At personalization of the device, one could securely associate device and user attributes with a device. At usage of a device, one could maintain an access control list of those devices that are allowed to communicate with it in a piconet. At device authentication, one also passes the attribute certificate that securely binds the device to user and device attributes. Access control is then based on these attributes as well, rather than on an authentic public key only. One can modify the access control list via a procedure similar to an 'address book' on a PDA. The implementation hereof requires a user interface. If one has no user interface (e.g., 'speaker-receiver'-type application), the access control list might be established via an automatic mechanism, e.g., during set-up of this equipment. The specification should provide the mechanisms and formats to allow implementation of dynamic access control lists and of user and device attributes and the like. Currently, this is completely lacking in the draft.

Proposed Response **Response Status** O

CI 10 SC P L # 1643
 Shvodian, William XtremeSpectrum
Comment Type TR **Comment Status** X
 If we are going to leave the Access control list to the upper layers, we need to add teh MLMES
SuggestedRemedy
 Sorry if this is a repeat. It is getting late (again)
Proposed Response **Response Status** O

CI 10 SC P L # 1834
 Rasor, Gregg Motorola
Comment Type TR **Comment Status** X
 Currently, anonymity is not considered in the draft. Lack of anonymity was a major criticism of the original Bluetooth specification. It led to a change requirement by Ericcson, after this privacy issue had been advertised on the front cover of the NY physical device: device Id; public key; Times). One distinguishes a user; user and device attributes. One distinguishes the following bindings at Device & device Id: physical tying of the device to its identity (to WPAN-chip, which might lead Device Id & public **SuggestedRemedy**
 Investigate whether anonymity would be required (e.g., as a distinguishing feature for Device Id & device attributes: binding between the device Id and WPAN vs. User & user attributes: what changes this would require to the specification of the security data objects (device Id format and the-like).

Proposed Response **Response Status** O

CI 10 SC P 175 L # 1767
 Maa, Yeong-Chang InProComm, Inc.
Comment Type TR **Comment Status** X
 There is neither security/authentication details nor a cipher suite defined for the sake of interoperability among devices built by different vendors.
SuggestedRemedy
 Please provide the details and the cipher suite clearly.
Proposed Response **Response Status** O

P802.15.3 Draft 09 Comments

CI 10 SC P 177 L # 802
Kinney, Patrick Invensys

Comment Type T Comment Status X
The security section looks thin. Specifically I do not believe that I can implement security according to this section in an unambiguous manner.

SuggestedRemedy
Detail out the mechanisms to implement security in such a manner that interoperability will be assured.

Proposed Response Response Status O

CI 10 SC P 177 L # 1785
Liu, Shawn InProComm, Inc.

Comment Type TR Comment Status X
There is neither security/authentication details nor a cipher suite defined for the sake of interoperability among devices built by different vendors.

SuggestedRemedy
Please provide the details and the cipher suite clearly.

Proposed Response Response Status O

CI 10 SC P 177 L # 1750
Chen, Hung-Kun InProComm, Inc.

Comment Type TR Comment Status X
There is neither security/authentication details nor a cipher suite defined for the sake of interoperability among devices built by different vendors.

SuggestedRemedy
Please provide the details and the cipher suite clearly.

Proposed Response Response Status O

CI 10 SC P 177 L # 1741
Chen, Kwang-Cheng InProComm, Inc.

Comment Type TR Comment Status X
There is neither security/authentication details nor a cipher suite defined for the sake of interoperability among devices built by different vendors.

SuggestedRemedy
Please provide the details and the cipher suite clearly.

Proposed Response Response Status O

CI 10 SC P 184 L 1012 # 1838
Rasor, Gregg Motorola

Comment Type E Comment Status X
Add the following (informative) paragraph hereafter:_"First, however, we give a general overview. The system comprises of ordinary devices, a single piconet controller, and a fixed external trusted party (see the mapping of roles to devices as defined in 10.3.2.2). The piconet controller acts as the security manager of the operational network. As such, it authenticates devices that would like to join the piconet and facilitates the distribution of data keys, to be used for securing communications between devices in the piconet. In addition, it allocates time slots for these message exchanges to each piconet device (see the role model of 10.3.2.1). Finally, it enforces the security rules as formulated in 10.3.3. Device authentication and the initial establishment of keying material are based on public key techniques. Evidence regarding the authenticity and validity of these public keys is corroborated via the external trusted party, who facilitates the generation of authentic public keying material for each device and the verification hereof during system operations (see 10.3.1.3 and 10.3.2.1). The role of the external trusted party is limited to the system initialization phase." Comment: this informative text illuminates some of the design rationale behind the current security architecture and should prove useful, esp. to non-specialists.

SuggestedRemedy

Proposed Response Response Status O

CI 10 SC P 184 L 26 # 1839
Rasor, Gregg Motorola

Comment Type E Comment Status X
Replace 'the it would' by 'it would'.

SuggestedRemedy

Proposed Response Response Status O

CI 10 SC 1 P 177 L 23 # 1798
Rasor, Gregg Motorola

Comment Type TR Comment Status X
One might need a different identifying string than the IEEE MAC address, in the event that anonymity of devices is required as an additional security objective.

SuggestedRemedy
Delete '(the IEEE MAC Address)'.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 10 SC 1 P 177 L 25 # 1795

Rasor, Gregg Motorola

Comment Type E Comment Status X
Add that the nodes operate on close distance from one another.

SuggestedRemedy

Proposed Response Response Status O

CI 10 SC 1 P 177 L 25 # 1796

Rasor, Gregg Motorola

Comment Type E Comment Status X
The PNC has local address 0, neighbor piconets and child piconets have local addresses 0xFA-0xFC, and one has reserved addresses for broadcast (0xFF), temporary during association (0xFE), and for multicast (0xFD). Thus, the range of local addresses assigned to entities in a piconet setting is 0x00-0xFC, which adds up to 253 (254, if one includes the temporary local address).

SuggestedRemedy
Replace '252' by '253'.

Proposed Response Response Status O

CI 10 SC 1 P 177 L 3435 # 1797

Rasor, Gregg Motorola

Comment Type TR Comment Status X
The current wording does not cover the admission of devices to a piconet and the handling of child and neighbor piconets.

SuggestedRemedy
Replace 'This standard describes only the communication behavior between DEVs in the piconet' by 'This standard describes only the communication behavior between WPAN-enabled devices and -entities'.

Proposed Response Response Status O

CI 10 SC 1 P 177 L 50 # 1799

Rasor, Gregg Motorola

Comment Type E Comment Status X
The current wording does not cover, e.g., neighbor and child piconets.

SuggestedRemedy
Replace 'DEVs' by 'entities'.

Proposed Response Response Status O

CI 10 SC 1 P 177 L 6 # 1794

Rasor, Gregg Motorola

Comment Type E Comment Status X
The characteristics of the 802.15.3 WPAN define the context and the constraints the security framework has to live with. In itself issues like communication bandwidth are not related to security, but do impose restrictions here on (e.g., selected encryption mechanisms must guarantee sufficient throughput).

SuggestedRemedy
Replace 'security-related' by 'security-relevant'

Proposed Response Response Status O

CI 10 SC 1 P 178 L 3 # 1800

Rasor, Gregg Motorola

Comment Type E Comment Status X
The current wording does not cover, e.g., neighbor and child piconets.

SuggestedRemedy
Replace 'DEVs' by 'entities'.

Proposed Response Response Status O

CI 10 SC 1.1 P L # 546

GUBBI, RAJUGOPAL Broadcom, corp

Comment Type E Comment Status X
This subclause does not belong here. it is better suited in clause-5

SuggestedRemedy
move it to clause 5

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 10 SC 1.1 P 177 L # 801
 Kinney, Patrick Invensys
 Comment Type E Comment Status X
 This section, Characteristics of the IEEE 802.15.3 WPAN; seems to be out of place, it's a duplicate entry.
 SuggestedRemedy
 eliminate it

Proposed Response Response Status O

CI 10 SC 10. P 177 L # 1609
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 General Comment: Given that the entire piconet uses the same Keys, it is imperative that we choose a mandatory cipher suite as voted on in Austin.
 SuggestedRemedy

choose and document the mandatory cipher suite.
 Proposed Response Response Status O

CI 10 SC 10. P 177 L 1 # 1229
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Retitle this section
 SuggestedRemedy
 Instead of "Privacy and Security" call this section "Authentication and Security" and move all the authentication text out of clause 8.3.1 over to this section.
 Proposed Response Response Status O

CI 10 SC 10.1 P 177 L 4 # 418
 Gilb, James Appairt
 Comment Type E Comment Status X
 This section is interesting, but distracts from the requirements of this clause. Move everything up to, but not including, 10.2.2 to an informative annex that provides the rationale for the security implementation. Also move 10.3.2 through 10.3.3 to the same area

SuggestedRemedy
 Move the sections to an new annex.

Proposed Response Response Status O

CI 10 SC 10.1.1 P 177 L 13 # 1608
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 this section belongs in clause 5.

SuggestedRemedy
 Consider moving to clause 5

Proposed Response Response Status O

CI 10 SC 10.1.1 P 177 L 15 # 1607
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 objects are typically within 10 m apart, not around 10 m apart.

SuggestedRemedy
 Change to "moving objects that are typically within 10 m apart.

Proposed Response Response Status O

CI 10 SC 10.1.1 P 177 L 25 # 1230
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Number of DEVs is listed as 252

SuggestedRemedy
 Should this be 256?

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 10 SC 10.1.1 P 177 L 27 # 71

Barr, John Motorola

Comment Type T Comment Status X
PNC does not allocate bandwidth, only channel time.

SuggestedRemedy
Change 'bandwidth' to 'channel time'.

Proposed Response Response Status O

CI 10 SC 10.1.1 P 177 L 30 # 269

Gifford, Ian Self

Comment Type E Comment Status X
The word ad-hoc is spelled incorrectly here, subclause 10.1.2, page 178, line 3, and subclause 10.2.2, page 179, line 13.

SuggestedRemedy
Ad hoc (please, no hyphen) has been an English word for over a hundred years (and yes, it has to do with Latin). Change all occurrences of this word to ad hoc.

Proposed Response Response Status O

CI 10 SC 10.1.2 P 177 L 3741 # 1677

Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
The constraints described in this section are possible limitations and are discussed to give rationale about why we chose what we did and what dangers there are for implementers. These are not strict constraints since not all devices will have these

SuggestedRemedy
Replace section title with "Security Limitations in an IEEE 802.15.3 WPAN". Replace first line to: "The security of an 802.15.3 WPAN is dependent on the devices having certain properties. When implementing 802.15.3 security in a device, the user should take into account the following possible constraints, which may limit the capability of the device to perform in a secure manner." Comment via Ari Singer.

Proposed Response Response Status O

CI 10 SC 10.2.1 P 178 L # 1611

Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Even if access control is provided at a higher layer for the piconet, we need some way to ensure that devices do not join the wrong piconet.

SuggestedRemedy
Add a mechanism to control which piconet a DEV joins.

Proposed Response Response Status O

CI 10 SC 10.2.1 P 178 L 1617 # 757

Huang, Bob Sony Electronics

Comment Type T Comment Status X
Refers to identity of 'its communication party'. Is this a person or a host device?

SuggestedRemedy
Clarify. If it is a host device, what assurance is there that the (new) device should be allowed to enter the network? i.e., device could belong to a neighbor.

Proposed Response Response Status O

CI 10 SC 10.2.1 P 178 L 18 # 1612

Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
We should make it clear that the "communicating party" is the piece of equipment and not the human using it.

SuggestedRemedy
Add text that makes it clear that the "communicating party" is the piece of equipment and not the human using it.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 10 SC 10.2.1 P 178 L 2324 # 1678
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 Non-repudiation is more properly defined as "Prevention of an entity claiming that a DEV performed an action that it did not perform." This is the other side of the coin of what is described in the text, but the point is that an entity that cannot deny it has done certain things also gets the benefit that it cannot be claimed that it did something that it

SuggestedRemedy
 Comment via Ari Singer.

Proposed Response Response Status O

CI 10 SC 10.2.1 P 178 L 34 # 1610
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 We do authentication of the DEV, but not he owner or user. We need to have some way of controlling access to the piconet based on the owner of the equipment.

SuggestedRemedy
 If access control is done at a higher layer, we need to at least provide the MLMEs to make it possible.

Proposed Response Response Status O

CI 10 SC 10.2.2 P 179 L 13 # 1614
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 Need to add reference to the access control list.

SuggestedRemedy
 Change to "Regulation of admission of these DEVs requires evidence as to the true identity of the DEVs that comprise the piconet, and membership in the access control

Proposed Response Response Status O

CI 10 SC 10.2.2 P 179 L 13 # 1613
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 met is probably not the best term to use.

SuggestedRemedy
 change met to communicated

Proposed Response Response Status O

CI 10 SC 10.2.2 P 179 L 30 # 1615
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 need to add "and access control list."

SuggestedRemedy
 Change to "The authentication of the DEV will be based upon evidence regarding its true identity and proof that the DEV itself corroborated this evidence and that the DEV is also in the access control list."

Proposed Response Response Status O

CI 10 SC 10.2.3 P 179 L 25 # 1679
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 If the piconet implements security, it always requires authentication (number 1) and sometimes requires payload protection (number 2), not just a combination of the two.

SuggestedRemedy
 Replace this line by: "The cipher suite in use determines the currently enforced security requirements. If security is in use, the cipher suite shall enforce requirement 1 below and may enforce requirement 2." Comment via Ari Singer.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 10 SC 10.2.3 P 179 L 31 # 1680
Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
The heading is misleading and not accurate to the requirement.

SuggestedRemedy
Change heading to "Payload protection for authenticated parties only." Comment via Ari Singer.

Proposed Response Response Status O

CI 10 SC 10.3.1.1 P 180 L 1213 # 1681
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Requiring that the device not have a user interface for the input of secret keying material negates the possibility of using methods where a password/passphrase is input as a shared secret and that is used for keying material. This may prevent the use of other mechanisms such as 802.1x and 802.11b security.

SuggestedRemedy
Recommend the removal of the second sentence in this paragraph (leaving the parenthetical comment in some form may be okay). Comment via Ari Singer.

Proposed Response Response Status O

CI 10 SC 10.3.1.1 P 180 L 18 # 1616
Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
change the acronym from RNG to PRNG.

SuggestedRemedy
Make a global change from RNG to PRNG

Proposed Response Response Status O

CI 10 SC 10.3.1.3 P L # 1682
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
It is unclear whether this section is normative or informative, but it seems to imply the use of a certificate authority, which should not be a requirement in the standard. The use of certificates and the method for verifying the validity of a public key should be outside the scope of the standard. Some arguments for this point of view include: 1) If two devices do not share a common CA, they cannot set up a piconet using security. 2) Certificates should have limited lifetimes and be revocable in order to provide the expected security of certificates. Since this section assumes that keys are never revoked, this limits the practical usefulness of certificates. 3) A device may want to act as its own CA and sign keys of devices it trusts rather than relying on an "external" trusted party. 4) A device may want to have a list of public keys that it trusts without using certificates. Certificates have the drawbacks in that they are computationally more expensive to use than to not use and they may require more storage space than needed (even using implicit certificates).

SuggestedRemedy
It should be made clear that this section is informative and other alternatives should be suggested such as low power PHY transmission, user interface input and 802.1x methods. Comment via Ari Singer.

Proposed Response Response Status O

CI 10 SC 10.3.1.3 P 180 L 4047 # 1683

Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
Implicit certificates are simply a special form of public-key certificate that is proprietary to Certicom Corp. There is no reason to explicitly describe them in the document as they provide exactly the same functionality as other certificates.

SuggestedRemedy
Recommend removing this paragraph. Comment via Ari Singer.

Proposed Response Response Status O

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CI 10 SC 10.3.1.3 P 180 L 48 # 419
 Gilb, James Apparent

Comment Type T Comment Status X
 Since we can assume physical control of the DEVs in a PAN as well as close proximity, we should allow the verification of the public keys to use a physical connection combined with a user action.

SuggestedRemedy
 Add an enumeration item: "3) Physical contact with user intervention: This provides a method for the public key certificates to be passed from one DEV to another without using the wireless link. The user intervention would be required to complete the process, either by pressing a combination of buttons or in response to a prompt from the DEV. In this case the trusted part is the user who has physical control of both DEVs."

Proposed Response Response Status O

CI 10 SC 10.3.1.3 P 180 L 48 # 420
 Gilb, James Apparent

Comment Type T Comment Status X
 The external trusted part has not yet been defined.

SuggestedRemedy
 Indicate that the external trusted part is defined by the cipher suite.

Proposed Response Response Status O

CI 10 SC 10.3.1.3 P 181 L 11 # 1231
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
 Lacking detail on how authentication will be done for 802.15.3

SuggestedRemedy
 Security committee needs to provide details on authentication algorithm.

Proposed Response Response Status O

CI 10 SC 10.3.1.3 P 181 L 57 # 1684
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 It should not be required that the trusted party's public key be stored in each device at all, much less only at manufacture time. This should be a recommendation for those using certificates, but not a requirement.

SuggestedRemedy
 Recommend (at least) changing "will" to "should". Comment via Ari Singer.

Proposed Response Response Status O

CI 10 SC 10.3.2.1 P 181 L 3639 # 1685
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 There may be more than one external trusted party (or none) and they may have control over different trust relationships. The cipher suite determines what method is used to verify the authenticity of a public key, but this may or may not involve the use of an external trusted party. In any case, the external trusted party is not a DEV role, so this role should not be included here.

SuggestedRemedy
 Recommend removing bullet 5). Comment via Ari Singer.

Proposed Response Response Status O

CI 10 SC 10.3.2.1 P 181 L 41 # 1686
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 The role of the external trusted party is also beyond the scope of the document.

SuggestedRemedy
 Change to "Since this standard addresses PANs, the security implications of the roles of the portal and the external trusted party are beyond the scope." Comment via Ari

Proposed Response Response Status O

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CI 10 SC 10.3.2.1 P 181182 L 838412 # 1687
Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
The external trusted party may not be outside the network and we need not require that it be external to the network.

SuggestedRemedy
Recommend removing bullet 3). Comment via Ari Singer.

Proposed Response Response Status **O**

CI 10 SC 10.3.2.1 P 182 L 2 # 1232
Roberts, Richard XtremeSpectrum

Comment Type **TR** Comment Status **X**
In the sentence prior to line 2 we have a nice discussion about the external trusted

SuggestedRemedy
Security committee needs to provide details on how this will be done for 802.15.3.

Proposed Response Response Status **O**

CI 10 SC 10.3.2.2 P 182 L 2126 # 1688
Shvodian, William XtremeSpectrum

Comment Type **T** Comment Status **X**
Discussion of the external trusted party should be made as general as possible and mention alternatives such as certificates, rather than stating what it will do.

SuggestedRemedy
Recommend replacing the paragraph with "The security implications of the trusted party role should be addressed elsewhere and are considered to be out of scope." Comment via Ari Singer.

Proposed Response Response Status **O**

CI 10 SC 10.3.2.2 P 182 L 22 # 81
Barr, John Motorola

Comment Type **E** Comment Status **X**
Seems to be a dangling reference here.

SuggestedRemedy
Remove or correct dangling reference. i.e. change "DEV,10.3.1.3" to "DEV".

Proposed Response Response Status **O**

CI 10 SC 10.3.3 P L # 1689
Shvodian, William XtremeSpectrum

Comment Type **TR** Comment Status **X**
The security policy section should be informative rather than normative. It is not always desirable to enforce the policy that every time a DEV times out or wishes to leave the piconet that the keys must be changed. This is a good policy in most cases and should be encouraged, but it does not affect interoperability and should not be

SuggestedRemedy
Remove all shall and will statements from this section and make it informative. Comment via Ari Singer.

Proposed Response Response Status **O**

CI 10 SC 10.3.3.1 P 182 L 28 # 1233
Roberts, Richard XtremeSpectrum

Comment Type **T** Comment Status **X**
Clause 10.3.3 hints at a security policy. Is this section complete? Is the security policy completely presented here?

SuggestedRemedy
Refer to security committee.

Proposed Response Response Status **O**

CI 10 SC 10.3.3.1 P 183 L 12 # 270
Gifford, Ian Self

Comment Type **E** Comment Status **X**
The note numbered list states "Notes:", most of the notes up to this page in the D09 are "Note that..." vs. "Notes: ...". The issue is normative vs. informative; respectively.

SuggestedRemedy
I defer to the Editor but it is likely that it should be changed to "Notes that...". If you choose to leave as-is then remember - Notes always start with the word "NOTE" in capital letters, followed by a dash, and are set in 9-point type.

Proposed Response Response Status **O**

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CI 10 SC 10.3.3.3 P 184 L 1 # 1234
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 During a PNC handover, why can't the old PNC just vouche for all the authenticated devices when they are handed over to the new PNC?

SuggestedRemedy
 Question for security committee.

Proposed Response Response Status O

CI 10 SC 10.3.3.3 P 184 L 4 # 421
 Gilb, James Appairent

Comment Type T Comment Status X
 The formal language is out of place here. The definition of the required action occurs later in the clause.

SuggestedRemedy
 Change "each DEV shall" to "each DEV will"

Proposed Response Response Status O

CI 10 SC 10.3.4 P 185 L 9 # 423
 Gilb, James Appairent

Comment Type E Comment Status X
 Some message sequence charts would really help explain the security operations.

SuggestedRemedy
 Add MSC's that reflect the formal language in the sub-clauses.

Proposed Response Response Status O

CI 10 SC 10.3.4.1 P 184 L 1427 # 1690
 Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
 The process for generating a public key and getting it registered with the external trusted party should be a recommended (alternative) method for initializing the public key on the device, not a mandatory method.

SuggestedRemedy
 The section should be called Security Initialization, rather than system initialization. Once again, this section should be made informative, as it does not affect interoperability. Comment via Ari Singer.

Proposed Response Response Status O

CI 10 SC 10.3.4.1 P 184 L 26 # 1235
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 remove stray word "the"

SuggestedRemedy
 ... back to its intitial state it would then ...

Proposed Response Response Status O

CI 10 SC 10.3.4.1 P 184 L 26 # 848
 Kleindl, Guenter Siemens

Comment Type E Comment Status X
 editorial

SuggestedRemedy
 replace 'initial state, the it would' with 'initial state, it would'

Proposed Response Response Status O

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CI 10 SC 10.3.4.2 P 184 L 50 # 1236
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
 Where is the cipher information. In this line we talk about a cipher suite but I see no detail in clause 10.

SuggestedRemedy
 Security committee to supply detail on cipher algorithm.

Proposed Response Response Status O

CI 10 SC 10.3.4.2 P 184 L 5152 # 1691
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 Why must the mode of operation and the cipher suite be fixed over the life cycle of the piconet? What if the PNC changes and needs to use a different cipher suite or mode? This requirement does not affect interoperability and should be removed.

SuggestedRemedy
 Recommend deleting the final sentence in the paragraph. Comment via Ari Singer.

Proposed Response Response Status O

CI 10 SC 10.3.4.2.1 P 185 L # 83
 Barr, John Motorola

Comment Type TR Comment Status X
 This section does not describe how authentication may fail due to a timeout.

SuggestedRemedy
 Add message sequence charts from 02033r0 for "Timed out Authentication (DEV side)" and "Timed out Authentication {PNC side)" to this section following the normal authentication MSC. Add following text prior to (DEV side): "When the DEV attempts to authenticate to the PNC, it sends an authenticate request. Until the authentication process is completed, the DEV is not granted the rights of an authenticated DEV, so the DEV should not wait indefinitely to get an authentication response from the PNC. While the DEV is waiting for the authentication response, it may participate in a challenge response protocol with the PNC or it may not. In either case, if the DEV does not receive an authenticate response within a reasonable amount of time, the MLME shall return a timed out response after which the DME may choose to attempt a new authenticate request or choose not to authenticate to the PNC." Add the following text prior to the (PNC side): "During the authentication process for a particular DEV, the PNC sends a challenge to the DEV for it to prove it is who it says it is. As with any other time a challenge is sent, the PNC sets a time limit for how long it will wait to receive the response. One reason for this timeout is to free up the resources of the PNC that are being used to save the state of the challenge protocol. If the challenge times out, the PNC shall send an authenticate response message to the DEV informing it that the authentication process failed."

Proposed Response Response Status O

CI 10 SC 10.3.4.2.1 P 185 L 0 # 82
 Barr, John Motorola

Comment Type TR Comment Status X
 More complete explanation of Authentication of a DEV to the piconet is required.

SuggestedRemedy
 Add the Message Sequence Chart for successful DEV authentication figure from document 02033r0 to this section at line 33. Replace text in lines 30-32 on page 185 with the following: "When a device wishes to join a secure piconet, it must authenticate to the PNC. The authentication process starts with an authentication request. When the PNC receives the authentication request, it checks to see if it is willing to allow that device into the piconet and, if so, it generates a challenge for the DEV so that it can prove it is who it claims to be. If the DEV provides a legitimate response to the challenge, the PNC sends back a confirmation that the DEV may join the piconet."

Proposed Response Response Status O

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CI 10 SC 10.3.4.2.1 P 185 L 1112 # 758
 Huang, Bob Sony Electronics

Comment Type **TR** Comment Status **X**
 From this, I believe that a device establishes its identity in na 'stand alone' fashion (i.e., true identity is established at the factory). However, to join a piconet, the ownership of the device is what is at question. How is that established.

SuggestedRemedy
 Clarify and reword as necessary.

Proposed Response Response Status **O**

CI 10 SC 10.3.4.2.1 P 185 L 12 # 1618
 Shvodian, William XtremeSpectrum

Comment Type **T** Comment Status **X**
 Need to add text about access control list.

SuggestedRemedy
 Change to "Admission of a DEV to the piconet is based upon evidence regarding its true identity and proof that the DEV itself corroborated this evidence and teh DEV is in the access control list."

Proposed Response Response Status **O**

CI 10 SC 10.3.4.2.1 P 185 L 2124 # 1676
 Shvodian, William XtremeSpectrum

Comment Type **T** Comment Status **X**
 The cryptographic evidence provided by the PNC and the DEV may give evidence of their identity, but identity alone doesn't necessarily permit a device to be in the piconet, or to act as a PNC. This decision is made on the basis of identity and other rules. Cryptographic evidence of identity isn't necessary or sufficient to identify the roles the devices are intended to assume.

SuggestedRemedy
 Change 2 bullets to: 1) The PNC shall have sufficient information to decide whether or not the DEV is authorized to join the piconet, and will have cryptographic material related to the DEV. 2) The joining DEV shall have sufficient information to decide whether or not the PNC is authorized to perform the role of security manager, and will have cryptographic material related to the PNC. Comment via Ari Singer.

Proposed Response Response Status **O**

CI 10 SC 10.3.4.2.1 P 185 L 41 # 1238
 Roberts, Richard XtremeSpectrum

Comment Type **TR** Comment Status **X**
 In line 41, mention is made of public key and symmetric key techniques ... yet not details for provided for either.

SuggestedRemedy
 Security committee needs to provide the details on public and private key generation.

Proposed Response Response Status **O**

CI 10 SC 10.3.4.2.1 P 185 L 44 # 1239
 Roberts, Richard XtremeSpectrum

Comment Type **TR** Comment Status **X**
 In line 44 and line 45, mention is made of "key encryption key" and "entity authentication protocol", yet there are no details on either of these in the document.

SuggestedRemedy
 Security committee to provide details on key encryption key and also on the authentication protocol.

Proposed Response Response Status **O**

CI 10 SC 10.3.4.2.1 P 185 L 46 # 1240
 Roberts, Richard XtremeSpectrum

Comment Type **TR** Comment Status **X**
 In line 46, mention is made of a "separate key agreement protocol", yet there are no details on this protocol.

SuggestedRemedy
 Security committee to provide details on the "separate key agreement protocol". Also, details on its usage.

Proposed Response Response Status **O**

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CI 10 SC 10.3.4.2.2 P 186 L 21 # 422
 Gilb, James Apparent

Comment Type T Comment Status X
 Only need to re-issue keys if the DEV was authenticated as well as associated.

SuggestedRemedy
 Change "in the piconet." to be "in the piconet if the DEV that is disassociated was also authenticated in the piconet."

Proposed Response Response Status O

CI 10 SC 10.3.4.2.3 P 186 L 31 # 1247
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Mention is made of the "authentication process".

SuggestedRemedy
 Security committee to provide clause reference to the "authentication process".

Proposed Response Response Status O

CI 10 SC 10.43.4.2 P 184 L 41 # 1617
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 A low power DEV may belong to a piconet that has encryption on, but that DEV may wish to communicate without encryption to save power. Sec is a field in the stream management. We should allow streams to negotiate whether they want to use encryption or not.

SuggestedRemedy
 Document the ability of DEVs to turn encryption off for a stream, or get the SEC bit out of stream management.

Proposed Response Response Status O

CI 10 SC 2 P L # 1837
 Rasor, Gregg Motorola

Comment Type TR Comment Status X
 Currently, there are no references to communication behavior and security associations with child and neighbor piconets.

SuggestedRemedy
 Incorporate communication behavior and security associations with child piconets and neighbor piconets.

Proposed Response Response Status O

CI 10 SC 2 P 178 L 37 # 1801
 Rasor, Gregg Motorola

Comment Type E Comment Status X
 Delete the comma behind 'capabilities'.

SuggestedRemedy

Proposed Response Response Status O

CI 10 SC 2 P 179 L 21 # 1802
 Rasor, Gregg Motorola

Comment Type TR Comment Status X
 The current wording does not cover the admission of devices to a piconet and the handling of child and neighbor piconets.

SuggestedRemedy
 Replace ' between DEVs in the piconet' by 'between WPAN-enabled devices and

Proposed Response Response Status O
 Proposed Response Response Status O

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CI 10 SC 2.3 P 179 L # 1803
Rasor, Gregg Motorola

Comment Type TR Comment Status X

The current wording is not stated as a time-invariant property and does not cover the admission of child and neighbor piconets. Moreover, it conflicts with the intended operation described in Sub-clause 10.3.4.2.1 (Page 185, lines 11-13), since there unauthenticated devices are only denied time-slots and not denied association per se. Last, but not least, the security requirement should not specify which device (here, the PNC) should regulate the admission policy; this should rather depend on the role(s) associated with the devices (as elaborated upon in Sub-clause 10.3.2).

SuggestedRemedy

Change Item 1 to the following: 'Joining of authenticated entities only. At any given moment of time, effective admission of an entity to the piconet (authenticated association) must be based upon evidence regarding its true identity and proof that the device itself corroborated this evidence. Here, effective admission refers to allocation of time slots to an associated device, and distribution of keying material hereto.'

Proposed Response Response Status O

CI 10 SC 2.3 P 179 L # 1804
Rasor, Gregg Motorola

Comment Type TR Comment Status X

Currently, no mentioning is made to the peer-to-peer scenario, thus conflicting Sub-clause 10.1.1, Page 177, lines 25-26 (which specifies both peer-to-peer and broadcast communications); this should be corrected.

SuggestedRemedy

Item 2 should make more precise what is meant by a 'group' of piconet devices. As a minimum, this should include peer-to-peer (end-to-end) communication, and broadcasting. Ideally, this should include multicasting to any subset of the devices that constitute the piconet.

Proposed Response Response Status O

CI 10 SC 3 P 179 L 4142 # 1805
Rasor, Gregg Motorola

Comment Type TR Comment Status X

For the security architecture, the mapping between devices and their roles is essential. The security events trigger actions depending upon the role of a device. Without this role model, the security architecture is completely inflexible and security policy cannot be described correctly. Given the importance of this role model, rated this comment as a TR rather than 'Editorial' only.

SuggestedRemedy

Replace 'security assumptions and' by 'security assumptions, a classification of devices according to role(s) these assume, and'.

Proposed Response Response Status O
Proposed Response Response Status O

CI 10 SC 3 P 181 L 11 # 1808
Rasor, Gregg Motorola

Comment Type E Comment Status X

Add the following sentence 'For details, we refer to Item 3 of 10.1.2.'

SuggestedRemedy

Proposed Response Response Status O

CI 10 SC 3 P 181 L 13 # 1807
Rasor, Gregg Motorola

Comment Type E Comment Status X

Add the following (informative) sentence hereafter: 'The actual procedure by which public key pairs are generated has important practical consequences, since it determines to what extent devices can be re-initialized after manufacturing and influences the level of trust required in the external trusted party. A more detailed discussion is beyond the scope of this document.'

SuggestedRemedy

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 10 SC 3 P 181 L 20 # 1809
 Rasor, Gregg Motorola

Comment Type E Comment Status X
 The wording 'validity' implies a judgement. A mere enumeration is all that is needed

SuggestedRemedy
 Replace 'The following roles of DEVs are valid within the piconet setting' by 'One distinguishes the following roles of entities within the piconet setting'.

Proposed Response Response Status O

CI 10 SC 3 P 181 L 25 # 1810
 Rasor, Gregg Motorola

Comment Type TR Comment Status X
 The potential mapping of security functionality to the PNC is addressed in Sub-clause 10.3.2.2, and should not be addressed here; moreover, other mappings are conceivable. Given the importance of separating the role(s) of devices from the actual implementation hereof and avoiding confusion here, this comment is rated TR rather

SuggestedRemedy
 Delete the complete sentence 'The security manager shall be hosted by the current

Proposed Response Response Status O

CI 10 SC 3 P 181 L 3 # 1806
 Rasor, Gregg Motorola

Comment Type E Comment Status X
 Replace '10.3.1.1' by 'see 10.3.1.1'.

SuggestedRemedy

Proposed Response Response Status O

CI 10 SC 3 P 181 L 3133 # 1811
 Rasor, Gregg Motorola

Comment Type TR Comment Status X
 The potential mapping of security functionality to the PNC is addressed in Sub-clause 10.3.2.2, and should not be addressed here; moreover, other mappings are conceivable. Given the importance of separating the role(s) of devices from the actual implementation hereof and avoiding confusion here, this comment is rated TR rather

SuggestedRemedy
 Delete the complete sentence 'The PNC hosts ... security manager.'

Proposed Response Response Status O

CI 10 SC 3 P 181 L 34 # 1812
 Rasor, Gregg Motorola

Comment Type TR Comment Status X
 The question whether this role is present in the piconet or not depends on the mapping of roles to devices and is addressed in Sub-clause 10.3.2.2, and should not be addressed here. Given the importance of separating the role(s) of devices from the actual implementation hereof and avoiding confusion here, this comment is rated TR rather than 'Editorial' only.

SuggestedRemedy
 Change 'If present, this entity ensures' by 'This entity is the sole source that ensures'.

Proposed Response Response Status O

CI 10 SC 3 P 181 L 41 # 1813
 Rasor, Gregg Motorola

Comment Type E Comment Status X
 Replace 'Since this standard address PANs' by 'Since this standard addresses communications between WPAN-enabled devices and -entities only'.

SuggestedRemedy

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 10 SC 3 P 181 L 45 # 1814
 Rasor, Gregg Motorola

Comment Type E Comment Status X

Item 2 of the current paragraph (on PNCs) confuses the role model with the mapping of roles to devices (as addressed in Section 10.3.2.2) and violates the security invariant formulated in the security model (as discussed in Section 10.3.2.2). Given the importance of separating the role(s) of devices from the actual implementation hereof and given the importance of sticking to a carefully defined security policy and avoiding any confusion here, a total rewrite of this paragraph is required.

SuggestedRemedy

Replace this entire paragraph by a more appropriate text as follows: __The role model is motivated as follows: _1. The roles in the security model are formulated in such a way as to allow a distributed implementation. In particular, there might be more than 1 piconet controller, more than 1 security manager, and more than 1 external trusted party. What is important is that these roles may conceptually be thought of as being centralized. _2. The roles in the security model are independent of the way these are actually implemented. In particular, this means that different roles may be implemented in a single device. An example of the latter would be the creation of a single device that assumes both the role of piconet controller and that of security manager. _3. roles in the security model are separated from the actual devices that assume these roles, thus allowing for a dynamic mapping of roles to devices. An example of the latter would be changes to the piconet controller and to the security manager. _4. The roles in the security model are separated from the actual devices that assume these roles, thus allowing different devices to associate different roles with the same device, depending on their individual view on the role(s) this particular device should play. An example of the latter would be a device that assumes the role of security manager for one device and that of ordinary device for another device. _5.

45
 (PNC) need not be fixed in time and space. Since the device that is assigned the role of PNC might vary over time, it is not convenient to a priori assign any security functionality to it (for otherwise, trust might need to be established over and over again, at each change of PNC). _6. The external trusted party is assumed to be the sole source of global trust, since it is a party that is external to the network and might have facilities that are deemed necessary for proper key management (e.g., secure key generation facilities, proper authentic storage of keying material, availability, etc.).

Proposed Response Response Status O

CI 10 SC 3 P 182 L 4046 # 1817
 Rasor, Gregg Motorola

Comment Type TR Comment Status X

Without this additional sentence, the effect of composite security events is not

SuggestedRemedy

Add the following sentence hereafter: 'Simultaneous changes of the group structure and of the role are conceptually thought of as to take place subsequently, e.g., if the current PNC simply vanishes, this can be thought of as to have occurred in the order 'change role to ordinary device'; 'vanish'.'

Proposed Response Response Status O

CI 10 SC 3 P 182 L 41 # 1815
 Rasor, Gregg Motorola

Comment Type E Comment Status X

Replace 'exclusion' by 'to the exclusion'. Similarly, replace 'An example is' by 'An The example hereof is'.

SuggestedRemedy

Proposed Response Response Status O

The piconet controller CI 10 SC 3 P 182 L
 # 1816

Rasor, Gregg Motorola
 Comment Type TR Comment Status X

The current wording does not cover a device that will assume the (for him new) role of
SuggestedRemedy

Replace 'a change of role of the PNC' by 'a role change from PNC to ordinary device, or vice versa'.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 10 SC 3 P 183 L 4 # 1820
 Rasor, Gregg Motorola

Comment Type E Comment Status X
 Add the following (informative) sentence hereafter: 'Compliance with the key storage rule rests upon 'benign' devices implementing this rule; it cannot be enforced upon devices. This provided yet another reason that the security rule should be strictly

SuggestedRemedy

Proposed Response Response Status O

CI 10 SC 3 P 183 L 9 # 1819
 Rasor, Gregg Motorola

Comment Type TR Comment Status X
 Currently, this security relevant event is lacking; this should be corrected.

SuggestedRemedy

5Add the following item hereafter: '(2) PNC takeover (sign in). This refers to an alternate PNC device assuming the role of piconet controller'.

Proposed Response Response Status O

CI 10 SC 3 P 183 L 9 # 1818
 Rasor, Gregg Motorola

Comment Type E Comment Status X
 This illuminates that a change of role as PNC to that of ordinary device (rather than the other way around).

SuggestedRemedy

Replace 'PNC hand over' by 'PNC hand over (sign out)'.

Proposed Response Response Status O

CI 10 SC 3 P 185 L 17 # 1824
 Rasor, Gregg Motorola

Comment Type TR Comment Status X
 Each of the communicating parties should provide evidence that it corroborated evidence regarding its true identity itself.

SuggestedRemedy

Replace 'public keys' by 'public keys and evidence that each of these parties have access to the corresponding private keys'.

Proposed Response Response Status O

CI 10 SC 3 P 185 L 3032 # 1825
 Rasor, Gregg Motorola

Comment Type TR Comment Status X
 The current text does not cover the consequences of the execution of an authentication protocol.

SuggestedRemedy

Include the following paragraph hereafter: "The piconet controller will reject any commands other than an authentication request from associated devices for which the authentication protocol was not completed successfully. It will accept any commands from a positively authenticated device."

Proposed Response Response Status O

CI 10 SC 3 P 185 L 47 # 1826
 Rasor, Gregg Motorola

Comment Type TR Comment Status X
 This is an obvious error in the current text.

SuggestedRemedy

Replace 'piconet' by 'piconet controller'.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 10 SC 3 P 186 L 67 # 1827
 Rasor, Gregg Motorola

Comment Type E Comment Status X
 Include the following text here: "Special attention should be given to the fact that not all communication might be realized online, since one cannot assume that all devices are aware of each other (dormant mode)."

SuggestedRemedy

Proposed Response Response Status O

CI 10 SC 3.3.3 P 184 L 36 # 1821
 Rasor, Gregg Motorola

Comment Type TR Comment Status X
 In the current draft, a change of PNC unnecessarily triggers a re-authentication procedure. This expensive (!) procedure is not required by the security policy, since the role change does not invoke a change to the key-sharing group, and should therefore be skipped. Granted, I also first thought otherwise. One can explain the phenomenon as follows in a more informal way. If one has a PNC hand over and encryption is on, the only devices that can read encrypted traffic are those that already had been authenticated by the previous PNC (otherwise, they had no way of getting any keying material, except by 'force' (breaking open the supposedly trusted module). Hence, one can safely continue broadcasting messages using these keys, since only those previously already authenticated devices can read traffic. If only authentication is on, then things might get tricky, since it depends on the proper and authentic hand over of the list of authenticated devices from the old PNC to the new one (This is handled in Sub-clause 10.3.4.2.3). To avoid confusion and violation of the security policy, a total rewrite of this paragraph is required.

SuggestedRemedy

Replace this entire sub-clause by a more appropriate text as follows:_'We consider the effect of changes to the roles of devices in the scenario where information shared between members of a group is secured via a common (symmetric) group key._'A change of the role of the piconet controller due to a PNC hand over has no effect on the group structure, so it does not impact the group key.'_

Proposed Response Response Status O

CI 10 SC 3.4.2.3 P 186 L 2538 # 1829
 Rasor, Gregg Motorola

Comment Type TR Comment Status X
 In the current draft, the change of PNC automatically triggers a re-authentication procedure. This (expensive!) re-authentication procedure is not required by the security policy (10.3.3), since the role change does not invoke a change to the key-sharing group, and should therefore be avoided altogether.

SuggestedRemedy

Replace this entire sub-clause by a more appropriate text as follows:_"A change of piconet controller is based on the election of an alternate piconet controller._'The parting piconet controller transfers the list of authenticated piconet devices to the new piconet controller. If this list is received in proper order, the new piconet controller will take this list as to represent the authenticated devices in the piconet and will act accordingly. Hence, it will reject any commands other than an authentication request from associated devices that are not listed as being authenticated and it will accept any commands from a device that is listed as being authenticated._'If this list of authenticated devices is not received properly, e.g., if the parting piconet controller has vanished, all devices must be assumed to be unauthenticated, thus requiring the piconet controller to engage in the same communications as described in §10.3.4.2.1 and re-authenticate each of the other devices in the piconet."_

Proposed Response Response Status O

CI 10 SC all P 177 L # 742
 Huang, Bob Sony Electronics

Comment Type TR Comment Status X
 Three equally key promises of 15.3 are high bandwidth, low cost and low power consumption. Of these, high bandwidth is the key differentor, opening the door to the possibility of rich multimedia applications. However, rich multimedia brings with it a strong requirement for high security (to protect enhanced digital video content). 15.3 does not yet specify a security system with assured interoperability between implementations. Without assured interoperable security, the usefulness of 15.3 for transporting protected digital content in a consumer environment will be severely limited.

SuggestedRemedy

A default (single) encryption system must be unambiguously specified. Additional encryptions options are acceptable.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 10 SC all P 177 L # 764
 Huang, Bob Sony Electronics

Comment Type TR Comment Status X
 Security, to protect artistic intellectual property of rich multimedia content, is key to the widespread adoption of 802.15.3 in a multiplicity of home consumer products. This draft does not provide a default baseline encryption algorithm through which different implementations of 802.15.3 can securely communicate. It is important that a single baseline algorithm be selected. Multiple options, increasing the cost of implementation, can not replace a default system.

SuggestedRemedy
 choose a baseline security algorithm.

Proposed Response Response Status O

CI 10 SC NA P 0 L 0 # 85
 Barr, John Motorola

Comment Type T Comment Status X
 Security description seems to be incomplete.

SuggestedRemedy
 Complete description of security interoperation for all of the designated security options that will be supported.

Proposed Response Response Status O

CI 11 SC P L # 1723
 Rofheart, Martin XtremeSpectrum

Comment Type TR Comment Status X
 The coexistence mechanisms for the TG3 2.4 GHz are lacking.

SuggestedRemedy
 Refer to the remedy indicated by Rick Roberts
 Proposed Response Response Status O

CI 11 SC P L # 782
 Akahane, Masa Sony

Comment Type TR Comment Status X
 As we experienced at the ballot for 802.15.1, coexistence description need to be approached. 802.15.3 will not be an exception as far as we have 2.4GHz PHY.

SuggestedRemedy
 Need technical description for coexistence solution such as Dynamic Frequency

Proposed Response Response Status O

CI 11 SC 11.1 P 187 L 27 # 1249
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Need to complete reference to clause 6.6.1

SuggestedRemedy
 The regulatory domains are enumerated in a vector called PHYPIB_RegDomainSupported (6.6.1) and are indicated by the parameter PHYPIB_CurrentRegDomain. The domains are mapped to PHYPIB_CurrrentRefDomain as 0x00=Europe, 0x003=Japan, 0x01=USA and 0x02=Canada.

Proposed Response Response Status O
 Proposed Response Response Status O

CI 11 SC 11.1 P 187 L 42 # 424
 Gilb, James Appairant

Comment Type T Comment Status X
 Add 15.247 to the list of applicable US standards if the NPRM for digital modulation is approved.

SuggestedRemedy
 Add ", 15.247" at the right location.
 Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 11 SC 11.2 P 188 L 1 # 1257
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 It was suggested previously in this letter ballot that the following items be PHY dependent. They should be added to clause 11.2.

SuggestedRemedy
 11.2.9 MaxTransferUnitSize 11.2.10 MinSuperFrameDuration 11.2.11
 MaxSuperframeDuration
 Proposed Response Response Status O

CI 11 SC 11.2.1 P 188 L 67 # 272
 Gifford, Ian Self

Comment Type E Comment Status X
 The word "jurisdictions" is not advisable.

SuggestedRemedy
 I recommend the sentence "...jurisdictions that have allocated this band." be replaced with "...regulatory bodies that have designated this band."

Proposed Response Response Status O

CI 11 SC 11.2.1 P 188 L 7 # 1250
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Add the following text.

SuggestedRemedy
 As indicated by Table 41, this is PHYPIB_Type value 0x00.

Proposed Response Response Status O

CI 11 SC 11.2.2 P 188 L 12 # 1251
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
 Clause 11.2.2 is misleading for deployment within the USA. FCC Regs 15.249 indicate that the measurement of interest is 50 uV/meter at 3 meters; hence, just measuring at the antenna input is not conclusive. If the power level is reduced by the amount of the maximum antenna directional gain then this is accurate. Also, assuming a 0 dBi antenna is ok but a cop out. For example, if the antenna is very inefficient (lossy) then you can actually increase the RF input power to the antenna to compensate for the antenna loss since the type acceptance metric is field strength measurements.

SuggestedRemedy
 A note needs to be added that indicates the implementor needs to refer to the rules of the country of deployment since type acceptance testing may require field strength measurements that are not the same as antenna input power.

Proposed Response Response Status O

CI 11 SC 11.2.3 P 188 L # 1745
 Chen, Kwang-Cheng InProComm, Inc.

Comment Type TR Comment Status X

The 2.4 GHz coexistence issue is not fully and clearly addressed

SuggestedRemedy
 Please address the coexistence issue/mechanism clearly.

Proposed Response Response Status O

CI 11 SC 11.2.3 P 188 L # 1789
 Liu, Shawn InProComm, Inc.

Comment Type TR Comment Status X

The 2.4 GHz coexistence issue is not fully and clearly addressed

SuggestedRemedy
 Please address the coexistence issue/mechanism clearly.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 11 SC 11.2.3 P 188 L # 1771
 Maa, Yeong-Chang InProComm, Inc.

Comment Type TR Comment Status X
 The 2.4 GHz coexistence issue is not fully and clearly addressed

SuggestedRemedy
 Please address the coexistence issue/mechanism clearly.

Proposed Response Response Status O

CI 11 SC 11.2.3 P 188 L # 1754
 Chen, Hung-Kun InProComm, Inc.

Comment Type TR Comment Status X
 The 2.4 GHz coexistence issue is not fully and clearly addressed

SuggestedRemedy
 Please address the coexistence issue/mechanism clearly.

Proposed Response Response Status O

CI 11 SC 11.2.3 P 188 L 18 # 1253
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X

The data in this section needs to be tied to the PHY PIB. This can be done as shown below.

SuggestedRemedy

PHYPIB_NumChannelsSupported = 3 or 5 (apparently it has two values)
 PHYPIB_CurrentChannel=1 or 2 or 3 (or 4 or 5) as shown in first column of table 75.

Proposed Response Response Status O

CI 11 SC 11.2.3 P 188 L 18 # 1254
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
 The table in clause 11.2.3 (Table 75) indicates an IEEE802.11b coexistence mode that puts the 802.15.3 transmissions directly on top of the 802.11b channels. This is called coexistence mode. I fail to understand how deliberately putting 15.3 transmissions on 802.11b channels is a coexistence mode. Clause 11 needs a complete subsection that discusses coexistence with existing 802 PHY types in the 2.4 GHz band, especially given that the GTS slot assignments DO NOT listen before transmitting. One suggestion is that even through a DEV has a GTS slot assignment, it still must listen before transmitting and reframe from transmitting if the channel is in use. This "channel in use" data can be indicated back to the PNC by a command packet and the PNC can try to find a new channel. The importance of coexistence, and the serious consideration being made by ExCom and SA, are exemplified by the comments that were generated by the first rejection of 802.15.1 by the SA.

SuggestedRemedy
 PHY committee to reconvene to work on coexistence mechanisms for 802.15.3 and supply text for letter ballot approval. I'd withdraw this comment if the MAC and the PHY were split into two separate letter ballots. Sample text can be found in TG4 draft text D13, in clauses 6.9.2 and 7.5.1. These are copied below for reference. 6.9.2 802.15.4 2.4GHz as interferer The 802.15.4 devices have several characteristics that improves its coexistence with other wireless devices operating in the 2.4 GHz band. 802.15.4 devices are intended for low duty cycle applications (typically less than 1%) using CSMA/CCA mechanism for collision avoidance. Furthermore, it is defined to operate in two possible frequency bands (868/915 MHz and 2.4 GHz). Finally, the low transmit power will minimize their effect on other 802.11/802.15 compliant devices. 7.5.1 Channel Access All devices must use the radio channel in such a way as not to obstruct the transmissions of other devices, which may already be transmitting. The mechanism for handling this requirement is called Carrier Sense Multiple Access - Collision Avoidance (CSMA-CA). A device wishing to transmit using CSMA-CA must first sense the channel for radio activity. If no activity is detected, the device may transmit. If activity is detected the device should back-off for some random period before beginning the CSMA-CA procedure again. A device that senses activity on the channel, repeatedly, a specified number of times may not transmit its message regardless but should consider its transmission attempt a failure. All transmission should abide by the CSMA-CA channel access mechanism.

Proposed Response Response Status O

P802.15.3 Draft 09 Comments

CI 11 SC 11.2.3 P 188 L 18 # 1252
 Roberts, Richard XtremeSpectrum
 Comment Type TR Comment Status X
 Clause 11.2.3 indicates there are two frequency plans. What is the basis for picking one frequency plan over the other? How is this selection made? Is it done by the DME or is it done at manufacture time? If it is done by the DME then how is having two frequency plans supported by the PLME and the PHY PIB?

SuggestedRemedy
 PHY group to comment and clarify. Text may need to be generated for clause 11.2.3 to clarify.

Proposed Response Response Status O

CI 11 SC 11.2.3 P 188 L 2027 # 766
 Huang, Bob Sony Electronics

Comment Type TR Comment Status X
 Co-existence is very important in consumer products (refer). While an alternate frequency plan, to enhance co-existence, is interesting, there seems to be no mechanism for automatically choosing a fewquency plan. Without some guidance in this area, it can not be said with assurance that an implementation conforming to this draft standard will have any degree of success in increasing co-existence. Thus draft fails to meet an important and self proclaimed goal.

SuggestedRemedy
 Unfortunately, this comment is prepared while the deadline for comments draws near, preventing the extensive drafting required for an adequate solution.

Proposed Response Response Status O

CI 11 SC 11.2.3 P 188 L 27 # 425
 Gilb, James Appairnt

Comment Type T Comment Status X
 The current cnannel arrangement cannot be use with the TX PSD in under US 15.249 rules. Ignore this if the 15.247 NPRM on digital modulation reaches report and order.
 SuggestedRemedy
 Change the channel locations to the following frequencies, 2412, 2432, 2442, 2451 and 2461, all in MHz.

Proposed Response Response Status O

CI 11 SC 11.2.5 P 188 L 44 # 1255
 Roberts, Richard XtremeSpectrum
 Comment Type T Comment Status X
 Temperature Range ... seems ok for in the house but how about outside deployment, such as a PDA that has been lying in a car.

SuggestedRemedy
 PHY committee to consider increasing range from -20 to +40, or some suitable range given outside deployment.

Proposed Response Response Status O
 Proposed Response Response Status O

CI 11 SC 11.2.6.1 P 189 L 8 # 426
 Gilb, James Appairnt

Comment Type T Comment Status X
 Need to add a definition for RIFS

SuggestedRemedy
 Add a row to the table that has: RIFS aCCADetectTime + aRXTXTurnaroundTime 11.6.5 and 11.2.6.2

Proposed Response Response Status O

CI 11 SC 11.2.6.3 P 189 L 23 # 1256
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 editorial

SuggestedRemedy
 remove the hyphen in the word "transmitted"

Proposed Response Response Status O

CI 11 SC 11.2.6.3 P 23 L # 1621
 Shvodian, William XtremeSpectrum

Comment Type E Comment Status X
 trans-mitted should not be hyphenated.

SuggestedRemedy
 unhyphenate.
 Proposed Response Response Status O

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Cl 11 **SC 11.2.8** **P 189** **L 37** **# 1622**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Details of the HCS should be provided to the level that they are in 7.2.8.
SuggestedRemedy
 Add CRC details here.
Proposed Response *Response Status* **O**

Cl 11 **SC 11.3** **P 189** **L 49** **# 427**
 Gilb, James Appairnent
Comment Type **E** *Comment Status* **X**
 Add a reference for trellis coding here.
SuggestedRemedy
 Add a bibliograph reference following "with Trellis coding." The reference is: Gottfried Ungerboeck, "Channel Coding with Multilevel/Phase and Signals", IEEE Trans. on Information Theory, Vol 28 January 1982. Put this in the bibliography.
Proposed Response *Response Status* **O**

Cl 11 **SC 11.3** **P 190** **L 3** **# 1258**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Add the following text at the end of the paragraph.
SuggestedRemedy
 The data rates are respectively the entries to the PHYPIB_DataRateVector.
Proposed Response *Response Status* **O**

Cl 11 **SC 11.3.2** **P 190** **L 22** **# 273**
 Gifford, Ian Self
Comment Type **E** *Comment Status* **X**
 The words "air medium" are not advisable.
SuggestedRemedy
 I recommend the sentence ending "...through the air medium." be replaced with "through the common air interface."
Proposed Response *Response Status* **O**

Cl 11 **SC 11.3.3** **P 191** **L 26** **# 1260**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 Rewrite part of the sentence as shown below.
SuggestedRemedy
 In the table, the term +jw shall be defined ...
Proposed Response *Response Status* **O**

Cl 11 **SC 11.3.3** **P 191** **L 29** **# 274**
 Gifford, Ian Self
Comment Type **E** *Comment Status* **X**
 The following sentence does not end in a period: determined relative to the phase of the last symbol in the CAZAC sequence, 11.4.2
SuggestedRemedy
 Add the period.
Proposed Response *Response Status* **O**

Cl 11 **SC 11.3.4** **P 192** **L 45** **# 1261**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Missing Figure reference
SuggestedRemedy
 ... in Figure 99 and Figure 100, respectively.
Proposed Response *Response Status* **O**

Cl 11 **SC 11.3.4** **P 192** **L 4546** **# 849**
 Kleindl, Guenter Siemens
Comment Type **E** *Comment Status* **X**
 missing figure number
SuggestedRemedy
 replace 'Figure and Figure 100' by 'Figure 99 and Figure 100'
Proposed Response *Response Status* **O**

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CI 11 SC 11.3.4 P 192 L 47 # 1262
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 We have a formatting problem on some symbol scripts. The same problem is in line 47, line 51, 52, and 53.

SuggestedRemedy
 Reformat math symbols.

Proposed Response Response Status O

CI 11 SC 11.3.4 P 198 L 47 # 428
 Gilb, James Appairnt

Comment Type E Comment Status X
 Is the QPSK-TCM 8-state or 4-state TCM?

SuggestedRemedy
 Change description to 4-state if it is true (and throughout clause 11). Otherwise leave it alone.

Proposed Response Response Status O

CI 11 SC 11.4.1 P 200 L 10 # 1735
 Karaoguz, Jeyhan Broadcom Corp.

Comment Type T Comment Status X
 Tail symbols are not used for all modulation types

SuggestedRemedy
 Finish the first paragraph by saying "if necessary".

Proposed Response Response Status O

CI 11 SC 11.4.1 P 200 L 46 # 1736
 Karaoguz, Jeyhan Broadcom Corp.

Comment Type E Comment Status X
 Repetition of the PHY and MAC header is not explained in the text. Also it is not clear that 22 Mbps DQPSK modulation applies to the second repetition of the PHY and MAC header in figure 108.

SuggestedRemedy
 See the comment

Proposed Response Response Status O

CI 11 SC 11.4.1 P 200 L 6 # 429
 Gilb, James Appairnt

Comment Type T Comment Status X
 The frame format shows and refers to the HCS as separate from the MAC header, but in clause 7 and most of the rest of clause 11, the HCS is considered to be part of the MAC header.

SuggestedRemedy
 Lots of changes here either way. If we change the MAC header definition to exclude the HCS, we need to update other spots in clause 11. Otherwise, the following modifications need to be made in 11.4.1: Change "and appends this to the" to be "and inserts this into the end of the" in line 7, page 200 and change "and is appended this to the combined PHY and MAC" to be "and is inserted into the end of the MAC" in line 7, page 201. Change the MAC Header boxes to be MAC Header - HCS for the first two rows of figures 107 and 108. Delete the HCS boxes and + HCS in the other rows. Change "Calculate HCS" to be "Calculate and insert HCS" in one place in each figure

Proposed Response Response Status O

CI 11 SC 11.4.1 P 201 L # 1623
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 Sending the header twice raises some interesting questions: What if the preamble is incorrect? Does the PHY then always look at the payload to see if there is a 11 Mbps header? If not, what is the purpose?

SuggestedRemedy
 Detail how the second header is processed.

Proposed Response Response Status O

CI 11 SC 11.4.1 P 201 L 1 # 1624
 Shvodian, William XtremeSpectrum

Comment Type T Comment Status X
 What does the length field cover - the frame body, but not the second header?

SuggestedRemedy
 Clarify what the length field covers. The additional header time must be accounted for by the MAC in calculating channel time.

Proposed Response Response Status O

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CI 11 SC 11.4.2 P 201 L 3 # 430
 Gilb, James Appairent

Comment Type T Comment Status X
 Forgot to indicate that the header is repeated twice.

SuggestedRemedy

Change "and MAC header, followed by" to be "and MAC header at the base rate, followed by a copy of the PHY and MAC header modulated at 11 Mb/s QPSK-TCM,

Proposed Response Response Status O

CI 11 SC 11.4.3 P 202 L 35 # 431
 Gilb, James Appairent

Comment Type T Comment Status X
 The MAC header includes the HCS

SuggestedRemedy

Change 3 occurances of "MAC header and the HCS" to be "MAC header" on lines 35, 37 and 38.

Proposed Response Response Status O

CI 11 SC 11.4.4 P 203 L 3 # 1737
 Karaoguz, Jeyhan Broadcom Corp.

Comment Type E Comment Status X
 Figure 110 should be cleaned up .

SuggestedRemedy
 See the comment.

Proposed Response Response Status O

CI 11 SC 11.4.5 P 204 L 13 # 275
 Gifford, Ian Self

Comment Type E Comment Status X
 The following sentence does not end in a period: defined in Table 82

SuggestedRemedy
 Add the period.

Proposed Response Response Status O

CI 11 SC 11.4.5 P 204 L 18 # 432
 Gilb, James Appairent

Comment Type T Comment Status X
 Change the encoding of the frame body length to be sent LSB first in b5 with the MSb at b15.

SuggestedRemedy

Change as indicated and change the examples as well.

Proposed Response Response Status O

CI 11 SC 11.4.6 P 204 L 50 # 1266
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 grammatical ... remove the "s" from the end of the word symbols as shown below.

SuggestedRemedy

... of the bits/symbol that is to be used ...

Proposed Response Response Status O

CI 11 SC 11.4.7 P 205 L 7 # 1267
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 add a definitive article as shown below

SuggestedRemedy

... added to the end of the frame body ...

Proposed Response Response Status O

CI 11 SC 11.4.7 P 206 L 31 # 1268
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 remove the phrase "2 and 3"

SuggestedRemedy

... higher order bits, ...

Proposed Response Response Status O

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CI 11 SC 11.4.7 P 206 L 31 # 1269
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 Refomattng of math scripts

SuggestedRemedy
 The math scripts in lines 31 and 33 are in need of reformatting. Some of the symbols appear to be "chopped off".

Proposed Response Response Status O

CI 11 SC 11.4.7 P 206 L 34 # 433
 Gilb, James Appairent

Comment Type T Comment Status X
 While the trellis state is independent of the other bits, the symbol selection isn't. Since it probably easier to find known symbols, lets define the last inputs as all zeros to the non-TCM portion.

SuggestedRemedy
 Indicate that the other bits (i.e. those not determined by the trellis encoder) shall be chosen to be 0 for the symbol selection.

Proposed Response Response Status O

CI 11 SC 11.4.7 P 207 L 44 # 434
 Gilb, James Appairent

Comment Type T Comment Status X
 The BPSK mode no longer exists.

SuggestedRemedy
 Delete the sentence "For the BPSK modulation, ... over the air."

Proposed Response Response Status O

CI 11 SC 11.5.2 P 209 L 14 # 1271
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 This clause deals with the EVM. Measurements are made on a "reference receiver". It is well known that a reciever can cause EVM problems as well as the transmitter, so how does one define this "reference receiver"? Do you deconvolve the EVM distortion caused by the receiver?

SuggestedRemedy
 PHY committee to comment on how a reference receiver is to be used.

Proposed Response Response Status O

CI 11 SC 11.5.2 P 209 L 27 # 435
 Gilb, James Appairent

Comment Type T Comment Status X
 Should add EVM requirement for QPSK-TCM explicitly

SuggestedRemedy
 Change "DQPSK" to be "DQPSK/QPSK-TCM" in Table 87.

Proposed Response Response Status O

CI 11 SC 11.5.9 P 210 L 51 # 436
 Gilb, James Appairent

Comment Type T Comment Status X
 It is not the standards job to require conformance to governmental regulations.

SuggestedRemedy
 Change "devices shall also" to "devices should also"

Proposed Response Response Status O

CI 11 SC 11.5.9 P 211 L 19 # 276
 Gifford, Ian Self

Comment Type E Comment Status X
 The following sentence does not end in a period: The minimum TX power level required to support TPC, aMinTPCLevel, shall be 4 dBm

SuggestedRemedy
 Add the period.

Proposed Response Response Status O

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CI 11 SC 11.6.1 P 211 L 25 # 1272
 Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
 Replace "an" with "a"

SuggestedRemedy
 ... less than 8% with a frame body ...

Proposed Response Response Status O

CI 11 SC 11.6.4 P 212 L # 1363
 Shellhammer, Steve Symbol Technologies

Comment Type TR Comment Status X
 In Table 91 the adjacent channel rejection is only 0 dB, when running at 55 Mb/s. This means that if the interferer, in an adjacent channel, is closer to the receiver than the source, then the receiver will not work. I think this level of adjacent channel rejection is insufficient. This makes operation of multiple TG2 WPANs in the same area impractical. As a reference point, the IEEE 802.11b adjacent channel rejection, operating at 11 Mb/s is 35 dB.

SuggestedRemedy
 Increase the adjacent channel rejection, for all data rates, by 20 dB.

Proposed Response Response Status O

CI 11 SC 11.6.4 P 212 L 51 # 437
 Gilb, James Appairent

Comment Type T Comment Status X
 Need formal language for the jamming requirements.

SuggestedRemedy
 Change "signal is to be" to be "signal shall be"

Proposed Response Response Status O

CI 11 SC 11.6.5 P 213 L 9 # 1738
 Karaoguz, Jeyhan Broadcom Corp.

Comment Type T Comment Status X
 The modes CCA detection should be clearly enumerated. It is not clear what constitutes CCA.

SuggestedRemedy
 Use the 802.11b CCA detection template in the standard.

Proposed Response Response Status O

CI 11 SC 11.7 P 213 L # 1278
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Additional note to clause 11.7

SuggestedRemedy
 The items of Table 50 are implmentation dependent.

Proposed Response Response Status O

CI 11 SC 11.7 P 213 L 36 # 1275

Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 addition to clause 11.7

SuggestedRemedy
 Add the following text ... Antenna diversity is an implementation specific issue. For the PHY description of clause 11, it has been assumed that there is no diversity; that is, PHYPIB_DiversitySupported has a value of one.

Proposed Response Response Status O

CI 11 SC 11.7 P 213 L 36 # 1276
 Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
 Need to supply mapping for TX power as per the text written in clause 6.6.4 and indicated in table 44.

SuggestedRemedy
 PHY committee to supply.

Proposed Response Response Status O

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Cl 11 **SC 11.7** **P 213** **L 36** **# 1277**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** **Comment Status** **X**
 Need a note added to clause 11.7 to indicate that ranging is not supported by this PHY.
SuggestedRemedy
 11.7.x Ranging The PHY description of clause 11 does not support the PHY PIB ranging group of clause 6.6.9.
Proposed Response **Response Status** **O**

Cl 11 **SC 6.5** **P 213** **L 13** **# 1355**
 Seals, Michael Intersil
Comment Type **TR** **Comment Status** **X**
 I don't see any effort made to coexist with other 802 wireless standards or proposed standards in the 2.4 GHz band, other than selecting operation on 802.11b channels. CCA done by ED alone requires a signal 20 dB above the minimum sensitivity defined in 11.6.2. I do not believe this is sufficient for coexistence. Coexistence should be a requirement, not a goal.
SuggestedRemedy
 Develop a method for coexistence with other 802 wireless standards in the 2.4 GHz
Proposed Response **Response Status** **O**

Cl 11 **SC Equation 7** **P 203** **L 21** **# 1264**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** **Comment Status** **X**
 Is this equation correct. It does not seem to match Figure 110. Figure 110 shows Xn as not being the quantity that bn is xor'ed with.
SuggestedRemedy
 Verify that the notation between Equation 7 and Figure 110 are correct. Correct as needed. Refer this to the PHY committee.
Proposed Response **Response Status** **O**

Cl 11 **SC Figure 110** **P 203** **L** **# 1263**
 Roberts, Richard XtremeSpectrum
Comment Type **T** **Comment Status** **X**
 Add lables that help clarify equation 7
SuggestedRemedy
 Input serial data = bn Output serial data = sn add bn and sn to the figure.
Proposed Response **Response Status** **O**

Cl 11 **SC Table 74** **P 187** **L 14** **# 271**
 Gifford, Ian Self
Comment Type **T** **Comment Status** **X**
 The 802.15.3 PAR Purpose states: "The data rate will be high enough, 20 Mbps or more...". I am still unclear why the QPSK modulation type for 11 Mb/s is allowable. Additionally, the subclause 11.3.1, page 190, line 14-15 sentence "The QPSK-TCM mode is implemented in assigned GTS slots to help maintain connections of devices that are in range of the PNC, but which may be more distant from each other." suggests that the 11 Mb/s is used to make the WPAN a WLAN.
SuggestedRemedy
 Please advise the WG and/or myself why an 11 Mb/s is part of the IEEE Std 802.15.3 and why the 802.15.3 PAR does not require a corrigendum to allow this fifth type.
Proposed Response **Response Status** **O**

Cl 11 **SC Table 75** **P 188** **L** **# 1109**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** **Comment Status** **X**
 Table 75 shows two frequency plans. How does a DEV know which frequency plan to use with a Piconet? Is there a default frequency plan? How does the PNC change the frequency plan if the 802.11b coexistence is needed?
SuggestedRemedy
 Refer to PHY subcommittee. There will have to be commands added to the MAC to accommodate frequency plan switching. Also, since the only frequencies in common are 2.408 and 2.468 GHz, all Piconets will have to start on one of these two frequencies and then switch to either the 5 frequency plan or the 3 frequency plan.
Proposed Response **Response Status** **O**

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CI 11 SC Table 76 P 189 L 5 # 1620
Shvodian, William XtremeSpectrum

Comment Type TR Comment Status X
aRXTXTurnaroundTime is a range. I am not sure how SIFS can be a range..

SuggestedRemedy
Specify if SIFS is a range.

Proposed Response Response Status O

CI 11 SC Table 77 P 191 L # 1259
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
Last three Kmod values are missing the left bracket.

SuggestedRemedy
Supply left brackets as needed.

Proposed Response Response Status O

CI 11 SC Table 82 P 203 L # 1265
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
In Table 82 we have the notation "Seed value". Is this the same as Xinit in equation 6.
If so, then be consistent on names. Pick one name for the other.

SuggestedRemedy
PHY committee to review the comment.

Proposed Response Response Status O

CI 11 SC Table 86 P 208 L # 1270
Roberts, Richard XtremeSpectrum

Comment Type E Comment Status X
Font problems in table 86 on the right two column headings

SuggestedRemedy
Please reformat the headings in the right two columns.

Proposed Response Response Status O

CI 11 SC Table 89 P 211 L # 1111
Roberts, Richard XtremeSpectrum

Comment Type T Comment Status X
Table 89 indicates that in the USA operation is under Part 15.249. Given the changes in Part 15.247 (removal of processing gain) would this PHY qualify for operation under part 15.247?

SuggestedRemedy
If part 15.247 is legal, increase the max output power in line 19 of page 211, clause

Proposed Response Response Status O

CI 11 SC Table 93 P 214 L # 1273
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
Table 93 contains reference to two PHY PIB values that do not exist.
PHYPIB_NumTxPowerLevels and PHYPIB_PowerLevelVector are not in clause 6.

SuggestedRemedy
The available PHY PIB values that deal with TX power are listed in clause 6.6.4. Table 93 needs to be regenerated using the PHY PIB values of clause 6.6.4. Assigned to PHY committee.

Proposed Response Response Status O

CI 11 SC Table 93 P 214 L # 1274
CI 11 SC Table 93 P 214 L # 1274
Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status X
Addition to Table 93

SuggestedRemedy
Add to table 93 PHYPIB_MPDULengthMax. PHY committee to supply value

Proposed Response Response Status O

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CI 11 SC Table75 P 188 L 28 # 1619
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Who makes the choice of which frequency plan to use? The implementer or the user?
SuggestedRemedy
 Specify how the channel plan is chosen.
Proposed Response *Response Status* **O**

CI A SC P 229 L # 1726
 McInnis, Michael D. The Boeing Company
Comment Type **TR** *Comment Status* **X**
 Annex C Specification and Description Language (SDL) was not provided for voter comment and review.
SuggestedRemedy
 Provide Annex C content, SDL for voter comment and review
Proposed Response *Response Status* **O**

CI A SC 0 P 215 L 15 # 759
 Huang, Bob Sony Electronics
Comment Type **TR** *Comment Status* **X**
 Only receives from peer (does not send to peer). Who then can send?
SuggestedRemedy
 change 'receiving' to 'receiving/sending'
Proposed Response *Response Status* **O**

CI A SC A P 215 L 40 # 438
 Gilb, James Apparent
Comment Type **T** *Comment Status* **X**
 Need to indicate that the interfaces described are only required if the interface is
SuggestedRemedy
 After the sentence ending "specified for 802.15.3" on line 18 add the following paragraph: "If the SSCS-SAP interface is not exposed in an 802.15.3 device, then these interfaces do not have to be implemented as described here. If the interfaces are exposed, then they should support the primitives described in this clause."
Proposed Response *Response Status* **O**

CI A SC A. P 215 L # 1279
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Need consistent name for the Convergence Sublayer
SuggestedRemedy
 Let's use "sublayer". On page 215 we have sublayer, sub layer, sub-layer, etc.
Proposed Response *Response Status* **O**

CI A SC A.0 P 215 L 1 # 34
 Bain, Jay Time Domain
Comment Type **T** *Comment Status* **X**
 This is a general comment for the Annex. It is noted that this annex is too standalone and doesn't provide tie in to the rest of the draft.
SuggestedRemedy
 Add xrefs as appropriate.
Proposed Response *Response Status* **O**

CI A SC A.1 P 215 L 1 # 278
 Gifford, Ian Self
Comment Type **E** *Comment Status* **X**
 The Annex Title "Service Specific Convergence Sub layer" is spelled wrong. Also, the annex subclause numbering should start at the introduction or line 8.
SuggestedRemedy
 Change to "Service Specific Convergence Sublayer" and insert the word "Introduction" and use the paragraph tag AH1,A.1; forcing the A.1 to start.
Proposed Response *Response Status* **O**

CI A SC A.1 P 215 L 50 # 760
 Huang, Bob Sony Electronics
Comment Type **T** *Comment Status* **X**
 Only receives from peer (does not send to peer). Who then can send?
SuggestedRemedy
 change 'receiving' to 'receiving/sending'
Proposed Response *Response Status* **O**

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CI A **SC A.1.1** **P 216** **L 3** **# 1280**
 Roberts, Richard XtremeSpectrum

Comment Type **T** *Comment Status* **X**
 In line 3 we have "PDU" while in figure A.2 we show "SDU". Is there an inconsistency here or is this OK.

SuggestedRemedy
 Refer to the MAC subcommittee

Proposed Response *Response Status* **O**

CI A **SC A.1.1** **P 216** **L 8** **# 279**
 Gifford, Ian Self

Comment Type **E** *Comment Status* **X**
 The word "Classification" should not be capitalized.

SuggestedRemedy
 Change word to lower case or "classification".

Proposed Response *Response Status* **O**

CI A **SC A.2** **P 217** **L 1** **# 1281**
 Roberts, Richard XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 I'm confused about clause A.2 ... where are we at Figure A.1 ... are we at the SSCS SAP or at the MAC CPS SAP. Please clarify. Also, is there an inconsistency between clause A.2 and clause 6.8 on the names?

SuggestedRemedy
 Refer to MAC committee

Proposed Response *Response Status* **O**

CI A **SC A.2** **P 217** **L 12** **# 1282**
 Roberts, Richard XtremeSpectrum

Comment Type **E** *Comment Status* **X**
 Stray editor note

SuggestedRemedy
 Please remove the editorial note.

Proposed Response *Response Status* **O**

CI A **SC A.2** **P 217** **L 12** **# 439**
 Gilb, James Appairent

Comment Type **E** *Comment Status* **X**
 Editorial comment left in.

SuggestedRemedy
 Delete the comment and apply the changes that are indicated (i.e. reformat the parameter definitions into a table).

Proposed Response *Response Status* **O**

CI A **SC A.2** **P 217** **L 1213** **# 280**
 Gifford, Ian Self

Comment Type **E** *Comment Status* **X**
 There are Editor notes here, subclause A.2.2., page 219, line 4, and line 53.

SuggestedRemedy
 Delete the Editor notes.

Proposed Response *Response Status* **O**

CI A **SC A.2.1** **P 217** **L 17** **# 1283**
 Roberts, Richard XtremeSpectrum

Comment Type **T** *Comment Status* **X**
 Is the LLC sublayer one of the SSCS options?

SuggestedRemedy
 MAC subcommittee to clarify and to add text to remove the confusion.

Proposed Response *Response Status* **O**

CI A **SC A.2.2** **P 218** **L 49** **# 1284**
 Roberts, Richard XtremeSpectrum

Comment Type **E** *Comment Status* **X**
 The sentence that starts half way across line 49 needs to be modified as shown below.

SuggestedRemedy
 This MAC only reports success since all failures of reception are discarded without generating a MA-UNITDAT.indication.

Proposed Response *Response Status* **O**

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CI A **SC A.2.2** **P 219** **L 4** **# 1285**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 We have an editorial note that needs to be resolved and removed.
SuggestedRemedy
 Refer to the MAC subcommittee
Proposed Response *Response Status* **O**

CI A **SC A.2.2** **P 219** **L 4** **# 761**
 Huang, Bob Sony Electronics
Comment Type **E** *Comment Status* **X**
 Editorial note
SuggestedRemedy
 Remove
Proposed Response *Response Status* **O**

CI A **SC A.2.2** **P 219** **L 5** **# 440**
 Gilb, James Appairent
Comment Type **T** *Comment Status* **X**
 Editorial comment left in, but still valid.
SuggestedRemedy
 Since .request supports reorderable multicast, we would have to support it on the .indication side as well. However, it appears that the standard does not support multicast at all and so this could be deleted as an allowed service class from the .request side to fix this.
Proposed Response *Response Status* **O**

CI A **SC A.2.3** **P 219** **L 53** **# 1286**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 We have an editorial note that needs to be resolved and removed.
SuggestedRemedy
 Refer to MAC folks
Proposed Response *Response Status* **O**

CI A **SC A.2.3** **P 219** **L 53** **# 762**
 Huang, Bob Sony Electronics
Comment Type **E** *Comment Status* **X**
 Editorial note
SuggestedRemedy
 Remove
Proposed Response *Response Status* **O**

CI A **SC A.2.3** **P 219** **L 54** **# 441**
 Gilb, James Appairent
Comment Type **T** *Comment Status* **X**
 Editorial comment left in but still valid.
SuggestedRemedy
 Add a condition, "9 - Undeliverable (channel conditions are too severe).
Proposed Response *Response Status* **O**

CI A **SC A.4** **P 221** **L 46** **# 1288**
 Roberts, Richard XtremeSpectrum
Comment Type **TR** *Comment Status* **X**
 Clause A.4 does not seem complete. What is the point of having this clause in the standard. If the clause is needed then it needs to be finished. If it is not needed then it should be deleted.
SuggestedRemedy
 Refer to MAC folks
Proposed Response *Response Status* **O**

CI A **SC D** **P 231** **L** **# 1727**
 McInnis, Michael D. The Boeing Company
Comment Type **TR** *Comment Status* **X**
 Annex D Protocol Implementation Conformance Statement (PICS) was not provided for voter comment and review.
SuggestedRemedy
 Provide Annex D content, PICS for voter comment and review
Proposed Response *Response Status* **O**

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CI A **SC Figure A.1** **P 215** **L 20** **# 1625**
 Shvodian, William XtremeSpectrum

Comment Type T **Comment Status X**
 In the rest of the document I think we are calling the MAC CPS the MAC and the MAC
 CPS SAP the MAC SAP. We need to be consistent

SuggestedRemedy
 Clarify what we are calling the MAC and be consistent with the rest of the document.

Proposed Response **Response Status O**

CI A **SC Figure A.1** **P 215** **L 35** **# 277**
 Gifford, Ian Self

Comment Type E **Comment Status X**
 The term "PHY Sublayer", used in the Figure A.1 is spelled wrong.

SuggestedRemedy
 Change to "PHY Layer".

Proposed Response **Response Status O**

CI A **SC Table A.1** **P 220** **L** **# 1287**
 Roberts, Richard XtremeSpectrum

Comment Type T **Comment Status X**
 What is the relationship between the information and the assignment of GTS slots.
 Why is Table A.1 relevant to the standard?

SuggestedRemedy
 Refer to MAC folks

Proposed Response **Response Status O**

CI B **SC 3.3.2** **P** **L** **# 1694**
 Shvodian, William XtremeSpectrum

Comment Type TR **Comment Status X**
 The challenge response protocol as described in the standard is underspecified. In
 some discussions, the idea was to use the challenge response protocol to allow for
 peer-to-peer authentication. Below are some comments on this protocol: 1) There is no
 defined method for a DEV to send its public key to another DEV, so the protocol cannot
 be implemented as currently specified. 2) The challenge-response is an authentication
 protocol and, as such, it may require more passes than 2 (depending on the algorithms
 available in the cipher suite) and probably will require more if mutual authentication is
 desirable instead of single-party authentication. Changing the number of passes will
 require a change to the MLME messages. 3) The purpose of this protocol is unclear.
 Why does a device need to authenticate other devices in the piconet? Is this because
 it will only trust the piconet if the security manager (PNC) and itself both authenticate
 all the other devices? This policy would require a lot of overhead. The use of this
 protocol should be clarified. 4) If devices wanted to authenticate each other individually,
 it stands to reason that they might want to exchange keys and communicate securely
 just between the two of them. If this protocol is kept, it should be extended to include a
 method for exchanging keys. Even better, the "authenticate" protocol, if it allows both
 parties to be authenticated, might be allowed between peer DEVs in the piconet.

SuggestedRemedy
 Comment via Ari Singer.

Proposed Response **Response Status O**

CI B **SC B.1** **P 223** **L 9** **# 35**
 Bain, Jay Time Domain

Comment Type T **Comment Status X**
 The informative annex relating to Power management is not complete. There is a key
 informative piece prior to use of the EPS action command that either should be in the
 annex or be located in clause 6.

SuggestedRemedy
 Add the summary of what happens after authentication and association and until the
 DEVs are ready to do EPS operations.

Proposed Response **Response Status O**

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CI B **SC B.1.2** **P 223** **L 18** **# 1289**
 Roberts, Richard XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 Suggest a figure to clarify the master/slave relationship unique to EPS sets.
SuggestedRemedy
 Refer to power management folks.
Proposed Response *Response Status* **O**

CI B **SC B.1.2** **P 223** **L 23** **# 1626**
 Shvodian, William XtremeSpectrum
Comment Type **T** *Comment Status* **X**
 EPSPHase does not occur in the rest of the document.
SuggestedRemedy
 Delete reference to EPSPHase. If this is the wrong workd, replace it.
Proposed Response *Response Status* **O**

CI B **SC B.2** **P 223** **L 3** **# 72**
 Barr, John Motorola
Comment Type **E** *Comment Status* **X**
 Resources in a piconet are allocated as channel time, not bandwidth.
SuggestedRemedy
 Change two occurrences of 'bandwidth' to 'channel time' in this sentence.
Proposed Response *Response Status* **O**

CI B **SC B.2** **P 223** **L 48** **# 797**
 Akahane, Masa Sony
Comment Type **E** *Comment Status* **X**
 piconet coordinator should be deleted
SuggestedRemedy
 correct
Proposed Response *Response Status* **O**

CI B **SC B.2** **P 224** **L 1** **# 1290**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 grammatical
SuggestedRemedy
 Remove the word "be" as shown below GTS time is then calculated using ...
Proposed Response *Response Status* **O**

CI B **SC B.2** **P 224** **L 11** **# 1291**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 with in is one word
SuggestedRemedy
 replace "with in" with "within"
Proposed Response *Response Status* **O**

CI B **SC B.2** **P 224** **L 47** **# 1292**
 Roberts, Richard XtremeSpectrum
Comment Type **E** *Comment Status* **X**
 add the definitive
SuggestedRemedy
 ... indicating "anywhere in the CFP", 7.5.10.1.
Proposed Response *Response Status* **O**

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CI B **SC B.3** **P** **L** **# 1692**
 Shvodian, William XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 Requirements and descriptions of the cipher suites should be part of section 10 in the main part of the document and should be normative in some capacity. The standard needs to require that a cipher suite behave in a certain manner, otherwise there can be no guarantee that the selected cipher suite has the properties that are needed to satisfy the security requirements.

SuggestedRemedy
 Move cipher suite text to section 10 and clarify cipher suite requirements. Comment via Ari Singer.

Proposed Response *Response Status* **O**

CI B **SC B.3** **P 225** **L 3** **# 1293**
 Roberts, Richard XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 The text in B.3.1 implies there will be more than one cipher suite. I will not be able to vote "yes" for a standard unless there is a default cipher suite. Additional cipher suites can be considered to be optional alternatives. To do otherwise does the following: 1. without a default (mandatory) cipher suite then the only compatible security between all 802.15.3 devices is no security at all 2. When implementing hardware, I don't want to be burdened with having to put multiple cipher suites into the implementation. That will be inefficient and expensive.

SuggestedRemedy
 The security subcommittee must select one cipher method as being the default, mandatory cipher method. Additional ciphers can be added as options. I believe this is consistent with the motion made and passed in Austin.

Proposed Response *Response Status* **O**

CI B **SC B.3.1** **P 225** **L 13** **# 1627**
 Shvodian, William XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 In Austin we voted to have a mandatory cipher suite. We need to include the mandatory cipher suite in the standard.

SuggestedRemedy
 Choose and document a mandatory cipher suite.

Proposed Response *Response Status* **O**

CI B **SC B.3.1** **P 225** **L 6** **# 727**
 Herold, Barry Motorola

Comment Type **T** *Comment Status* **X**
 A cipher suite needs to be chosen for the 15.3 standard. This would give a certain level of security for all devices which require security, and allow for interoperability for 15.3 devices. If higher levels of security, or differing cipher suites are needed for certain applications, then the application layer could implement its own security protocol by not using the 15.3 security, or by overlaying its protocol over the 15.3 security.

SuggestedRemedy

Proposed Response *Response Status* **O**

CI B **SC B.3.2** **P 225** **L 13** **# 1693**
 Shvodian, William XtremeSpectrum

Comment Type **E** *Comment Status* **X**
 The standard does not say what can't be in the MAC, so a more proper structure of the first sentence should be "The cipher suites are conceptually implemented outside of the MAC (although they may physically be implemented there), so . . ."

SuggestedRemedy
 Comment via Ari Singer.

Proposed Response *Response Status* **O**

CI B **SC B.3.2.1** **P 225** **L 37** **# 1294**
 Roberts, Richard XtremeSpectrum

Comment Type **TR** *Comment Status* **X**
 Mention is made of a trusted relationship.

SuggestedRemedy
 The standard must explain how that trusted relationship is established.

Proposed Response *Response Status* **O**

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Cl B SC **B.3.2.2** P **225** L **44** # **1295**
 Roberts, Richard XtremeSpectrum

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

SuggestedRemedy
 add an s to key as shown below ... needs to distribute keys to the DEVs

Proposed Response Response Status **O**

Cl B SC **B.3.3.1** P **226** L **45** # **1296**
 Roberts, Richard XtremeSpectrum

Comment Type **TR** Comment Status **X**
 In discussing authentication, mention is made of "using a processes defined by the cipher suite".

SuggestedRemedy
 The process used by the cipher suite has to take into consideration the WPAN environment. That is, the cipher suite needs to accommodate WPAN and not the other way around. I can not vote "yes" to a WPAN standard that does not have an authentication process that is suitable for WPAN deployments.

Proposed Response Response Status **O**

Cl C SC P L # **1364**
 Shellhammer, Steve Symbol Technologies

Comment Type **TR** Comment Status **R**
 Clause contains no content.

SuggestedRemedy
 Add content.

Proposed Response Response Status **W**
 The committee does not want to add normative content that may conflict with the other clauses. Informative content will not be available until at least 3 months after the final draft has been approved.
 SDL clause will be removed from the draft and left for a follow on project.

Cl C SC P L # **548**
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type **TR** Comment Status **R**
 Without SDL there is an higehr risk of non-interoperable implementations

SuggestedRemedy
 Provide formal description of the MAC and PHY. SDL can be one option.

Proposed Response Response Status **C**
 PROPOSED REJECT. The committee does not want to add normative content that may conflict with the other clauses. Informative content will not be available until at least 3 months after the final draft has been approved.
 SDL clause will be removed from the draft and left for a follow on project.

Cl C SC P **229** L **1** # **88**
 CYPHER, DAVID NIST

Comment Type **TR** Comment Status **A**
 This annex is marked as **NORMATIVE**, yet nothing is present. Any change to this section will be a significant technical change and require a new letter ballot not a recirculation. If there are large holes like this in a draft, then it should not be even motioned to working group letter ballot. I have provided three suggested remedies.

SuggestedRemedy
 1) Remove the annex, but since the annex is normative. Note: this is a significant change removing something that is normative. 2) Changing the annex, from normative to informative. Note: this does not solve the problem as it is still empty. Even if SDLs are proposed as part of someone else's comments, I will consider these significant enough to warrant a new ballot. 3) Add the missing SDLs. Note: this is a substantial technical change and will require a new ballot.

Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE. The committee does not want to add normative content that may conflict with the other clauses. Informative content will not be available until at least 3 months after the final draft has been approved.
 SDL clause will be removed from the draft and left for a follow on project.

Cl C SC **ALL** P **229** L # **86**
 Barr, John Motorola

Comment Type **T** Comment Status **R**
 SDL not included. SDL should be informative instead of normative.

SuggestedRemedy
 Add high level SDL for all mandatory portions for the specification.

Proposed Response Response Status **C**
 The committee does not want to add normative content that may conflict with the other clauses. Informative content will not be available until at least 3 months after the final draft has been approved.
 SDL clause will be removed from the draft and left for a follow on project.

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CI C SC C P 229 L # 1106
 Roberts, Richard XtremeSpectrum

Comment Type TR Comment Status A
 There are no SDL's. This is not a valid letter ballot with normative sections missing from the draft.

SuggestedRemedy
 The SDLs should not be considered normative and should be completely removed from the document.

Proposed Response Response Status C

PROPOSED ACCEPT. The committee does not want to add normative content that may conflict with the other clauses. Informative content will not be available until at least 3 months after the final draft has been approved. SDL clause will be removed from the draft and left for a follow on project.

CI C SC C P 229 L 1 # 442
 Gilb, James Appairtent

Comment Type T Comment Status A
 SDL is not defined and is not normative.

SuggestedRemedy
 Change normative to informative and get some SDL to put in here. Or just delete the entire clause.

Proposed Response Response Status C

PROPOSED ACCEPT. The committee does not want to add normative content that may conflict with the other clauses. Informative content will not be available until at least 3 months after the final draft has been approved. SDL clause will be removed from the draft and left for a follow on project.

CI D SC P L # 549
 GUBBI, RAJUGOPAL Broadcom, corp

Comment Type TR Comment Status A
 Without PICS there is an higehr risk of non-interoperable implementations

SuggestedRemedy
 Provide PICS for implementation description of the MAC and PHY.

Proposed Response Response Status C
 PROPOSED ACCEPT. PICS content will be added as an informative clause as derived from the normative portion of the draft.

CI D SC P L # 1365
 Shellhammer, Steve Symbol Technologies

Comment Type TR Comment Status A
 Clause contains no content.

SuggestedRemedy
 Add content.

Proposed Response Response Status W
 PICS content will be added as an informative clause as derived from the normative portion of the draft.

CI D SC P 231 L 1 # 89
 CYPHER, DAVID NIST

Comment Type TR Comment Status A
 This annex is marked as NORMATIVE, yet nothing is present. Any change to this section will be a significant technical change and require a new letter ballot not a recirculation. If there are large holes like this in a draft, then it should not be even motioned to working group letter ballot. I have provided two suggested remedies. A PICS is not to contain any requirements that cannot be found in the descriptive text. It has been my experience that this is not the case. TG1's draft 802.15.1 is the best example of where a PICS makes requirements that are not part of the descriptive text. The PICS in this case has become a product implementation time line, which marks items as optional, if the feature is not to be supported as a first released product. A standard is never to be written as phases of a product roll out. Requirements must be set and options well marked. This is what a PICS contains. If this is true that a PICS contains only what is fully stated in the text, then why could the PICS not have been part of the balloted text at this time? Could it be that the requirements and options are not yet finalize in the text? If this is the case then why was this draft motioned to working group letter ballot?

SuggestedRemedy
 1) Remove the annex, but since the annex is normative. Note: this is a significant change removing somthing that is normative. 2) Add the missing PICS. Note: this is a substantial technical change and will require a new ballot.

Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE. PICS content will be added as an informative clause as derived from the normative portion of the draft.

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CI D SC ALL P 231 L # 87
 Barr, John Motorola
Comment Type E Comment Status A
 PICS not defined. PICS section should be informative since it repeats items defined in earlier clauses and only servers to determine what portions of the specification to which particular implementation conforms.
SuggestedRemedy
 Add PICS based on final content of the specification.
Proposed Response Response Status C
 PROPOSED ACCEPT. PICS content will be added as an informative clause as derived from the normative portion of the draft.

CI D SC D P 231 L # 1107
 Roberts, Richard XtremeSpectrum
Comment Type TR Comment Status A
 There are no PICs. This is not a valid letter ballot with normative sections missing from the draft.
SuggestedRemedy
 Add the PICs material.
Proposed Response Response Status C
 PROPOSED ACCEPT. PICS content will be added as an informative clause as derived from the normative portion of the draft.

CI D SC D P 231 L 3 # 443
 Gilb, James Appairnt
Comment Type T Comment Status A
 The PICS are derived from the text and so are informative rather than normative.
SuggestedRemedy
 Change the annex designation from normative to informative and add the PICS tables.
Proposed Response Response Status C
 PROPOSED ACCEPT. PICS content will be added as an informative clause as derived from the normative portion of the draft.

CI E SC - P 233 L 15 # 1698
 Siwiak, Kazimierz Time Domain
Comment Type E Comment Status X
 Excess blanks after [B4]
SuggestedRemedy
 remove the excess blanks
Proposed Response Response Status O

CI E SC - P 233 L 18 # 1699
 Siwiak, Kazimierz Time Domain
Comment Type E Comment Status X
 "Papoulis" should be "Athanasios Papoulis"
SuggestedRemedy
 use: "Athanasios Papoulis"
Proposed Response Response Status O

CI E SC - P 233 L 20 # 1700
 Siwiak, Kazimierz Time Domain
Comment Type E Comment Status X
 "Proakis" should be "John G. Proakis"
SuggestedRemedy
 use "John G. Proakis"
Proposed Response Response Status O

CI E SC - P 233 L 40 # 1701
 Siwiak, Kazimierz Time Domain
Comment Type E Comment Status X
 "Stallings" should be "William Stallings"
SuggestedRemedy
 use "William Stallings"
Proposed Response Response Status O

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Cl E SC - P 234 L 5 # 1702
Siwiak, Kazimierz Time Domain
Comment Type E *Comment Status* X
publication number missing in Ref [B19]
SuggestedRemedy
fill in proper number for "ZZZ" in lines 5 and 6
Proposed Response *Response Status* O

Cl E SC - P 234 L 9 # 1703
Siwiak, Kazimierz Time Domain
Comment Type E *Comment Status* X
publication number missing in Ref [B20]
SuggestedRemedy
fill in proper number for "#HMAC" in lines 9 and 10
Proposed Response *Response Status* O