| Seq. | Section <br> $\#$ | your <br> number <br> voter | Cmnt <br> s id <br> E, <br> code | Part <br> of <br> T, | NO <br> vote | Comment/Rationale | Recommended change |
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Results of LMSC Ballot on Draft Standard 802.11 D5.0-Comments on clauses 12-16

| Seq. \# | Clause number | $\begin{gathered} \text { your } \\ \text { voter } \\ \text { s ID } \\ \text { code } \end{gathered}$ | $\begin{gathered} \text { Cmnt } \\ \text { type } \\ \text { E, e, } \\ \mathrm{T}, \mathrm{t} \end{gathered}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 12.3.2 | PMK | e |  | "...is seperated into tosublayers:..." | "is separated into twosublayers:" |  |
|  | 12.3.3 | KC | T |  | It would be better layering if the standard included a section here such as "(3) Service primitives that supporttimekeeping." and all timers moved out of the MAC layer and into the PHY clause 12 as services. This would allow an implementation of the entire MAC layer as an object that could be completely tested at this boundary with simulated events. |  |  |
|  | 12.3.3 | TLP | e |  | Change first sentence to be literate English. | Change to read "The primitives associated with communication betwee the 802.11 MACSublayer and the 802.11 Physical Layer fall into two basi categories:" |  |
|  | 12.3.4.3 | TLP | e |  | Put the two primitivesPHYDATA.request and PHYDATA.indicate on separate lines within a single tabl entry (as shown in the submitted revision-marked files). | Change column title to 'Associated Primitive" and make a two-line entry in the first data row, second column. |  |
|  | 12.3.5.1.2 | TLP | E | Yes | Other portions of this standard use the syntax 0xNN for the hexadecimal number NN. This section uses 00 through FFh. Either syntax is acceptable, though the $0 x N N$ syntax is more self-explanatory. But whichever, is used, please be consistent throughout the entire standard. | Use hexadecimal nomenclature consistent with the rest of this draft standard. |  |


| $\begin{aligned} & \text { Seq. } \\ & \# \\ & \hline \end{aligned}$ | Section | $\begin{gathered} \text { your } \\ \text { voter } \\ \text { vid } \\ \text { sid } \\ \text { code } \end{gathered}$ | $\begin{aligned} & \text { Cnnt } \\ & \text { yep } \\ & \text { Ee, }, \end{aligned}$ | $\begin{gathered} \hline \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |


| Seq. \# | Clause number | $\begin{gathered} \text { your } \\ \text { voter } \\ \text { s ID } \\ \text { code } \end{gathered}$ | Cmnt <br> type <br> E, e, <br> T, $\mathbf{t}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \hline 12.3 .5 .10 \\ .2 \end{gathered}$ | TLP | e |  | poor conceptualization and wording. For example, a "channel assessment" process should observe a "channel not a "medium". | Change second indented paragraph to read "The STATE parameter can be one of two values: BUSY or IDLE. The parameter value shall be BUSY if the channel assessment by the PHYsublayer determines that the channel is not available. Otherwise the value of the parameter shall be IDLE." |  |
|  | $\begin{gathered} \hline 12.3 .5 .10 \\ .3 \end{gathered}$ | TLP | e |  | Use of undefined term. | Change "clear" to "idle" twice. |  |
|  | $\begin{gathered} 12.3 .5 .1 \\ 0.2 \\ 14.3 .3 .2 \\ .2 \\ 9.2 .5 .2 \end{gathered}$ | SB | t | N | Clause 14.3.3.2.2 says: <br> The appropriate CS/CCA indication shall be generated prior to the end of each $50 \mu \mathrm{~s}$ slot time with the performance specified insubclause 14.6 (PMD). <br> (The CS/CCA indication is byPHYCCA.indicate as in figure 68) <br> While clause 12.3.5.10.2 says abouPHYCCA.indicate: <br> This primitive shall be generated every time the status of the channel changes from channel clear tochannel busy or from channel busy to channel clear. <br> Clearly there is some conflict here - one says that the primitive is issued on a time basis once per slot time even if the channel state has not changed, the other on a physical event (a change of channel state) irrespective of time. If I look at the PHY chapters the FH chapter (Figure 68) would seem to follow 14.3.3.2.2 and the DS (Figure 83) follows 12.3.5.10.2 | Correct conflict one way or the other do I get a regular PHY CCA indication per slot time, or only when the channel state changes. <br> (It also occurs to me that the first two sentences of clause 14.3.3.2.2 are duplicated in the immediately previous clause.) |  |

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| Seq. <br> $\#$ | Section <br> number | your <br> voter <br> sid <br> code | Cmnt <br> type <br> E, e, <br> T, | Part <br> of <br> NO <br> vote | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |


| Seq. <br> \# | Clause number | your <br> voter' <br> s ID <br> code | $\begin{gathered} \hline \text { Cmnt } \\ \text { type } \\ \text { E, e, } \\ \text { T, t } \end{gathered}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Actually this is pretty important for compliance given the rules that define when the back-off timer may, or may not be decremented in 9.2.5.2 |  |  |
|  | $\begin{array}{\|c\|} \hline 12.3 .5 .12 \\ .2 \end{array}$ | TLP | e |  | State machines do not "think". Please avoid anthropomorphizing equipment and software. | Change first two sentences of second indented paragraph to read "The RXERROR parameter can convey one more of the following values NoError, <br> FormatViolation, CarrierLost, or UnsupportedRate. A number of error conditions may occur after thePLCP's receive state machine has detected what appeared to be a valid preamble and start frame delimiter." |  |
|  | $\begin{array}{\|c\|} \hline 12.3 .5 .12 \\ .2 \\ \hline \end{array}$ | TLP | e |  | Use of inappropriate word. | Change last word from "encountered" t $\phi$ "detected" |  |
|  | 12.3.5.8.4 | TLP | e | Yes | The word "packet" (a network layer concept) is used where "frame" is appropriate. Please use the appropriate OSI Basic Reference Model terminology. | Change "packet" to "frame". |  |
|  | 12.all | TLP | e |  | Use of undefined jargon | Replace "node" with "station" (or "STA") everywhere |  |
|  | 12.all <br> 5.1.1.2 (c) <br> 5.2.4.1 <br> 5.4 <br> 9.2.1 <br> 14.all <br> 15.some <br> 16.all <br> 13.1 .1 .1 | TLP | e | Yes | The wireless medium is definitely singular (unless there an alternate universe with multiple "ethers"), or unless P802.11 is extending its charter to acoustic modes of transmission. | s change "edia" to "edium" everywhere except when referring to wired media. |  |
|  | 13.1.1.1 | TLP | e |  | The attribute name for slot time needs to be spelled consistently with earlier uses in the standard. | Change to "aSlotTime" everywhere in $\qquad$ |  |

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| Seq. \# | Section number | your <br> voter' <br> s id <br> code | $\begin{gathered} \text { Cmnt } \\ \text { type } \\ \text { E, e, } \\ \text { T, }, \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Seq. \# | Clause number | your <br> voter' <br> s ID <br> code | $\begin{gathered} \text { Cmnt } \\ \text { type } \\ \text { E, e, } \\ \text { T, t } \end{gathered}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
|  | 13.1.1.1 | TLP | e |  | The A in CCA already stands for Assessment. You can' have Clear Channel AssessmentAssessment Time. Even MS-Word flags it as redundant. | Change to "aCCATime" everywhere in this section |  |
|  | 13.1.1.1 | TLP | e |  | Missing paragraph mark after "aMACPrcDelay" | Add end-of-paragraph mark after corrected "aMACProcessingDelay" |  |
|  | 13.1.1.3 | TLP | t |  | The concept of antenna appears, from all its occurrences to be thought of within this standard as only relevant to RF. However, it could also apply to IR transmit/receive apparatus | This applicability to IR should be pointed out somewhere within the text, perhaps in one of the first antennarelated attribute definitions. |  |
|  | 13.1.2 | WD | t |  | Management objects are now defined twice: in the std body (section 13.1) and in Annex D. There is no added value in this double definitionSuggest to remove the definitions in the std body (13.1), if there is also a formal definitions in Annex D which has precedence anyway. <br> However the use of this MIB is primarily by the local MAC entity itself, and its use is not relevant for Network Management purposesThis could be a good reason to specifically not place them in Annex D, but indeed specify them in section 13.1 <br> The definitions per PHY as given in sections 14.8.2, 15.3.4 and 16.4 are considered very relevant, because they define the values for the attributes per PHY. | Suggest to use only one definition in the standard, which is to be normative, and remove the other definitions. <br> One possibility is to remove the definition in the std body (13.1), and to correct Annex D as applicable. However a summary of the relevant MIB parameters and their GETREPLACE characteristics, like provided in section 13.1.2 can be functional here, and could be maintained in section 13. <br> A more clear alternative would be to maintain the section 13.1 definitions, and remove them from Annex D, sinse these parameters are only of interrest to thelcal MAC entity. |  |
|  | 13.1.4. | RM | e |  | In the followingubclauses, use consistent unitsshould be in microseconds | 13.1.4.12 RxRFDelay <br> 13.1.4.13 aRxPLCPDelay <br> 13.1.4.15 aTxRampOffTime |  |

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| Seq. <br> $\#$ | Section <br> number | your <br> voter <br> sid <br> code | Cmnt <br> type <br> E,, <br> $\mathbf{T}, \mathbf{t}$ | Part <br> of <br> NO <br> vote | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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| Seq. <br> \# | Clause <br> number | your <br> voter <br> s ID <br> code | Cmnt <br> type <br> E, e, <br> T, |
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| Seq. <br> $\#$ | Section <br> number | your <br> voter <br> sid <br> code | Cmnt <br> type <br> E, e, <br> T,t | Part <br> of <br> NO <br> vote | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |


| Seq. \# | Clause number | your <br> voter' <br> s ID <br> code | Cmnt <br> type <br> E, e, <br> T, $\mathbf{t}$ | $\begin{gathered} \hline \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 13.1.4.20 | TLP | T |  | The attribute is under-defined; it's coding (other than intenger) is not specified andimplementors from different countries would naturally make incompatible choices. Fpr example, is this coded as the minimum temperature of designed-for operation inmilli-degrees Kelvin? | Add a specification of the attributes coding, either as a table of correspondin ranges |  |
|  | 13.1.4.25 | TLP | e |  | (1) It is unclear what is being measured or characterized by this parameter. Is it a transmit FIFO and pipeline depth, or the number of bits per PHY symbol, or the payload of an on-the-medium transmission unit, or what ${ }^{2}$ <br> (2) The existing text is illiterate. | Clarify intent within the committee and rewrite appropriately, in literate English For example, the existing text should b rewritten to read "The maximum numbe of octets of an MPDU that can be conveyed by a PLCPPDU" |  |
|  | $\begin{aligned} & \hline 13.1 .4 .27 \\ & 13.1 .4 .28 \\ & 13.1 .4 .30 \end{aligned}$ | TLP | e |  | Failure in conceptualization. Surely antennae are not defined by integers. At least, not according tdWebster's definition of "defined". | Rewrite each sub-sub-sub-section to a literate form, such as "Each antenna is represented by an integer, starting with antenna 1, and through antenna N , where $\mathrm{N} \leq 255$;" |  |
|  | 13.1.4.29 | TLP | e |  | Poor exposition | Rewrite as "This implementation's support for diversity, encoded as: 01 h - diversity is available and is performed over the fixed list of antenna defined in aDiversitySelectionRx. 02 h - diversity is not supported. 03 h - diversity is supported and contrq of diversity is also available, in which case the attribute aDiversitySelectionRx can be dynamically modified by the LME." |  |
|  | 13.1.4.4 | WD | E |  | "Behaviour" not same as "Description" in Annex D. | Suggest to remove the definitions in the std body (13.1), and to correct Annex D as applicable. |  |
|  | 13.1.4.4 | SB | t | N | Dwell time related MIB attributes are a complete mess | Please can we have some order here. It |  |


| $\begin{gathered} \text { Seq. } \\ \# \end{gathered}$ | Section number | $\begin{array}{\|c} \hline \text { your } \\ \text { voter } \\ \text { s id } \\ \text { code } \\ \hline \end{array}$ | $\begin{gathered} \hline \text { Cmnt } \\ \text { type } \\ \text { E,e, } \\ \mathbf{T}, \mathrm{t} \\ \hline \end{gathered}$ | Part <br> of <br> NO <br> vote | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |


| Seq. \# | Clause number | your <br> voter' <br> s ID <br> code | $\begin{gathered} \hline \text { Cmnt } \\ \text { type } \\ \text { E, e, } \\ \text { T, t } \end{gathered}$ | $\begin{gathered} \hline \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \hline 4, \\ \text { 13.1.4.4 } \\ 5,7.3 .2 . \\ 3, \\ 11.1 .5, \\ 14.8 .2 \end{gathered}$ |  |  |  | in terms of units. <br> 13.1.4.4 definesaMaxDwellTime and aCurrentDwellTime in nanoseconds (!), the default values in 14.8.2 are in milliseconds and the comparison to a TSF timer value in 11.1.5 is to a time in microseconds. Lastly the value for the dwell time in the FH Parameter set element (7.3.2.3) is inKmicroseconds. | would be nice if theaMaxDwellTime and aCurrentDwellTime were inKus since this is what a number of other MAC attributes such asaBeaconPeriod is in. It also ties up with the FH parameter set. It also makes the TSF time comparison easy (hence the beacon stuff). <br> So: <br> aMAXDwellTime should be inKus and be a default value of 390 ( 399.360 ms ) <br> aCurrentDwellTime should be inKus an be a default value of 20 . |  |
|  | 13.1.4.55 | TLP | e |  | Illeterate, perhaps partially due to typographic errors | Rewrite as "This parameter, together with CCAWatchdogCountMax, determines when energy detected in the channel can be ignored." |  |
|  | 13.1.4.56 | TLP | e |  | Illeterate, perhaps partially due to typographic errors | Rewrite as "This parameter, together with CCAWatchdogTimerMax, determines when energy detected in the channel can be ignored." |  |
|  | 13.1.4.all | TLP | e |  | Many minor corrections are appropriate, as shown in the accompanying revision-marked files. | Change as shown in the accompanying revision-marked files. |  |


| Seq. \# | Section number | your <br> voter' <br> s id <br> code | Cmnt <br> type <br> E, e, <br> T, $\mathbf{t}$ | $\begin{gathered} \hline \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Seq. \# | Clause number | $\begin{gathered} \text { your } \\ \text { voter } \\ \text { s ID } \\ \text { code } \end{gathered}$ | $\begin{gathered} \hline \text { Cmnt } \\ \text { type } \\ \text { E, e, } \\ \text { T, t } \end{gathered}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
|  | 13.all | TLP | E | Yes | Please take pity on non-native English speakers and use names that they have some slight chance of understandin <br> Mis-pronounceable subsets of English words, such as "suprt" for "supported", are not even close to acceptable. Similarly, what does "Asmnt" mean? How about Lvls"? <br> "Ths demnt is nt prntd fr clmns up." That tried to say "This document is not printed four columns up." Why ane vowels so scarce that you can't use them? Please turn these names into something suitable for human consumption. This clause is not acceptable as it stands. am balloting NO on it, for grossinconsideration of the intended readers. <br> To simplify the task of fixing this clause, I have applied global transforms to produce more intelligible attribute names. See the submitted revision-marked files. | Use all of the letters in each constituent word unless the resulting word length is really impractical. <br> See the submitted revision-marked files for an acceptable set of MIB names. |  |
|  | $\begin{aligned} & \text { 13.all } \\ & \text { 14.all } \end{aligned}$ | TLP | E | Yes | IEEE and ISO/IEC editing rules require use of SI units and proper nomenclature. That includes capitalizing a unit derived from a person's name, and using the unit (W), not the name. It also includes using a non-break space between the amount and the unit, so that line-wrap cannot split the amount from the unit | Follow the IEEE and ISO/IECeditng rules with regard to units; there is no reason not to do so. |  |
|  | 14. | JMZ | E |  | There are a number of uses of "is" that should be reworded as "shall" in the normative text of a standard. | Convert FH PHY English to IEEE Standardsese through clause 14. |  |
|  | 14.2.2 | RM | T | Y | Clarify the supported data rates do not include all possible rates the TXvector. | 14.2.2 TXVECTOR Parameters <br> The following parameters are defined as pa of the TXVECTOR parameter list in the PHY_TXSTART.request service primitive. The 1MBPS and 2MBS are the only rates currently supported. Other indicated data rates are for posible future use. |  |

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| Seq. <br> $\#$ | Section <br> number | your <br> voter <br> sid <br> code | Cmnt <br> type <br> E, e, <br> T, | Part <br> of <br> NO <br> vote | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |


| Seq. \# | Clause number | your <br> voter' <br> s ID <br> code | Cmnt <br> type <br> E, e, <br> T, $\mathbf{t}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 14.2.2.1 | TLP | t |  | A value of zero is nonsensical. How can the PHY be asked to transmit nothing. The OSI Basic Reference Model does not permit null SDU transmissions, and there seems to be no reason for null PDU transmissions either | Change minimum length from " 0 " to |  |
|  | 14.2.2.2 | vh | e |  | The FHSS MIB variableBSSBaicRate and the MIB variable CurrentHighSRate are mentioned here but are not defined in the respective clauses | Remove the last two sentences of the clause and insert: BASIC rate is 1 . HIGHSPEED is either 0 if not supported or 2 if the optional 2 Mbit/s PMD is implemented. |  |
|  | 14.2.2.2 | RM | t | Y | This section refers to undefined MIB variables | 14.2.2.2 TXVECTOR PLCP_BITRATE <br> The PLCP_BITRATE parameter is an optional parameter. Its value describes the $b$ rate the PLCP should use to transmit the PLCP_PDU. Its value can be BASIC or HIGHSPEEDThe BASIC rate is defined as the BSSBasieRate in the FHSS PHY MIB. The HIGHSPEED rate is defined by the EurrentHighSRate in the MHB. |  |
|  | 14.3.1.1 | TLP | e |  | The heading is missing all of its text. | Add text to the heading line, or remove the heading. |  |
|  | 14.3.1.1 | TLP | e |  | "Function" is probably the maximally wrong word here. FSM (finite state machine), procedure, automaton, etc. come to mind. But since function has a connotation of $n 0$ or minimal side effects, it is probably not the best word to use. I don't know what would be; perhaps the committee can make that determination. | Choose a better word to convey the intended concept. |  |
|  | $\begin{gathered} \text { 14.3.1.1 } \\ \text { 2nd } \mathbb{I} \end{gathered}$ | TLP | e |  | Arrows have orientation, and thus convey information which should be specified here. | Change to read "Each permissible transition between the states of a function is represented graphically by a arrow from the initial to the terminal state. A transition ..." |  |

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| Seq. <br> $\#$ | Section <br> number | your <br> voter <br> sid <br> code | Cmnt <br> type <br> E, e, <br> T, $t$ | Part <br> of <br> No <br> vote | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |


| Seq. \# | Clause number | your <br> voter' <br> s ID <br> code | $\begin{gathered} \text { Cmnt } \\ \text { type } \\ \text { E, e, } \\ \text { T,t } \end{gathered}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 14.3.2.1.1 | TLP | e |  | poor English | Change to read "... to detect a potentially-receivable signal, select ..." |  |
|  | 14.3.2.1.2 | TLP | E | Yes | Either the transmitted objects are "packets", in which caseU this should be a "Start Packet Delimiter", or they are "frames", in which case the word "packet" should be replaced by "frame" everywhere within this clause. Use "packet" only if it refers to a PHY concept which must be distinguished from an 802.11 Data Link MAC PDU (which latter is correctly called a "frame"). | Use consistent nomenclature. Avoid th use of the term "packet" if possible, because its primary meaning of "packet" is that of an OSI network-layer PDU, and IEEE 802 has agreed to respect the OSI Basic Reference Model, including its nomenclature. |  |
|  | 14.3.2.2.1 | TLP | e |  | (1) A value of zero is nonsensical. How can the PHY be asked to transmit nothing. The OSI Basic Reference Model does not permit null SDU transmissions, and there seems to be no reason for null PDU transmissions either <br> (2).LSB means Least Significant Bytelsb means least significant bit. Its been this way for at least two decades. | Change to read "The PLCPPDU Length Word (PLW) is passed from the MAC as a parameter within the PHYTXSTART.request primitive. The PLW specifies the number of octets contained in the MPDU packet. Its valid values are $001 \mathrm{~h}-\mathrm{FFFh}$, representing counts of oneto 4095 octets. The PLW is transmitted lsb first and msb last. The PLW is used by the receiving stationin combination with the $32 / 33$ coding algorithm specified in this clause, to determine the last bit in the packet." |  |
|  | 14.3.2.2.2 | TLP | e |  | (1) The table format should be corrected to fit within the column and avoid breaking the parameter name across two lines. <br> (2) With regard to the spelled-out units, with one entry pør line, clarity in this area might be worth more than the paper saved. | See the submitted revision-marked files o for the necessary corrections |  |

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| Seq. <br> $\#$ | Section <br> number | your <br> voter <br> sid <br> code | Cmnt <br> type <br> E, e, <br> T, | Part <br> of <br> NO <br> vote | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |


| Seq. <br> \# | Clause number | your <br> voter' <br> s ID <br> code | $\begin{gathered} \hline \text { Cmnt } \\ \text { type } \\ \text { E, e, } \\ \text { T, t } \end{gathered}$ | $\begin{gathered} \hline \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 14.3.2.2.3 | TLP | T | Yes | This polynomial works only when the modulation avoid differential coding, which has the effect of creating double-bit errors on decoding. Otherwise two errors 22 bits apart can go undetected, as can many other lowweight short error bursts, since the power of the CCITT code is biased heavily toward detecting odd numbers of bits in error. | If differential decoding is required, then change to a CRC polynomial which does not contain $(1+X)$ as a factor, so that the CRC polynomial is not compromised by the differential decoding process. N change needed otherwise. |  |
|  | 14.3.2.3 | TLP | t |  | The bit order must be specified, as well as the byte order. | Change to read "... stream LSB andlsb first and MSB andmsb last." |  |
|  | 14.3.3 | TLP | e |  | Poor terminology. | Change the last two sentences to read "Execution of the PLCP state machines normally is initiated by the FH PLME state machine and begins at the CS/CCA state machine. The PLCP returns to the FH PLME state machine upon interrupt to service a PLME service request, such as PLMESET, PLMERESET, etc." |  |
|  | 14.3.3.1.1 | TLP | T | Yes | ```In the Data Whitener Decoding Algorithm, the comment /********* Calculate bias in header for format error checking ******** implies that there should be error checking. Where is it``` | Add the necessary error checking procedure and any supporting text. |  |
|  | $\begin{gathered} 14.3 .3 .2 \\ .1 \end{gathered}$ | SB | t | N | In Figure 67 two timers are defined;count_down timer and CS/CCA timer. In this text/state machine CCA/CS timer has no actions other than 'maintain' - but there is no definition of what 'maintain' actually means. The accompanying text makes explicit reference to the purpose and actions oncown_down timer but only makes rather vague references to 'all relevant CCA/CS timers' - there is only one such timer hinted at in the state machine. <br> I could clearly take some sensible guesses here - but tha | Make it clear what CCA/CS timers are required for compliance with the standard (the comment author appreciates that much of the CCA stuff is outside the scope of the standard). Now bring the state machine and text into line and describe what the requirements and actions on the CS/CCA timer are. |  |


| Seq. \# | Section number | your <br> voter' <br> s id <br> code | Cmnt <br> type <br> E, e, <br> T, $\mathbf{t}$ | $\begin{gathered} \hline \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Seq. \# | Clause number | $\begin{gathered} \text { your } \\ \text { voter } \\ \text { s ID } \\ \text { code } \end{gathered}$ | Cmnt <br> type <br> E, e, <br> T, $\mathbf{t}$ | $\begin{gathered} \hline \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
|  |  |  |  |  | does not make a good standard! |  |  |
|  | $\begin{gathered} 14.3 .3 .2 \\ .1 \end{gathered}$ | SB | t | N | Clause 14.3.3.2.1 says: <br> However, if the CS/CCA procedure indicates the start of a new frame within the countdown timer period, it is possible to transition to the receive procedure prior to the end of the countdown timer period. When a nonzero countdown timer reaches zero, the PLCP shall reset all relevant CS/CCA assessment timers to the state appropriate for the end of a complete received frame and the CS/CCA indication shall reflect the state of the channel. <br> This says that if I transition to a new frame within the countdown timer period then I keep the countdown timer running from the previous frame and CCA locked busy until the countdown timer reaches zero (or is updated). <br> Was it the intent to have the countdown timer run and either expire during the new receive - or have an error in the new receive restart the timer. Alternatively, was the intent to actually reset the countdown timer on entry into the new receive. | Make intent clear in standard. |  |
|  | $\begin{array}{\|c\|} \hline 14.3 .3 .2 .1 \\ \text { 5th } \mathrm{I} \end{array}$ | TLP | e |  | The wording "to the end as positively indicated" is very confusing; I can't even figure out how it might be parsed to make sense. | Rephrase to make the meaning clear. |  |
|  | $\begin{array}{\|c\|} \hline 14.3 .3 .2 .1 \\ 5 \text { th } \mathbb{I} \\ \hline \end{array}$ | TLP | e, t |  | The wording "it is possible" is permissive as stated. If yd wish to require such a transition, use "shall". | Consider whether to make a requirement. |  |
|  | 14.3.3.2 <br> 9.2.5.2, | SB | t | N | Clause 14.3.3.2.2 says: <br> The appropriate CS/CCA indication shall be generated | Correct conflict one way or the other do I get a regular PHY CCA indication per slot time, or only when the channel |  |


| Seq. <br> $\#$ | Section <br> number | your <br> voter <br> sid <br> code | Cmnt <br> type <br> E, e, <br> T, | Part <br> of <br> NO <br> vote | Comment/Rationale | Recommended change |  |
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| Seq. \# | Clause number | your <br> voter' <br> s ID <br> code | Cmnt <br> type <br> E, e, <br> T, $\mathbf{t}$ | $\begin{gathered} \hline \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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|  | $\begin{gathered} \hline 12.3 .5 .1 \\ 0.2 \end{gathered}$ |  |  |  | prior to the end of each $50 \mu \mathrm{~s}$ slot time with the performance specified insubclause 14.6 (PMD). <br> (The CS/CCA indication is byPHYCCA.indicate as in figure 68) <br> While clause 12.3.5.10.2 says abouPHYCCA.indicate: <br> This primitive shall be generated every time the status of the channel changes from channel clear tochannel busy or from channel busyto channel clear. <br> Clearly there is some conflict here - one says that the primitive is issued on a time basis once per slot time even if the channel state has not changed, the other on a physical event (a change of channel state) irrespective of time. If I look at the PHY chapters the FH chapter (Figure 68) would seem to follow 14.3.3.2.2 and the DS (Figure 83) follows 12.3.5.10.2 <br> Actually this is pretty important for compliance given the rules that define when the back-off timer may, or may not be decremented in 9.2.5.2 | state changes. <br> (It also occurs to me that the first two sentences of clause 14.3.3.2.2 are duplicated in the immediately previous clause.) |  |
|  | $\begin{array}{\|c\|} \hline \text { 14.3.3.2.2 } \\ \text { 1st } I I \end{array}$ | TLP | T |  | It is not clear what "within a slot time including the PIFS and DIFS windows" means. Does this mean that the slo time includes the PIFS and DIFS windows, or does it mean a slot time plus a PIFS or DIFS window? Note th $\not$ substantial difference in meaning depending on the way it is actually worded. | Please clarify. |  |
|  | $\begin{array}{\|c\|} \hline \text { 14.3.3.2.2 } \\ \text { 2nd } \mathbb{I} \\ \hline \end{array}$ | TLP | e |  | BRAVO!!! The word "perceived" is a great word choic\&. It conveys the ambiguity nicely. | None |  |


| $\begin{gathered} \text { Seq. } \\ \# \end{gathered}$ | Section number | $\begin{array}{\|c} \hline \text { your } \\ \text { voter } \\ \text { sid } \\ \text { code } \\ \hline \end{array}$ | $\begin{gathered} \text { Cmnt } \\ \text { type } \\ \text { E,e, } \\ \mathbf{T}, \mathrm{t} \\ \hline \end{gathered}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { No } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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| Seq. \# | Clause number | your <br> voter' <br> s ID <br> code | Cmnt <br> type <br> E, e, <br> T, t | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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|  | 14.5.4.2 | TLP | e |  | Last line of table. The word management is abbreviated "mgmt", not "mgnt". The latter is an abbreviation for "magnet". | s Change "PMD_PWRMGNT" to "PMD_PWRMGNT", with any other case and underscore changes as appropriate to match section 13 . |  |
|  | 14.5.4.3 | RM | t | Y | This section is inconsistent with 14.5.5.1 and 14.5.5.2. Thes sections already make provisions for support both data rates us a common convention. If desired the 14.5.5.1 and 14.5.5.2 cou be modified to allow passing the BASIC and HIGHSPEED primitive within TXD_UNIT and RXD_UNIT. | TXD_UNITPMD_DATA.request $1 \mathrm{Mbit} / \mathrm{s}$ : ing 12 Mbit/s: $0,1,2$, RXD_UNIT IPMD_DATA.indicate $1 \mathrm{Mbit} / \mathrm{s}: 0,21$ Mbit/s: $0,12,3$ |  |
|  | 14.5.5.4 | TLP | e |  | This would be better titled "PA_RAMP", rather than "PARAMP". The first three times I read the word it parsed par-amp, rather than p-a-ramp. Non-native English speakers will have even more difficulty. | Change "PMD_PARAMP" to "PMD_PA_RAMP", with any other case and underscore changes as appropriate to match section 13. |  |
|  | 14.5.5.9 | TLP | e |  | The term "power-saving" is used elsewhere in the standar for the function that is here referred to as "low-power". | Use the same terminology throughout the document; either choice is OK. |  |
|  | 14.6.10 | TLP | E |  | MS Word superscript and subscript font attributes produc unacceptable results. | e Do not use MS-Wordsubscripting or superscripting; MS-Word makes the resulting text TOO SMALL. Instead, select the characters to become the subscript or superscript and use Format/Font/Font/Size/8 and Format/Font/Character Spacing/Position/Lowered and Format/Font/Character Spacing/By/2 foa subscript, and Format/Font/Font/Size/ $\$$ and Format/Font/Character Spacing/Position/Raised and Format/Font/Character Spacing/By/3 fo a superscript. <br> (This is corrected in the submitted revision-marked files.) |  |


| Seq. <br> $\#$ | Section <br> number | your <br> voter <br> sid <br> code | Cmnt <br> tye <br> ene, <br> e, <br> T,,$t$ | Part <br> of <br> vo <br> vote | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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| Seq. \# | Clause number | your <br> voter' <br> s ID <br> code | $\begin{gathered} \text { Cmnt } \\ \text { type } \\ \text { E, e, } \\ \text { T,t } \end{gathered}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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|  | $\begin{array}{\|c\|} \hline \text { 14.6.14.4 } \\ \text { last } I I \end{array}$ | TLP | T |  | Unclear relaxation of requirements. I believe that I know what is meant, but the existing wording would not stand up under legal scrutiny as a meaningful requirement, and thus can't be used as the basis for a conformance/nonconformance decision. | Please clarify this paragraph. |  |
|  | $\begin{gathered} 14.6 .15 \\ 5 \end{gathered}$ | RM | T | Y | The definition of Imp specifies that the desired signal amplituc larger than the undesired. This makes no sense as the specification is in $+\mathrm{dB}$ | elistermodulation protectiorl(Mp) is defined as the ratio of theninimumamplitude of one of two equal interfering signalloo the desired signal amplitude, where the interfering signals are spaced 4 andMhz removed from the center frequency of the desired signalboth on the same side of the center frequency..desired signaktrengthto the minimtm amplittule of one of two equa interfering signals at 4 and 8 MHz remed from center frequency, both on the same sid of center frequeney, thatThe Impprotection ratio is established at the interfering signal level thatcauses the FER of the receiver to be increased to $3 \%$ foMPDUs of 400 octets generated with pseudo random data, when the desired signal is -7 ABm . Each interfering signal is modulated with the FH PMD modulationuncorrelated in time to each other or the desired signal. The PMD shall have theIMp for the interfering signal at 4 and 8 MHz be greater than or equal to 30 dB . |  |
|  | $\begin{array}{\|c} \hline 14.6 .15 . \\ 6 \end{array}$ | PMK | e |  | FER used the clauses but notdefned | Insert in Clause 4:FER=Frame Error Rate (Vic Hayes: Ratio) |  |
|  | 14.6.4 | JMZ | t |  | By removing channel 47 from the Spain hop-sequences, it would be possible to come up with a single unified Spain/France table. I think it would be better to reduce the (potentially large) number of different regulatory | Combine Spain/France into a single regulatory-domain. |  |


| $\begin{gathered} \text { Seq. } \\ \# \end{gathered}$ | Section number | $\begin{gathered} \text { your } \\ \text { voter } \\ \text { sid } \end{gathered}$ | $\begin{aligned} & \text { Cmnt } \\ & \text { type } \\ & \text { E, e, } \end{aligned}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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| Seq. \# | Clause number | your <br> voter' <br> s ID <br> code | Cmnt <br> type <br> E, e, <br> T, t | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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|  |  |  |  |  | domains that must be supported than to use all the possible frequencies in France. |  |  |
|  | 14.6.8 | JMZ | t |  | The mathematics behind the pseudo-random sequences should be explained so that (if one exists) a reversemapping function can be implemented. Trying to calculate what position in a hop-sequence a device is currently at requires a rather lengthyTSFTimer calculation or a sequential-search through the appropriate table. This makes predicting what frequency a STA will be on in the future (forReassociation, for example) unnecessarily complex. | Explain the formula used to determine the hopping tables, or switch a formula with better mathematical properties (a number of academic articles on optimal patterns that pass regulatory muster have been published). |  |
|  | 14.6.8 | TLP | t |  | Specifications for France and Spain are made elsewhere, and need to be included here. | Change to read " $\mathrm{p}=$ number of frequency channels in hopping pattern (79 for North America/most of Europe 23 for Japan, 11 for France, 9 for Spain)" |  |
|  | 14.6.8 | TLP | E |  | The line formatting in this region leads to a difficult-toread document, and the electronic version is very sensitiy to the software set (OS, MS Word revision, font revision, selected printer, etc.) used for viewing. This sensitivity t the reader's environment is unnecessary. | Use the changed paragraph formatting provided in the submitted revisionmarked files- don't just put in line breaks and manually wrap the lines. In other words, useMSWord the way professionals do, not just as a flat-text program editor. |  |
|  | 14.6.all | TLP | T |  | In many places, specifications are made for Europe, and differently for France and Spain. The last time I checked, <br> France and Spain were in Europe. So all such specifications do not apply to "Europe" as claimed, but only to "most of Europe". | Change "Europe" to "most of Europe" wherever different specifications apply to France or Spain. |  |
|  | 14.7.2 | RM | e |  | Missing "4" | 14.7.2 4Level GFSK Modulation |  |
|  | 14.7.2 | TLP | e |  | Table 45 has incorrect title | Change "Division" to "Deviation" |  |
|  | 14.8.2 | SB | t | N | Dwell time related MIB attributes are a complete mess | Please can we have some order here. It |  |


| Seq. | Section number | your <br> voter' <br> sid <br> code | $\begin{gathered} \hline \text { Cmnt } \\ \text { type } \\ \text { E, e, } \\ \mathbf{T}, \mathbf{t} \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \\ \hline \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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| Seq. \# | Clause number | your <br> voter' <br> s ID <br> code | Cmnt <br> type <br> E, e, <br> T, $\mathbf{t}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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|  | $\begin{gathered} \hline 7.3 .2 .3, \\ \text { 11.1.5, } \\ \text { 13.1.4.4 } \\ 4, \\ \text { 13.1.4.4 } \\ 5, \end{gathered}$ |  |  |  | in terms of units. <br> 13.1.4.4 definesaMaxDwellTime and aCurrentDwellTime in nanoseconds (!), the default values in 14.8.2 are in milliseconds and the comparison to a TSF timer value in 11.1.5 is to a time in microseconds. Lastly the value for the dwell time in the FH Parameter set element (7.3.2.3) is inKmicroseconds. | would be nice if theaMaxDwellTime and aCurrentDwellTime were inKus since this is what a number of other MAC attributes such asaBeaconPeriod is in. It also ties up with the FH parameter set. It also makes the TSF time comparison easy (hence the beacon stuff). <br> So: <br> aMAXDwellTime should be inKus and be a default value of 390 ( 399.360 ms ) <br> aCurrentDwellTime should be inKus an be a default value of 20 . |  |
|  | 14.8.2 | RM | t | N | The default values focwmin andCwmax are incorrect. | aCWmin 15 decimah aCWmax 1023decimah |  |
|  | 14.8.2 | TLP | E |  | Use of term "Dep" in final column. If you wish to use a shortened form that fits on a single line, then choose one that is meaningful to non-native-English speaking reader and explain it in the Notes which follow the table, as in <br> "where Implementation means that the behavior is dependent on the specific implementation". | Use an appropriate legitimate word, or add an explanatory note to the table. |  |
|  | $\begin{gathered} 14.8 .2 .1 \\ .18 \\ \hline \end{gathered}$ | TLP | e |  | The Symbol font contains a multiply character※"; use it, rather than the letter " $x$ ". | Use the correct character for multiplication. |  |


| $\begin{aligned} & \text { Seq. } \\ & \# \\ & \# \end{aligned}$ | Section number | $\begin{gathered} \text { your } \\ \text { voter } \\ \text { vid } \\ \text { sid } \\ \text { code } \end{gathered}$ | $\begin{aligned} & \hline \text { Cmnt } \\ & \text { type } \\ & \text { e, e, } \\ & \text { T, } \end{aligned}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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| Seq. \# | Clause number | $\begin{gathered} \text { your } \\ \text { voter } \\ \text { s ID } \\ \text { code } \end{gathered}$ | $\begin{gathered} \hline \text { Cmnt } \\ \text { type } \\ \text { E, e, } \\ \text { T, t } \end{gathered}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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|  | 14.8.2.1.2 | TLP | E | Yes | The reader is unlikely to be familiar with the entire set of listed agencies. The countries corresponding to the agencies should be shown. | Add a third column to the table specifying the region/countries to which each code point applies. <br> (This is shown in the submitted revision marked files.) |  |
|  | 14.8.2.1.4 | TLP | t or e |  | The value assigned to the attribute is not equal to the value computed from the formula which defines the attribute. The formula gives $27+20+1=48$, not the claimed 50 . you intend that the number should be rounded up by including a safety factor, then say so. Wording such as that found in the definition ofaSIFSTime would be acceptable. But claiming equality without making the sums match is not acceptable. | e Correct something. |  |
|  | 14.all | TLP | E |  | The earlier clauses in the document do not use an underscore after the prefix PHY or PLCP, or PLME, even though that might aid readability. So this clause should not either. The necessary corrections have been included in the submitted revision-marked files, but the figures have not been corrected. | Be consistent throughout the draft standard - either use hyphens or underscores, which would improve readability, or don't. But do so consistently. |  |


| Seq. <br> $\#$ | Section <br> number | your <br> voter <br> sid <br> code | Cmnt <br> type <br> E, e, <br> T,t | Part <br> of <br> NO <br> vote | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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| Seq. \# | Clause number | $\begin{gathered} \text { your } \\ \text { voter } \\ \text { s ID } \\ \text { code } \end{gathered}$ | Cmnt <br> type <br> E, e, <br> T, $\mathbf{t}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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|  | 14.all | TLP | E | Yes | Please take pity on non-native English speakers and use names that they have some slight chance of understandinq <br> Mis-pronounceable subsets of English words, such as "suprt" for "supported", are not even close to acceptable. Similarly, what does "Asmnt" mean? How about Łvls"? <br> "Ths dcmnt is nt prntd fr clmns up." That tried to say "This document is not printed four columns up." Why ane vowels so scarce that you can't use them? Please turn these names into something suitable for human consumption. This clause is not acceptable as it stands. am balloting NO on it, for grossinconsideration of the intended readers. <br> To simplify the task of fixing this clause, I have applied global transforms to produce more intelligible attribute names. See the submitted revision-marked files. | Make names consistent with the name changes made in section 13 as a result o the similar comment for section 13 <br> Also update the figures, which I was no able to do in the submitted revisionmarked files. |  |
|  | 14.all <br> 5.1.1.2 (c) <br> 5.2.4.1 <br> 5.4 <br> 9.2.1 <br> 12.all <br> 15.some <br> 16.all | TLP | e | Yes | The wireless medium is definitely singular (unless there i an alternate universe with multiple "ethers"), or unless P802.11 is extending its charter to acoustic modes of transmission. | change "edia" to "edium" everywhere except when referring to wired media. |  |
|  | 15 | MT | E |  | in order to maintain consistency with other sections, the DSSS section should have added the France and Spain regulatory domains. <br> Updates to 15.4.6.2, 15.3.2, 15.3.3.3, DSSS PICS, MIB description. | This text was provided in a previous comment. France allows operation from 2.4465 to 2.4835 GHz ( 4 channels possible). Spain allows operation from 2.445 to 2.475 GHz ( 2 channels). |  |

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| Seq. <br> $\#$ | Section <br> number | your <br> voter <br> sid <br> code | Cmnt <br> type <br> E, e, <br> T, | Part <br> of <br> NO <br> vote | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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| Seq. \# | Clause number | $\begin{gathered} \text { your } \\ \text { voter } \\ \text { s ID } \\ \text { code } \end{gathered}$ | $\begin{gathered} \hline \text { Cmnt } \\ \text { type } \\ \text { E, e, } \\ \text { T, t } \end{gathered}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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|  |  |  |  |  | Other editorial fix-ups provided in separate file | Two additional channels could be added to the DSSS channel plan for ETSI and France (2467 and 2472) |  |
|  | $\begin{aligned} & \text { 15.1.1 } \\ & \text { last II } \end{aligned}$ | TLP | e |  | This paragraph is inappropriate as worded. It sound more like instructions to a standards-writing committee than the finished output of that committee. Either remove it or restate it as accomplished fact, rather than hypothetical necessity. Also, there is only one PMDublayer in your mode, so there can be only one in this clause (perhaps with variations). So what does the first sentence mean? This is just sloppy writing, in my opinion. | Clean up this paragraph or remove it. |  |
|  | 15.1.3 | PMK | e |  | Additional subsets of acronyms are introduced | Consolidate 15.1 .3 with 4 to have just one table of acronyms |  |
|  | $\begin{gathered} \hline 15.1 .3 \\ 4 \\ \hline \end{gathered}$ | MT | e |  | add the abbreviations from clause 15 (DSSS PHY) this maintains consistency among clauses | add abbreviations from clause 15 and delete from clause 15 |  |
|  | 15.2.3.6 | DSM | t |  | I do not see how a 32 byte MPDU can be transmitted in 192 microseconds(assuming a transmission rate of 1 Mbps ) | Change to 256 microseconds |  |
|  | 15.2.6 | PMK | e |  | "PLCP transmit procedure is shown in figure 6". | "procedures is shown in figure 81". |  |
|  | 15.3,4 | PMK | e |  | "...specific values defined in Table 3." | "defined in Table 58". |  |
|  | 15.3.1 | PMK | e |  | "Table 1 lists thisprimetives...." | "Table 56 lists the primitives" |  |
|  | 15.3.4 | SB | e | N | It says here 'All DSSS PHY Layer MIB attributes are defined in clause 12 with specific values defined in table 3' <br> Table 3 is Duration/ID Field Encoding - this should be a reference to the following table (Table 58 in D5). <br> The title on Figure 58 is 'MIB Variable Parameters' whereas I believe it should more accurately be titled 'MIB Attribute Default Values/Ranges' | Correct reference and title as suggested. <br> The text that appears underneath Table 47 (FHSS PHY Attributes) relating to the meaning of static/dynamic could also be reproduced here for clarity. |  |


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| voter |  |  |  |  |  |
| s id | Eype | of |  |  |  |
| co, | NO | Comment/Rationale |  | Recommended change |  |


| Seq. \# | Clause number | your <br> voter' <br> s ID <br> code | Cmnt <br> type <br> E, e, <br> T, $\mathbf{t}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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|  | $\begin{array}{r} \hline 15.3 .4 \\ \text { p. } 243 \end{array}$ | WD | e |  | Reference to "clause 12" should be "clause 13 . <br> The contents of this table does not match the contents and sequence of the applicable groups as defined in Annex D, and or section 13.1.2 | Suggest to remove the definitions in the std body (13.1), and to correct Annex D as applicable. |  |
|  | 15.4.6.2 | AK | T | Yes | Reduce the number of defined channels for FCC and ETSI domains. | Channels can not be used in the same area because they (heavily) overlap. Adjacent channel rejection is 35 dB with 30 MHz spacing (15.4.8.3). <br> Definition of this many channels does not improve network performance but makes channel allocation and channel acquisition (handover/roaming/start up) more complex. Define only 3 channels: preferably 2422, 2444 and 2466 for both FCC and ETSI and adapt table 63 (and appendix A.4.6) accordingly. Adapt table 63 accordingly. (also appendix A.4.6 is to be adapted) |  |
|  | 15.4.6.2 | AK | T | Yes | Make channel 1 and 2 optional for FCC and IC | With the current channel definition it is not possible to manufacture a product that is FCC/IC compliant and ETSI compliant and IEEE compliant (three labels on the same device). With channel 1 and 2 optional such a device is possible (if it actually does not support channel 1 and 2). <br> Advantage: same product for both American and European market. Disadvantage: in a network in FCC |  |


| $\begin{aligned} & \text { Seq. } \\ & \# \\ & \# \end{aligned}$ | Section number | $\begin{gathered} \text { your } \\ \text { voter } \\ \text { vid } \\ \text { sid } \\ \text { code } \end{gathered}$ | $\begin{aligned} & \hline \text { Cmnt } \\ & \text { type } \\ & \text { e, e, } \\ & \text { T, } \end{aligned}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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| Seq. \# | Clause number | your <br> voter' <br> s ID <br> code | $\begin{gathered} \hline \text { Cmnt } \\ \text { type } \\ \text { E, e, } \\ \text { T, t } \end{gathered}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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|  |  |  |  |  |  | domain operating on channel 1 or 2 an ETSI/FCC device can not have a connection. |  |
|  | 15.4.6.4 | PMK | e |  | "DBPSK encoder is specified in Table 9". | "is specified in Table 64" |  |
|  | 15.4.6.4 | PMK | e |  | "DQPSK encoder is specified in Table 10". | "is specified in Table 65". |  |
|  | 15.4.7.1 | PMK | e |  | "regulatory bodies is shown in Table 11". | "is shown in Table 66". |  |
|  | 15.all | TLP | E | Yes | Please take pity on non-native English speakers and use names that they have some slight chance of understanding <br> Mis-pronounceable subsets of English words, such as "suprt" for "supported", are not even close to acceptable Similarly, what does "Asmnt" mean? How about Łvls"? <br> "Ths demnt is nt prntd fr clmns up." That tried to say "This document is not printed four columns up." Why are vowels so scarce that you can't use them? Please turn these names into something suitable for human consumption. This clause is not acceptable as it stands. am balloting NO on it, for grossinconsideration of the intended readers. | Make names consistent with the name changes made in section 13 as a result o the similar comment for section 13 . Also update the figures. |  |
|  | 15.some <br> 5.1.1.2 (c) <br> 5.2.4.1 <br> 5.4 <br> 9.2.1 <br> 12.all <br> 14.all <br>  <br> 16.all | TLP | e | Yes | The wireless medium is definitely singular (unless there an alternate universe with multiple "ethers"), or unless P802.11 is extending its charter to acoustic modes of transmission. | change "edia" to "edium" everywhere except when referring to wired media. |  |


| Seq. <br> $\#$ | Section <br> number | your <br> voter <br> sid <br> code | Cmnt <br> type <br> E, e, <br> T, | Part <br> of <br> NO <br> vote | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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| Seq. \# | Clause number | your <br> voter' <br> s ID <br> code | $\begin{gathered} \hline \text { Cmnt } \\ \text { type } \\ \text { E, e, } \\ \text { T, t } \end{gathered}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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|  | $\begin{aligned} & \text { 16.1.1 } \\ & \text { last II } \end{aligned}$ | TLP | e |  | This paragraph is inappropriate as worded. It sound more like instructions to a standards-writing committee than the finished output of that committee. Either remove it or restate it as accomplished fact, rather than hypothetical necessity. Also, there is only one PMDublayer in your mode, so there can be only one in this clause (perhaps with variations). So what does the first sentence mean? This is just sloppy writing, in my opinion. | Clean up this paragraph or remove it. |  |
|  | 16.2.1 | PMK | e |  | prepended if an English word is a rare and obscure one | "a PLCP Preamble and PLCP Header are added to the MPDU... |  |
|  | $\begin{gathered} \text { 16.2.4.1 } \\ \text { 2nd II } \end{gathered}$ | TLP | e, t |  | The phrase "transitions in L-PPM slots which would otherwise constitute an illegal symbol" which ends this paragraph has not been defined. | Either describe here what you mean, or add a forward reference to the (sub) ${ }^{\wedge} \mathrm{N}$ clause where these concepts are described. |  |
|  |  | PMK | e |  | "The SFD field is not modulated using <br> 4-PPM but instead consists of transitional in 4-PPM slots which would otherwise constitute an illegal symbol". This is completely incomprehensible. what is the otherwise illegal symbol? |  |  |
|  | 16.2.4.5 | TLP | e |  | (1) The normal computer convention is lsb" and "msb" refer to bits, "LSB" and "MSB" refer to Bytes. <br> (2) If the qualifier "in time" is needed here, then it is needed at all earlier occurrences of "shall be transmitted first". "in time" seems redundant. How can it be transmitted first, yet not be first in time? | Change to read "Thelsb (least significant bit) shall be transmitted first." |  |
|  | 16.2.4.6 | PMK | e |  | Is the ones compliment of the remainder. | Is the ones complement of the remainder. |  |
|  | $\begin{gathered} 16.2 .5 \\ \text {.all } \end{gathered}$ | TLP | e |  |  | Use "shall" rather than "will" when the intent is legislative. See the submitted revision-marked files. |  |


| Seq. <br> $\#$ | Section <br> number | your <br> voter <br> sid <br> code | Cmnt <br> type <br> E, e, <br> T,t | Part <br> of <br> NO <br> vote | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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| Seq. \# | Clause number | $\begin{gathered} \text { your } \\ \text { voter } \\ \text { s ID } \\ \text { code } \end{gathered}$ | Cmnt <br> type <br> E, e, <br> T, $\mathbf{t}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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|  | 16.2.5.2 | TLP | e, t |  |  | Specify the range of application of the data rate. See the submitted revisionmarked files. |  |
|  | 16.2.5.3 | TLP | e, t |  |  | Specify that reception is the relevant process. See the submitted revisionmarked files. |  |
|  | 16.3 | TLP | t |  | to ??? To what is the PHYSAP presented? | Add the missing destination. |  |
|  | 16.3.2.1 | TLP | e, t |  | Inadequate lead-in to table 67 | Change last sentence of first paragraph to read "Transmission order of the symbol slots is from left to right, as shown below, where a 1 indicates inband energy in the slot, and a 0 indicate the absence of in-band energy in the slot" |  |
|  | 16.3.3.1 <br> table 69 | PMK | e |  | Collumn Heading= Peak Optical Power (averaged over the pulse width) Is it peak power or average power? | Peak Optical Power (over the pulse width) if this is what is meant |  |
|  | 16.3.3.2 | TLP | e |  | If you prefer the " $\mathrm{x} x$ than or equal to" form of expression then use "less", not "lower", since numeric comparison, and not height in a gravitation field, is being discussed. | Correct the text to reflect intended meaning. |  |
|  | 16.3.3.2 and following | TLP | E | Yes | IEEE and ISO/IEC editing rules require use of SI units and proper nomenclature. That includes capitalizing a unit derived from a person's name, and using the unit (W), not the name. It also includes using a non-break space between the amount and the unit, so that line-wrap cannot split the amount from the unit | Follow the IEEE and ISO/IECeditng rules with regard to units, including tim units ( $\mathrm{s}, \mathrm{ms}, \mu \mathrm{s}$, ns, ps, fs, etc.) ; there is no reason not to do so. |  |
|  | 16.3.3.3 | TLP | e |  | Correct the formatting of Table 71 as shown in the submitted revision-marked files. | Make the table less than the full column with the heading Bold as in the previou table, as shown. |  |
|  | 16.3.3.3 | TLP | e |  | The statement "may be added at a future time" is not acceptable in a standard. | Replace with "are for future study" |  |


| $\begin{aligned} & \text { Seq. } \\ & \# \\ & \# \end{aligned}$ | Section number | $\begin{gathered} \text { your } \\ \text { voter } \\ \text { vid } \\ \text { sid } \\ \text { code } \end{gathered}$ | $\begin{aligned} & \hline \text { Cmnt } \\ & \text { type } \\ & \text { e, e, } \\ & \text { T, } \end{aligned}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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|  | 16.3.5.1 | TLP | E |  | Neither CS or ED have been described to this point, nor have any mechanisms or models of operation been proposed by which a reader could infer what CS and ED imply. And the generic namesCarrierDetect and EnergyDetect do not convey enough information about th nature of the detection process or the implied hardware to permit the reader to continue attempting to understand this clause. | Please propose a model of receiver operation before referring to the behavio of the model's constituent parts. <br> ๔addendum after reading the CS and ED descriptions> I strongly recommend that $s$ this ordering problem be remedied by describing ED first, then CS, and then CCA. Had this been done in the draft, this comment would never have existed |  |
|  | 16.3.5.2 | TLP | e |  | The second sentence is redundant; it is better placed wher it occurs later in the sub-sub-sub-clause, at the end. | eRemove the second sentence; it is $100 \%$ redundant. |  |
|  | 16.4 | TLP | e |  | Table 73, rows foraMPDUMaxLengthXX. <br> Section 10 lists a single attributeaMPDUMaxLength, not a number of data-rate-dependent attributes. One of these lines needs to be struck, as shown in the submitted revision-marked files. | Delete the data rate from one label, and the second row with the same label prefix. |  |


| Seq. <br> $\#$ | Section <br> number | your <br> voter <br> sid <br> code | Cmnt <br> type <br> E, e, <br> T,t | Part <br> of <br> NO <br> vote | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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| Seq. \# | Clause number | $\begin{gathered} \text { your } \\ \text { voter } \\ \text { s ID } \\ \text { code } \end{gathered}$ | $\begin{gathered} \hline \text { Cmnt } \\ \text { type } \\ \text { E, e, } \\ \text { T, t } \end{gathered}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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|  | 16.all | TLP | E | Yes | Please take pity on non-native English speakers and use names that they have some slight chance of understandin <br> Mis-pronounceable subsets of English words, such as "suprt" for "supported", are not even close to acceptable Similarly, what does "Asmnt" mean? How about Evls"? <br> "Ths dcmnt is nt prntd fr clmns up." That tried to say "This document is not printed four columns up." Why an vowels so scarce that you can't use them? Please turn these names into something suitable for human consumption. This clause is not acceptable as it stands. am balloting NO on it, for grossinconsideration of the intended readers. <br> To simplify the task of fixing this clause, I have applied global transforms to produce more intelligible attribute names. See the submitted revision-marked files. | Make names consistent with the name changes made in section 13 as a result of the similar comment for section 13. <br> Also update the figures, which I was no able to do in the submitted revisionmarked files. |  |
|  | 16.all | TLP | e |  | The wrong prefix is used with PDU and SDU. | Replace PPDU and PSDU with PLCPD and PLCSDU as appropriate. (Replacements made in submitted revision-marked files.) |  |
|  | 16.all <br> 5.1.1.2 (c) <br> 5.2.4.1 <br> 5.4 <br> 9.2.1 <br> 12.all <br> 14.all <br> 15.some | TLP | e | Yes | The wireless medium is definitely singular (unless there an alternate universe with multiple "ethers"), or unless P802.11 is extending its charter to acoustic modes of transmission. | s change "edia" to "edium" everywhere except when referring to wired media. |  |
|  | $\begin{gathered} \text { Figure } \\ 84 \end{gathered}$ | DSM | t |  | There are state transition lines in the figure that go nowhere. | Add connections to the lines so that the two floating lines at the lower |  |

doc.: IEEE P802.11-96/135-5

| $\begin{gathered} \text { Seq. } \\ \# \\ \hline \end{gathered}$ | Section number | $\begin{gathered} \hline \text { your } \\ \text { voter, } \\ \text { vid } \\ \text { scode } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { Cmnt } \\ \text { type } \\ \text { E,e, } \\ \mathbf{T}, \mathrm{t} \\ \hline \end{gathered}$ | $\begin{gathered} \text { Part } \\ \text { of } \\ \text { NO } \\ \text { vote } \end{gathered}$ | Comment/Rationale | Recommended change | Disposition/Rebuttal |
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|  |  |  |  |  |  | right of the figure connect with the <br> line in the upper right. |  |

