Cl **XX** *SC* *P* *L* # **178**

Bob O'Hara Informed Technology, I

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

SuggestedRemedy

Proposed Response *Response Status* **O**

Cl **XX** *SC* *P* **0** *L* **?** # **179**

Stanley Reible MICRILOR, Inc

Comment Type **E** *Comment Status* **D**

Introduction, Participants: Officer and participants names are not present.

SuggestedRemedy

Officer and participant names should be present in document so that voters can review entire document when they are casting their ballot.

Proposed Response *Response Status* **O**

Cl **XX** *SC* *P* **1** *L* # **180**

Roger Marks NIST

Comment Type **E** *Comment Status* **D**

Regarding the Participants:

"At the time of the making of this draft, the committee had the following members:"

Since the draft standard is in Sponsor Ballot, this information should be provided. Also, it should explicitly name the committee.

SuggestedRemedy

Proposed Response *Response Status* **O**

Cl **XX** *SC* *P* **multiple** *L* # **291**

David Bagby 3Com Corporation

Comment Type **E** *Comment Status* **D**

Review Comment 2: Editorial
Provide all future drafts for review in a format that may be saved, searched (across pages) and edited. The PDF file was apparently created without the ability for people to save the file to disk. This means that it has to be either read online or printed in hard copy. This makes the review process harder and significantly extended the ballot response time for this reviewer. An electronic ballot where the reviewer is forced to retype text to provide comment context is at best ironic.

The difficulty involved means that you did not get several editing corrections submitted (missing words, bad phrasing etc) as part of this ballot because it is not easy to cut and paste text into a comment. The use of the web page for voting is fine, the use of the web page for commenting is an idea that was extremely poorly executed. The web page form is a pain to use – it effectively prevents any submission of bulk commentary. As a sponsor reviewer it is not acceptable for the review response to be limited by the minimal capabilities of the web page. The goal should be the best industry review possible of a standard draft.

SuggestedRemedy

Provide a way to submit bulk comments via file attachements.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **10.3.1** *P* *L* # **181**

Mike Trompower Telxon Corporation

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

PLME_start should be updated to reflect that more than one PHY parameter set may be present.

Additional information may be needed to declare the 'mandatory' status of the new options within the BSS.

SuggestedRemedy

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **10.3.1**

Cl **XX** *SC* **10.3.2.2** *P* *L* # **182**
Mike Trompower Telxon Corporation

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

PLME_scan.confirm should be updated to reflect that more than one PHY parameter set may be present.

Additional information may be needed to declare the 'mandatory' status of the new options within the BSS.

SuggestedRemedy

Proposed Response *Response Status* **O**

Cl **XX** *SC* **10.3.2.2.2** *P* **8** *L* **14** # **303**
Anil K. Sanwalka Neesus Datacom

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

There needs to be an edit to this clause from the green book. All of the existing table remains the same except the description of the BSSBasicRateSet is as follows:

SuggestedRemedy

The set of data rates that must be supported by all STAs that desire to join this BSS. The STAs must be able to receive and transmit at each of the data rates listed in the set.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **10.3.3.1** *P* *L* # **183**
Mike Trompower Telxon Corporation

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

PLME_join should be updated to reflect the station's support for the new options.

SuggestedRemedy

Proposed Response *Response Status* **O**

Cl **XX** *SC* **10.4.2** *P* *L* # **184**
Mike Trompower Telxon Corporation

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

PLME_characteristic should be updated with additional information for 'short', 'pbcc', and 'agile' functionality

If the intent is to mix and match operation of these options, then this SAP should also report multiple plcp preamble lengths, multiple values of CWMin and CWMAx as appropriate.

SuggestedRemedy

Proposed Response *Response Status* **O**

Cl **XX** *SC* **10.4.4** *P* *L* # **185**
Mike Trompower Telxon Corporation

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

PLME_DSSSTESTMODE should be updated to add switches for the new options.
The datarate range should include 5.5 and 11 values.

What are the three data patterns defined by DATA_TYPE ?? where are these defined?

SuggestedRemedy

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18** *P* **10** *L* **0** # **186**
Vic Hayes Lucent Technologies

Comment Type **E** *Comment Status* **D**

There is no way a reader understands that he has to add the complete clause 18.

SuggestedRemedy

Add in bold an italics "Insert new clause 18."

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.1** *P* *L* # **187**

Mike Trompower Telxon Corporation

Comment Type **E** *Comment Status* **D**

Second paragraph capitalization mistakes

SuggestedRemedy

6th line, capitalize ...Spread...
last line, change BSSS to BSS

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.1** *P* *L* # **188**

Mike Trompower Telxon Corporation

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

Last paragraph of this section.

We are under NO restrictions to make a high rate phy which interoperable with current FH PHY.

This statement implies many characteristics which are not defined in the current text.

SuggestedRemedy

Change the paragraph to the following:

Capability for identifying a channel agile mode is also provided. However, management of this function is outside the scope of this standard.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.1** *P* **10** *L* **21-34** # **304**

Anil K. Sanwalka Neesus Datacom

Comment Type **E** *Comment Status* **D**

Need to provide some justification for the options. I am suggesting some text below which may not be immediately acceptable to everyone. But remember people these options are now in the standard so let us try to put the best face forward and make it look like we agree and we know what we are doing.

SuggestedRemedy

Replace with following:

In addition to providing higher speed extensions to the DSSS system, a number of optional features are described that will allow the performance of the Radio Frequency LAN system to be improved as technology allows the implementation of the options to become cost effective.

An optional mode replacing the CCK modulation with Packet Binary Convolutional Coding (HR/DSSS/PBCC) is also provided. Use of this option should provide reduced error probabilities but at a significant increase in hardware cost.

Another optional mode which allows data throughput at the higher rates (2, 5.5 and 11 Mbit/s) to be significantly, increased by using a shorter PLCP preamble, is also provided. This mode called HR/DSSS/short or HR/DSSS/PBCC/short will require a significant amount of additional hardware to implement. This short preamble mode can co-exist with DSSS, HR/DSSS, or HR/DSSS/PBCC under limited circumstances such as on different channels or with appropriate CCA mechanisms.

An optional capability for channel agility is also provided. This option allows an implementation to overcome some inherent difficulty with static channel assignements (a tone jammer), without burdening all implementations with the added cost of this capability. This option also be used to implement 802.11 compliant systems that are interoperable between FH and DS modulations. See informative Annex F for more details.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.1.1** *P* **10** *L* **38** # **189**

Satoshi Obara Fujitsu

Comment Type **E** *Comment Status* **D**

"supplement" is wrong word.

SuggestedRemedy

The "supplement" should be change "clause".

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **18.1.1**

Cl **XX** *SC* **18.1.2** *P* *L* # **190**

Mike Trompower Telxon Corporation

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

Strike the last sentence.
The sentence creates many ambiguities - such as, do Cwmin, Cwmax, slottime, turnaround times, etc. default to those provided in the high rate PHY mib, or should the MAC be made aware of those currently used by the FH PHY.

SuggestedRemedy

Delete the last sentence

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.1.2** *P* **11** *L* **6-9** # **305**

Anil K. Sanwalka Neesus Datacom

Comment Type **E** *Comment Status* **D**

These two sentences seem to be contradictory. I think I know what is intended but I'm not sure an inexperienced reader will be able to determine the subtle difference between these 2 sentences.

I don't have any specific ideas.

SuggestedRemedy

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.1.2** *P* **11** *L* **8** # **191**

Bob O'Hara Informed Technology, I

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

The last two sentences of this paragraph conflict when Frequency agility is enabled. One say that the PHY is both DS and FH. The other says it is FH.

SuggestedRemedy

Correct this conflict.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.1** *P* *L* # **192**

Mike Trompower Telxon Corporation

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

This section creates ambiguity.
It says that the long preamble is mandatory. Which means that it must always be supported.
It then implies that the short preamble is intended for exclusive use; ie. a BSS will use only the short preamble.

In order to have the exclusive case, additional parameters must be added to the MIB and MAC which allow this mode.

If exclusivity is the intent of the PBCC and agility as well, then variables must be added for these as well.

In other words, will the PHY chips be created so that they can recognize on the fly which preamble is being used, or will they operate in one mode (long or short) only in order to demodulate the packet?

Will the PHY chips be created so that they can recognize on the fly whether or not PBCC is used and correctly demodulate the packet?

Likewise with the other combinations !!

SuggestedRemedy

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.1** *P* **11** *L* **49** # **306**

Anil K. Sanwalka Neesus Datacom

Comment Type **E** *Comment Status* **D**

This convergence procedure also applies to 2 Mbit/s when using the short preamble option.
The simplest fix may be to say 2, 5.5 and 11 Mbit/s

SuggestedRemedy

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **18.2.1**

Cl **XX** *SC* **18.2.1** *P* **11** *L* **53** # **193**

Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

Some words are missing in theis sentence.

SuggestedRemedy

Insert "and" between "IEEE Std 802.11-1997," and "an optional short preamble and header."

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.1** *P* **12** *L* **3** # **307**

Johnny Zweig Nortel Networks

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

Question: if the use of the short preamble results in non-interoperability with legacy DSSS PHY stations,
would it be appropriate to require that Beacons and Probe Responses be transmitted with long preambles only?
If not, should the flag defined in 7.3.1.4 indicate that all data in the BSS must be sent using the short
preamble? Will some stations implement some kind of (adaptive?) algorithm to switch which preamble they use?

SuggestedRemedy

Clarify the extent to which using the short preamble compromises interoperability and whether it makes sense to require that all "short" BSS traffic be sent with the same preamble.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.2.2** *P* **12** *L* **42,43** # **194**

Bob O'Hara Informed Technology, I

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

Use the proper standard language to define options.

SuggestedRemedy

Delete the first sentence. Replace "can" with "may".

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.2.2** *P* **13** *L* **24** # **195**

Bob O'Hara Informed Technology, I

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

Use the proper standard language to define normative requirements.

SuggestedRemedy

Replace "must" with "shall".

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.1** *P* **13** *L* **39** # **197**

Mark Webster Harris Semiconductor

Comment Type **E** *Comment Status* **D**

What does "MSB-1" mean? Does it mean the MSB is a 1?

SuggestedRemedy

Clarify.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.1** *P* **13** *L* **39** # **196**

Bob O'Hara Informed Technology, I

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

This field has no numeric value and, thus, can not be described using bit significance.

SuggestedRemedy

Replace the use of "MSB" and "LSB" with bit numberings. Define the correct bit numberings.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.10** *P* *L* # **198**

Mike Trompower Telxon Corporation

Comment Type **E** *Comment Status* **D**

Change numbering to a), b), c)

SuggestedRemedy

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.10** *P* **18** *L* **47** # **199**

Bob O'Hara Informed Technology, I

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

This clause talks about the field identifying the modulation used, but assigns data rates to the values of the field.

SuggestedRemedy

Either say it defines the data rates or assign modulations to the values.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.10** *P* **18** *L* **52-54** # **200**

Vic Hayes Lucent Technologies

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

The hexadecimal notation is not elegant

SuggestedRemedy

Adopt the method for commenters comment on 18.2.3.9.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.10** *P* **18** *L* **52-55** # **201**

Bob O'Hara Informed Technology, I

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

This field has no numeric value and, thus, can not be described using bit significance.

SuggestedRemedy

Replace the use of "MSB" and "LSB" with bit numberings. Define the correct bit numberings.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.2** *P* **13** *L* **49** # **202**

Vic Hayes Lucent Technologies

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

The specification of the contents of the field is ambiguous. Is it meant to describe that the 16 bit field should be sent LSB to MSB first?
Or that fisrt the X'F3' with its LSB first is to be transmitted like we do with the MAC protocol data unit?

SuggestedRemedy

Change into an unambigous manner, like showing the bit patern with bit numbers and specifying which bit goes out first.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.3** *P* **14** *L* **1** # **204**

Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

Bad break between pages.

SuggestedRemedy

Ensure that "kbit/s" does not break between pages.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.3** *P* **14** *L* **1** # **203**

Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

Bad break between pages.

SuggestedRemedy

Ensure that "kbit/s" does not break between pages.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.3** *P* **14** *L* **4-8** # **205**

Vic Hayes Lucent Technologies

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

Are the bits in hexadecimal notation have a weight? I contend that they are just bitsequences without a weight.

SuggestedRemedy

Change into a bitsequence with bitnumbers and specify which bit to transmit first.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.4** *P* **14** *L* **15-21** # **206**

Bob O'Hara Informed Technology, I

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

This field has no numeric value and, thus, can not be described using bit significance.

SuggestedRemedy

Replace the use of "MSB" and "LSB" with bit numberings. Define the correct bit numberings.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.4** *P* **14** *L* **29** # **207**

Vic Hayes Lucent Technologies

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

It is unclear what the meaning is of Locked Clocks Bit equal 0.

SuggestedRemedy

Change "not" into "not locked"

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.4** *P* **14** *L* **35** # **208**

Vic Hayes Lucent Technologies

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

"being" is a non-compulsory term, where a compulsery term is needed.

SuggestedRemedy

Change "being" into "shall be"

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.5** *P* *L* # **209**

Mike Trompower Telxon Corporation

Comment Type **E** *Comment Status* **D**

Capitalize the last sentence, next to last paragraph and grammar

SuggestedRemedy

Capitalize and Change "is" to "in".

The length in microseconds ...

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.5** *P* **15** *L* **15** # **308**
Johnny Zweig Nortel Networks

Comment Type **E** *Comment Status* **D**

This line should not be in boldface type.

SuggestedRemedy

Set in normal stroke weight.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.5** *P* **16** *L* **15** # **310**
Johnny Zweig Nortel Networks

Comment Type **E** *Comment Status* **D**

This is grammatically, punctuationally and technically incorrect as stands.

SuggestedRemedy

Change "the length is microseconds should at least cover" to "The length field is defined in units of microseconds, and must correspond to"
and change "should be exact" to "must be exact".

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.5** *P* **16** *L* **15** # **309**
Johnny Zweig Nortel Networks

Comment Type **E** *Comment Status* **D**

This is grammatically, punctuationally and technically incorrect as stands.

SuggestedRemedy

Change "the length is microseconds should at least cover" to "The length field is defined in units of microseconds, and must correspond to"
and change "should be exact" to "must be exact".

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.7** *P* **16** *L* **54** # **210**
Vic Hayes Lucent Technologies

Comment Type **E** *Comment Status* **D**

A Term has been broken as if it were an English word, which make the reader confused.

SuggestedRemedy

Remove the hyphen and lock word-breaking on terms.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.8** *P* **17** *L* **52,53** # **211**
Bob O'Hara Informed Technology, I

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

This field has no numeric value and, thus, can not be described using bit significance.

SuggestedRemedy

Replace the use of "MSB" and "LSB" with bit numberings. Define the correct bit numberings.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.8** *P* **17** *L* **53** # **212**
Vic Hayes Lucent Technologies

Comment Type **E** *Comment Status* **D**

MSB in capitals, where msb is used in other parts of this draft.

SuggestedRemedy

Use the method as given in subclause 18.2.4 with a bit string.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.8** *P* **17** *L* **54** # **213**

Mark Webster Harris Semiconductor

Comment Type **E** *Comment Status* **D**

What does "MSB-1" mean? Does it mean the MSB is a 1? If this is the case, this wrong. The MSB is a 0. The shortSYNC seed is the bit reversed version of the longSYNC seed.

SuggestedRemedy

Clarify.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.8** *P* **18** *L* **38 - 43** # **214**

Vic Hayes Lucent Technologies

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

"shortSFD" differs from the term in Figure 2.
The contents is not specified in the compulsary way.
Here the contents is described two in 2 ways. This commenter prefers the second way, but then written in a figure.

SuggestedRemedy

Replace "shortSFD" by SHORT SFD field".
Replace the description of the contents of the field by a specification.
The SHORT SFD field shall contain the pattern specified in the following figure.
Insert the figure:
b16 b15 b14 b13 b12 b11 b10 b9 b8 b7 b6 b5 b4 b3 b2 b1
0 0 0 0 0 1 0 1 1 1 0 0 1 1 1 1
bit b1 is transmitted first

and use this convention throughout the draft.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.9** *P* *L* # **215**

Mike Trompower Telxon Corporation

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

Confusion added - as stated in previous comments --

This section says ..."A receiver not configured to receive the high rate signals will not detect this SFD."

The implication is that the high rate PHY will be able automatically detect (at all times) between long and short preamble usage.

SuggestedRemedy

Clarify that this statement is correct or that the intended use is one or the other (long or short preamble) per BSS.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.3.9** *P* **18** *L* **39-43** # **216**

Bob O'Hara Informed Technology, I

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

This field has no numeric value and, thus, can not be described using bit significance.

SuggestedRemedy

Replace the use of "MSB" and "LSB" with bit numberings. Define the correct bit numberings.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.4** *P* **18** *L* **36-39** # **217**

Vic Hayes Lucent Technologies

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

For the long preamble, the initialization is done double, fo rthe short preamble the initialization is only in the not-preferred method.
Also, the contents is already specified in two other subclause.

SuggestedRemedy

Replace the paragraph along the following lines:
"The scrambler shall be initialized as specified in subclause 18.2.3.8 for the short PLCP and subclause 18.2.3.1 for the long PLCP."

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **18.2.4**

Cl **XX** *SC* **18.2.5** *P* **20** *L* **24** # **218**
Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

Awkward word choice.

SuggestedRemedy

Replace "for using" with "to use".

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.5** *P* **20** *L* **50-51** # **219**
Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

Is the PLCP procedural definition the place for a PMD implementation recommendation?

SuggestedRemedy

Move this sentece to a more appropriate spot.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.5** *P* **21** *L* **25** # **311**
Anil K. Sanwalka Neesus Datacom

Comment Type **E** *Comment Status* **D**

The first PHY_Data.Req should follow immediately after PHY_TXSTART.confirm. The MAC has no way of knowing how long to wait. It will however not issue another one until it gets the confirm for the previos one, so the rest of the figure can stay the same.

SuggestedRemedy

Move the PHY_Data.Req from line 25 to around line 15.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.6** *P* *L* # **220**
Mike Trompower Telxon Corporation

Comment Type **E** *Comment Status* **D**

The transmit state machine Figure incorrectly shows that a short preamble consists of 64 zeros

SuggestedRemedy

The correct number is 56 zeros

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.6** *P* *L* # **221**
Mike Trompower Telxon Corporation

Comment Type **E** *Comment Status* **D**

Add a period to end of first paragraph

SuggestedRemedy

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.2.6** *P* **35** *L* **12,17,22** # **312**
Anil K. Sanwalka Neesus Datacom

Comment Type **E** *Comment Status* **D**

The lines coming out of the blocks on the left of figure need arrows to indicate that they are outputs from the blocks not inputs.

SuggestedRemedy

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **18.2.6**

Cl **XX** *SC* **18.3.2** *P* **28** *L* **13** # **292**

Allen Heberling Eastman Kodak Co.

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

Currently the Table 4 entry for dot11PhyType for High Rate-2.4 is TBD.

SuggestedRemedy

Provide specific value or range of values.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.3.3** *P* *L* # **222**

Mike Trompower Telxon Corporation

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

This section also adds to the confusion about intended operation.
Reporting a single value, implies that the intent is to have exclusive operation.

Reported values for Preamble Length, Cwmin and Cwmax should be changed to report all valid values in a "mix and match" environment.

The fact that a mix and match mode MAC will be UNDULY BIASED towards stations using short preamble - better access because of shorter Cwmin, suggests that the intent is to have exclusive operation

SuggestedRemedy

I believe the intent is to have "mix and match", therefore, reporting Cwmin and Cwmax consistent with legacy systems is correct.

If the hooks are added to allow for exclusive BSS use of some options, shortening of CWMin andMax would be OK

This points out that there is a hole in the system, which says that the BSS ought to report the current Cwmin and Cwmax times in the BEACON and PROBE frames.

Also points out that statements ought to be added to the standard which specifies which values a station uses.

Should the station use values reported by its PHY, or should it adopt those values presented in the BEACON and PROBES

Or remove all doubt, the high rate PHY uses same values as legacyDS PHY, regardless of mode of operation. However, this leaves a bias towards DS vs FH which "combo vendors" will have to address.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.3.3** *P* **27** *L* **17** # **313**

Anil K. Sanwalka Neesus Datacom

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

This is another place where the reference is to 802.11-1997 but the actual text is from TGrev. In this case the green book has no PLME-Characteristics primitive in 10.4.3.

My guess is that this and many of my editorial comments will go away if the reference is changed to TGrev. Otherwise all the changes made in TGrev to appropriate sections will have to copied here.

SuggestedRemedy

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.3.3** *P* **28** *L* **15** # **314**

Anil K. Sanwalka Neesus Datacom

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

I have made this comment before.

There is no way for aPreambleLength to have 1 of 2 possible values. I would suggest leaving this as the value for long preamble. The TXTIME primitive should not use this value leaving it in the structure only to provide compatibility with the TGrev DSSS system.

SuggestedRemedy

Change value to 144

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.3.3** *P* **28** *L* **26-42** # **315**

Anil K. Sanwalka Neesus Datacom

Comment Type **E** *Comment Status* **D**

aPreableLength should not be referenced here because this value has nothing to do with the PHY characteristic.

SuggestedRemedy

Change name to PreambleLength

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.2** *P* **29** *L* **42** # **223**

Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

This is not specifying a normative requirement, but simply describing a capability.

SuggestedRemedy

Replace "shall be" with "is".

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.2** *P* **29** *L* **44-45** # **224**

Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

Doesn't the previous sentence already describe a "data stream"? Why is the last sentence in this paragraph at all?

SuggestedRemedy

Delete the last sentence.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.4.2** *P* *L* # **225**

Mike Trompower Telxon Corporation

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

Add 'X' to table for PMD_CS.request

Add new section (18.4.5.xx) for PMD_CS.request which states the method for setting the CS_THRESHOLD according to the text

SuggestedRemedy

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **18.4.4.2**

Cl **XX** *SC* **18.4.5.1.2** *P* **31** *L* **11** # **226**

Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

This is describing a parameter upon which the PMD acts.

SuggestedRemedy

Replace "PHY" with "PMD" in the Description column.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.1.2** *P* **31** *L* **14** # **227**

Vic Hayes Lucent Technologies

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

It is unconventional to specify mandatory items into primitives and their parameters.

SuggestedRemedy

Remove the "shall" in the description and make sure the spreading is unambiguously specified in the formatting or protocol specification of the draft.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.1.2** *P* **31** *L* **8-11** # **228**

Bob O'Hara Informed Technology, I

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

Why are two of the value combinations represented as modulations and tow others as data rates?

SuggestedRemedy

Make the representation of the values consistent, either all modulations or all data rates.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.1.2** *P* **31** *L* **9-11** # **229**

Vic Hayes Lucent Technologies

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

1. We use 2 methods for specifying the contents: first bitstrings, the hexadicmal strings.
2. The hexadecimal strings are specified in a new way (with and h) rather than the method with X' '.
3. It is unclear what is meant by the notation for 5.5 and 11 Mbit/s. apparently one os free to pick a value between X'00" and X0F' for 5.5 Mbit/s and between X'00" to X'FF" for 11 Mbit/s.

SuggestedRemedy

Use the bit string method for specification and ,ake sure the range of values is unambiguously specified.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.10.2** *P* **37** *L* **8-11** # **230**

Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

Why do two of the rates also have modulations attached?

SuggestedRemedy

Delete the modulations.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.11.1** *P* **37** *L* **39** # **231**

Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

State this in the proper "standard" way.

SuggestedRemedy

Delete the sentence and replace with "This primitive may be generated by the PMD to provide the received signal strength to the PLCP."

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **18.4.5.11.1**

Cl **XX** *SC* **18.4.5.11.3** *P* **38** *L* **3-4** # **232**
Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

Since this is optional, the use of "shall" is not appropriate, here.

SuggestedRemedy

Replace "shall" with "may" in two locations.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.12.1** *P* **38** *L* **16-17** # **233**
Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

State this in the proper "standard" way.

SuggestedRemedy

Delete the sentence and replace with "This primitive may be generated by the PMD to provide an indication of the signal quality (SQ) of the High Rate PHY PN code correlation to the PLCP."

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.12.3** *P* **38** *L* **36-37** # **234**
Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

Since this is optional, the use of "shall" is not appropriate, here.

SuggestedRemedy

Replace "shall" with "may" in two locations.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.13.3** *P* **39** *L* **37** # **235**
Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

This is generated by the PMD, not PHY.

SuggestedRemedy

Replace "PHY" with "PMD".

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.14.1** *P* **39** *L* **53-54** # **236**
Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

State this in the proper "standard" way.

SuggestedRemedy

Delete the sentence and replace with "This primitive may be generated by the PMD to provide an indication that the receiver has detected RF energy indicated by the PMD_RSSI primitive that is above a predefined threshold."

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.14.3** *P* **40** *L* **31** # **237**
Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

Since this is optional, the use of "shall" is not appropriate, here.

SuggestedRemedy

Replace "shall" with "may".

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.15.1** *P* **40** *L* **45-46** # **238**

Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

State this in the proper "standard" way.

SuggestedRemedy

Delete the sentence and replace with "This primitive may be generated by the PLCP to set a set a value for the energy detect ED THRESHOLD."

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.15.2** *P* **41** *L* **8-9** # **239**

Bob O'Hara Informed Technology, I

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

The values stated for the parameter appear to enable or disable the use of ED. This conflicts with the description of the primitive that claims to set a value for the threshold.

SuggestedRemedy

Correct this conflict.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.2.2** *P* **31** *L* **44-48** # **240**

Bob O'Hara Informed Technology, I

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

Why are two of the value combinations represented as modulations and tow others as data rates?

SuggestedRemedy

Make the representation of the values consistent, either all modulations or all data rates.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.2.2** *P* **31** *L* **45-47** # **241**

Vic Hayes Lucent Technologies

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

Same comments as for 18.4.5.1.2

SuggestedRemedy

Same remedy as for 18.4.5.1.2.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.3.2** *P* **32** *L* **21-22** # **242**

Bob O'Hara Informed Technology, I

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

This primitive allows only PBCC or CCK to be chosen as modulation methods. Yet, the PMD_Data.request primitive clearly allows single and dibit combinations to be passed to the PMD. How are DBPSK and DQPSK modulation methods chosen?

SuggestedRemedy

Add DBPSK and DQPSK as selectable modulation methods.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.4.4** *P* **33** *L* **30** # **243**

Bob O'Hara Informed Technology, I

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

This clause indicates that the primitive is generated by the PMD. THe previous clause clearly states that it is generated by the PLCP.

SuggestedRemedy

Correct this conflict.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.6.2** *P* **34** *L* **41** # **244**

Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

Since this primitive has no parameters, state this.

SuggestedRemedy

Delete the sentence and replace with "This primitive has not parameters."

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.7.2** *P* **35** *L* **9** # **245**

Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

Since this primitive has no parameters, state this.

SuggestedRemedy

Delete the sentence and replace with "This primitive has not parameters."

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.5.9.2** *P* *L* # **246**

Mike Trompower Telxon Corporation

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

Why does this section state a maximum of 4 levels? The mib 18.3.2 states that 8 levels are allowed. The parameter dot11NumbersupportedPowerLevels is declared implementation dependent and can be set by vendors to 4 should that be a restriction.

SuggestedRemedy

Remove the limit of 4 from these two sections

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.6.12** *P* *L* # **247**

Mike Trompower Telxon Corporation

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

The TBD must be resolved.

More accurately, this section ought to specify an exact hop time.
If one system hops in 100usec and begins transmitting, the 224usec station (while compliant) is at a disadvantage or worse the two won't interoperate.

SuggestedRemedy

Resolve the TBD

Specify an exact hop time specification or put a statement that no transmission will occur until after the time specified here.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.6.12** *P* **48** *L* **17** # **248**

Vic Hayes Lucent Technologies

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

This subclause contains a "TBD". It supports commenters view (subclause 18.4.6.7) that the whole frequency agility option is not tested nor simulated.
By the time a draft is in sponsor ballot this type of specification should not occur

SuggestedRemedy

Remove the channel agility option by removing subclauses 18.4.6.7, 18.4.6.12 and the annex F.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.6.12** *P* **49** *L* **17** # **293**

Allen Heberling Eastman Kodak Co.

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

...and the rate of change has settled to within TBDkHz/us.

SuggestedRemedy

Please provide specific value for this TBD.

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **18.4.6.12**

Cl **XX** *SC* **18.4.6.12** *P* **49** *L* **18** # **249**
Mark Webster Harris Semiconductor

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

A TBD is present.

SuggestedRemedy

Replace the TBD with a quantity.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.6.14** *P* *L* # **250**
Mike Trompower Telxon Corporation

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

The PICS (Annex A4.3) references two temperature types, the text references three.

SuggestedRemedy

Change 18.4.6.14 to reflect two temperature ranges.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.6.5** *P* **43** *L* **49,54** # **251**
Bob O'Hara Informed Technology, I

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

The complex chips do not have a numeric value and, thus, the bits of the chips can not have "significance".

SuggestedRemedy

Eliminate the use of msb and lsb throughout this clause and replace with a clearly described and/or illustrated bit numbering scheme.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.6.5.2** *P* **44** *L* **21** # **252**
Mark Webster Harris Semiconductor

Comment Type **E** *Comment Status* **D**

The FONT is wrong on jw.

SuggestedRemedy

The w in jw should be cast as the SYMBOL FONT.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.6.5.2** *P* **44** *L* **28-30** # **253**
Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

The PSDU does not have symbols, but octets.

SuggestedRemedy

Replace "PSDU" with the correct term.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.6.5.2** *P* **45** *L* **3** # **254**
Bob O'Hara Informed Technology, I

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

The complex chips do not have a numeric value and, thus, the bits of the chips can not have "significance".

SuggestedRemedy

Eliminate the use of msb and lsb throughout this clause and replace with a clearly described and/or illustrated bit numbering scheme.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.6.6** *P* **45** *L* **48** # **294**

Jeff Fischer MICRILOR, Inc.

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

The PBCC (i.e. coded) mode should be required, not optional. This issue is not related to the debate of having "options" in the standard, but to needing the PBCC mode because it is the only way the standard can be generally useful to the industry. The CCK modulation is inherently very weak by today's communications standards. If the PBCC is not used then the only way to make this waveform useful is with a severe measure of equalization. Therefore the only way to make this standard a useful one depends on a companies implementation, not on the standard waveform itself. By making the PBCC a requirement then the standard waveform itself will have inherent utility. The argument that there are commercial reasons to make a poor link is not a good one. Commercially speaking, the equalizer is a more complex, more costly, more power consumptive circuit to implement than the PBCC circuits.

SuggestedRemedy

Make this mode requried for a standard implementation.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.6.7** *P* *L* # **255**

Mike Trompower Telxon Corporation

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

We are under NO restrictions to make a high rate phy which is interoperable with current FH PHY.

The agility option enables a form of tolerance and coexistence, but not interoperability with current FH phys.

The statement referencing "shall meet requirements of ..." opens a can of inconsistency worms as described above.

SuggestedRemedy

Change text to following:

The channel agility option gives a high rate phy implementation the flexibility to move about the band. The management (determination of when and where to hop) of this option is outside the scope of this standard. When the channel agility option is enabled, the implementer may make use of both FH and DS parameter sets in BEACON and PROBE frames.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.6.7** *P* **48** *L* **32** # **295**

Dean Kawaguchi Symbol Technologies

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

This is a repeat comment with a change in comment type to TR.

The editorial change at the last meeting of moving the requirements from this section into the informative annex had two problems. First, the editorial change was contrary to the technical resolution made in the January 1999 meeting. Second, requirements are now placed in an informative annex. This is an awkward and undesirable way of specifying requirements. There are numerous instances of optional requirements within the approved 802.11 main standard so there should be no reason optional requirements cannot be included within clause 18.

SuggestedRemedy

Move the requirements from clauses F.1, F.2, F.3, and F.4 back into 18.4.6.7.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.6.7** *P* **48** *L* **32** # **257**

Dean Kawaguchi Symbol Technologies, I

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

The editorial change at the last meeting of moving the requirements from this section into the informative annex had two problems. First, the editorial change was contrary to the technical resolution made in the January 1999 meeting. Second, requirements are now placed in an informative annex. This is an awkward and undesirable way of specifying requirements. There are numerous instances of optional requirements within the approved 802.11 main standard so there should be no reason optional requirements cannot be included within clause 18.

SuggestedRemedy

Move the requirements from clauses F.1, F.2, F.3, and F.4 back into 18.4.6.7.

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **18.4.6.7**

Cl **XX** *SC* **18.4.6.7** *P* **48** *L* **32** # **256**

Bob O'Hara Informed Technology, I

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

There is not enough normative information to allow FH compatible systems to be built upon the HR PHY.

SuggestedRemedy

Move the following from Annex F to this clause and make it normative: F.1, F.2, F.3, and F.4.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.6.7** *P* **48** *L* **34** # **258**

Vic Hayes Lucent Technologies

Comment Type **E** *Comment Status* **D**

The word "interoperability" is misused here. A 5.5 or 11 Mbit/s can not interoperate with a 1 or 2 Mbit/s system. Apparently the writer meant to say here "co-existence".

SuggestedRemedy

Replace "interoperability" into "co-existence".

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.6.7** *P* **48** *L* **34** # **259**

Vic Hayes Lucent Technologies

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

1. The channel agility option is a method that has not been tested.
2. The committee has not seen any simulations of how this option would behave.
3. Commenter fears that this option, when implemented in a carefully planned system will disrupt the whole operation because it would confuse the whole carefully planned frequency plan.
4. From feedback from the field, commenters knows that the option confuses the whole market.
5. The present subclause makes an informal annex all of a sudden a formal one by the use of the word "shall" and supports commenters view that the option has not been simulated nor tested by stating "the expected behaviour".

SuggestedRemedy

Remove the channel agility option by removing subclauses 18.4.6.7, 18.4.6.12 and the annex F.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.6.7** *P* **48** *L* **34-35** # **316**

Anil K. Sanwalka Neesus Datacom

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

Sorry guys but this one is important.

Firstly:
Channel agility does not enable FH interoperability as it is claimed here and in Appendix F. It simply allows an implementer to build a "dual-mode" radio that can be used to colocate a DS and FH BSS. My understanding of the result of the last meeting was that we would put in frequency agility as an option without any specific claim for FH interoperability, with the knowledge that a "smart" implementer could create a system with radios that could switch between DS and FH modes.

I feel that frequency agility may be a useful thing in and of itself without any reference to FH interoperability.

Secondly:
Here it says that the hop sequences shall be as described in Annex F. In other places it says that Annex F is informative. I don't think you can have it both ways.

My feeling is that for there to be any kind of interoperability the hop sequences have to be normative.

SuggestedRemedy

Remove references to FH interoperability from clause 18.
Define Hop sequences and make them mandatory in clause 18.
Include Appendix F as an informative annex describing FH interoperability (I think that is what it is now).

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.6.8** *P* **48** *L* **43** # **260**

Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

This standard also specifies operation in Japan. The relevant document for Japan should also be cited.

SuggestedRemedy

Add the Japanese citation.

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **18.4.6.8**

Cl **XX** *SC* **18.4.7.2** *P* **49** *L* **54** # **261**

Bob O'Hara Informed Technology, I

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

Why is a minimum transmit power specified? Is it the intent to disallow very low power operation, i.e., personal area networks?

SuggestedRemedy

Remove this requirement.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.7.2** *P* **49** *L* **54** # **262**

Bob O'Hara Informed Technology, I

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

Why is a minimum transmit power specified? Is it the intent to disallow very low power operation, i.e., personal area networks?

SuggestedRemedy

Remove this requirement.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.7.3** *P* *L* # **263**

Mike Trompower Telxon Corporation

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

Why does this section state a maximum of 4 levels? The mib 18.3.2 states that 8 levels are allowed. The parameter dot11NumbersupportedPowerLevels is declared implementation dependent and can be set by vendors to 4 should that be a restriction.

SuggestedRemedy

Remove the limit of 4 from these two sections

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.7.6** *P* **50** *L* **40** # **264**

Mark Webster Harris Semiconductor

Comment Type **E** *Comment Status* **D**

The wording could be improved regarding the derivation of the symbol-rate clock and carrier-frequency clock from the same reference.

SuggestedRemedy

The wording is paragraph 18.2.3.4 is somewhat clearer.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.8.1** *P* *L* # **265**

Mike Trompower Telxon Corporation

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

These sections should specify as to whether this performance is achieved with or without or regardless of the "LOCKED" bit.
If different performance expectations are anticipated, so state.

SuggestedRemedy

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.8.1** *P* *L* # **266**

Mike Trompower Telxon Corporation

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

These sections should specify as to whether this performance is achieved with or without or regardless of the "LOCKED" bit.
If different performance expectations are anticipated, so state.

SuggestedRemedy

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.8.1** *P* **54** *L* **16** # **267**

Stan Reible MICRILOR, Inc

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

We need to select a transmit modulation approach which can provide better receiver input level sensitivities in fielded equipment.

SuggestedRemedy

Place a tighter sensistivity constaints on the equipment (and emerging chip designs)implementing the proposed standard.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.8.2** *P* *L* # **268**

Mike Trompower Telxon Corporation

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

These sections should specify as to whether this performance is achieved with or without or regardless of the "LOCKED" bit.
If different performance expectations are anticipated, so state.

SuggestedRemedy

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.8.4** *P* *L* # **269**

Mike Trompower Telxon Corporation

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

If the timer is not removed, then
The algorithms for CCA should have different numbering from those used in section 15.
The MIB should reflect the additional modes as well.
The algorithms using a timer are not the same as those which do not.

SuggestedRemedy

Mode 2 should become new mode 4
Mode 3 should become new mode 5

Change in 18.4.8.4 and in PICS HRDS11

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.8.4** *P* *L* # **270**

Mike Trompower Telxon Corporation

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

Remove the reference to a timer in CCA mode 2.
The mode says report busy upon detection of signal by carrier sense, therefore, the timer is not necessary.

I take this to mean that a high rate PHY must recognize and determine carrier sense for BOTH barker and CCK modulation.
This means that a high rate PHY which does not implement or recognize the

SuggestedRemedy

Delete reference to timer in mode 2.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **18.4.8.4** *P* **55** *L* **15** # **271**

Stan Reible MICRILOR, Inc.

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

While lower-transmit-level equipment is likely to be of a lower performance nature, dropping the energy detection threshold levels for such equipment by 10 dB does not appear to be full justifiable.

SuggestedRemedy

Consider a 4-6 dB lowering of the energy detection threshold levels for lower performance equipment.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **184.6.7 & Annex F** *P* *L* # **272**

Bob Ward

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

FH interoperability requirements, should be specified as requirements rather than in an "informative" annex. "Informative" would suggest being not required.

SuggestedRemedy

Include FH requirements in main body of Spec.

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **7.2.3.1** *P* **4** *L* **14** # **317**

Anil K. Sanwalka Neesus Datacom

Comment Type **E** *Comment Status* **D**

SuggestedRemedy

Remove lines around "Notes"

Proposed Response *Response Status* **O**

Cl **XX** *SC* **7.3.1.4** *P* *L* # **273**

Mike Trompower Telxon Corporation

Comment Type **E** *Comment Status* **D**

Wording should be APs (as well as STAs in IBSSs) shall ...

SuggestedRemedy

Make change in two new paragraphs for short preamble and PBCC

Proposed Response *Response Status* **O**

Cl **XX** *SC* **7.3.1.4** *P* **5** *L* **18** # **274**

Stanley Reible MICRILOR, Inc

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

Channel Agility is not a rquirement for high rate DS nor does it insure backward compatibily with devices implementing the existing standard. The options of short preamble, PBCC, and channel agility will combine to introduce a Multi-Standand Product

SuggestedRemedy

Eliminate the option for channel agility. Greatly shorten the long preamble to eliminate a need for the optional short preamble.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **7.3.1.4** *P* **5** *L* **33, 49** # **318**

Anil K. Sanwalka Neesus Datacom

Comment Type **E** *Comment Status* **D**

SuggestedRemedy

Delete the word "then"

Proposed Response *Response Status* **O**

Cl **XX** *SC* **7.3.1.4** *P* **6** *L* **7** # **275**

Bob O'Hara Informed Technology, I

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

What is the internal indication that channel agility is in use? These seems to be no way to determine how to set this bit.

SuggestedRemedy

Include appropriate MIB attributes or SAP parameters to determine when this bit shall be set.

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **7.3.1.4**

Cl **XX** *SC* **7.3.1.9** *P* *L* # **276**

Mike Trompower Telxon Corporation

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

The three new reason codes are not supported by stations which are compliant to the current (1997) standard.
The existing products, "should" ignore the three new capabilities bit definitions established in 7.3.1.4, however, the 1997 spec says they are defined to be always zero - it does not say what is proper course to take when a '1' bit is received.
Since the current systems cannot interpret these bits and are not aware of these new reason codes, there is no way for them to determine the reason for denied association.

Section 18 states that the long preamble is MANDATORY. Section 18.2.3.9 implies that long and short are used together. Section 18.2.5 states that the decision for using long or short is a management decision and implies packet by packet basis. To me this means "mix and match" is the intended operation.

Section 18 states that these new capabilities are optional. Section 7.3.1.4, when defining these new capabilities, implies that these features may be used (or not) on an individual packet by packet basis.

If the intent is to define the use of these new options as exclusive use and mandatory to join a BSS when enabled, then the station must know in advance (PHY bits) how to decode the frame and whether to recognize the short preamble.

SuggestedRemedy

I believe the intent was to allow mix and match operation. Therefore, no station can be denied access to the BSS based on non-support and these reason codes will never be used and should be deleted.

IF the intent is to give a vendor the ability to selectively discriminate against stations not supporting a particular optional mode, additional MIB parameters should be defined which allow configuration of the use as mandatory or optional within a BSS. - then the reason codes can be kept, although only recognized by stations compliant to this newer version of the draft.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **7.3.2.2** *P* **6** *L* **30** # **319**

Anil K. Sanwalka Neesus Datacom

Comment Type **E** *Comment Status* **D**

SuggestedRemedy

The struck word "station" should be "STA"

Proposed Response *Response Status* **O**

Cl **XX** *SC* **7.3.2.2** *P* **6** *L* **30-46** # **320**

Anil K. Sanwalka Neesus Datacom

Comment Type **E** *Comment Status* **D**

The original text that is modified here is not from "802.11-1997". I believe I originated these edits and I had used the output from TGrev.

SuggestedRemedy

Proposed Response *Response Status* **O**

Cl **XX** *SC* **7.3.2.2** *P* **6** *L* **33** # **321**

Johnny Zweig Nortel Networks

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

I'm afraid the knife has cut too deeply, in getting rid of "in units of 500 kbit/s" all over the place. I no longer see any text that specifies that the low-order 7 bits of each rate is, in fact, a rate in units of 500 kbps.
If the intent of the change is to remove the semantics of 500 kbit/s units, I heartily object to having 128 random values encoded in the Supported Rates
field. I assume the change is merely to clarify the fact that the low-order 7 bits are a rate and the high-order bit is a flag, without rewriting the definitions the "right"
way (by rewording it so each octet is a two-subfield entity).

SuggestedRemedy

Put back in enough instances of "500 kbit/s" to ensure that the format of the Supported Rates element is unambiguously defined as having a high-order bit indicating that it is in the Basic Rate Set and 7 low-order bits that convey a data rate in units of 500 kbit/s.

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **7.3.2.2**

Cl **XX** *SC* **7.3.2.2** *P* **6** *L* **50-52** # **322**

Anil K. Sanwalka Neesus Datacom

Comment Type **E** *Comment Status* **D**

The original text does not match what is in the green book. Some edits are incorrect.

SuggestedRemedy

The final text should read:

The medium access protocol allows for STAs to support different sets of data rates. All STAs shall be able to receive and transmit at all the data rates in the BSSBasicRateSet parmeter as described in the MLME_Join.request and MLME_Start.request primitives.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **7.3.2.2, et. al.** *P* **6** *L* **29** # **177**

Valerie E. Zelenty IEEE Standards Dept.

Comment Type **E** *Comment Status* **D**

There are no editorial instructions for subclause 7.3.2.2 on page 6,nor for Clause 18 on page 10.

SuggestedRemedy

Add editorial instructions.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **9.6** *P* *L* # **277**

Mike Trompower Telxon Corporation

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

Follow on comment #2 above.
This section should be expanded to include verbage about the new phy options - use of / not use during certain frame exchanges.
This becomes simpler if the intended use of the options is to be 'all or nothing'.

SuggestedRemedy

I believe the intent of the new phy options is to allow mix and match operation, therefore, this section should be updated.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **9.6** *P* **7** *L* **25-42** # **323**

Anil K. Sanwalka Neesus Datacom

Comment Type **E** *Comment Status* **D**

Again the original text is not what is in the green book. If this document is to reference the green book then this needs to be fixed. The edits I provided were from TGrev.

In particular, there was another paragraph at line 32 which has been deleted.

SuggestedRemedy

Remove "" around RA.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **9.6** *P* **7** *L* **40** # **324**

Johnny Zweig Nortel Networks

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

It doesn't make sense for different PHYs to implement different PLME primitives.

SuggestedRemedy

Add PLME-TXTIME.request and PLME-TXTIME.confirm primitives to all of the other PHYs.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **A.4.9** *P* **59** *L* **none** # **278**

Bob O'Hara Informed Technology, I

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

There is no PICS entry for channel settling time.

SuggestedRemedy

Add the appropriate entry for channel settling time.

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **A.4.9**

Cl **XX** *SC* **all area** *P* **all area** *L* # **279**

Satoshi Obara Fujitsu

Comment Type **E** *Comment Status* **D**

All figure numbers and table numbers should be adjusted to base document.

SuggestedRemedy

If possible, it should be "clause number - figure(table) number". For example, if it is figure 1 in clause 18, it is "Figure 18-1".

(Similarly, the change of base document may be needed ?)

In case of existing many figures and tables, it is easy for readers to understand the 802.11.
And, other 802 standards use the above format.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **Annex A.4** *P* *L* # **280**

Mike Trompower Telxon Corporation

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

HRDS8 - states that hop sequences are MANDATORY when agility is present.
First, this line item is not given a text reference.

Second, this feature falls outside the scope of 802.11. It must be controlled by an outside management entity, and therefore is outside the bounds of 802.

There are many 'desirable' methods which could be employed to decide when and where to hop. Unless ALL methods are provided for (and defined) this spec should not define a specific method. Besides, it is 'legally' outside the scope of 802.

SuggestedRemedy

Delete this check box from the spec.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **Annex A4.3** *P* *L* # **281**

Mike Trompower Telxon Corporation

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

If the timer is not removed, then
The algorithms for CCA should have different numbering from those used in section 15.
The MIB should reflect the additional modes as well.
The algorithms using a timer are not the same as those which do not.

SuggestedRemedy

Mode 2 should become new mode 4
Mode 3 should become new mode 5

Change in 18.4.8.4 and in PICS HRDS11

Proposed Response *Response Status* **O**

Cl **XX** *SC* **Annex D** *P* **60** *L* **4** # **283**

Bob O'Hara Informed Technology, I

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

It seems that there are more MIB entries than are listed in this addition to the Annex D, since the two attributes listed have registration numbers 6 and 7. Also the value of dot11PhyHRDSSSEntry is not defined.

SuggestedRemedy

Either number the attributes from 1 or insert all of the attributes that preceed these two. Also define the value of dot11PhyHRDSSSEntry.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **Annex D** *P* **60** *L* **4** # **282**

Bob O'Hara Informed Technology, I

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

There are no additions to the PHY compliance groups to cover the additional attributes.

SuggestedRemedy

Expand the compliance groups to include the additional attributes.

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **Annex D**

Cl **XX** *SC* **Annex F** *P* *L* # **284**

Mike Trompower Telxon Corporation

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

Delete this entire annex and all references to it. The information in this annex is outside the scope of 802.

This information (and many pointers to it in the text) alludes to the creation of a NEW PHY. This phy must be capable of receiving both FH and DS preambles. AS A SPECIFIC REFERENCE, the first sentence of annex f states that this option creates an "INTEROPERABLE" FH and DS PHY. This new PHY is not a part of the PAR.

If you attempt to use two radio devices, the mechanism for transferring the information between the two radios is not defined (and is outside the scope of 802) and will likely NOT Result in an "interoperable" solution as stated.

Further, the CCA mechanism which is referenced, is new functionality, not part of the main spec. no provisions have been provided in other parts of the spec (MIB and PICS)

SuggestedRemedy

Delete this entire annex - do not any of this information into section 18.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **Annex F** *P* **60** *L* # **296**

John H. Cafarella MICRILOR, Inc.

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

I believe the frequency-agility option violates our single-PHY PAR restriction. It perpetuates the dual-PHY situation into the future. It will work against acceptance of this already complex standard. Uncoordinated users (i.e., SOHO environment) may cause/experience disruption when this option is employed, and they will not understand why.

SuggestedRemedy

Remove Annex F, and all related cross-referencing from the main body of the standard.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **Annex F - Frequency H** *P* **60** *L* **51** # **285**

Stanley Reible MICRILOR, Inc

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

The option for FH interoperability introduces unnecessary system complexity without enhancing high data system capability. The ability for users to readily switch operating channels will make it very difficult for high rate DS uses to find and effectively use any clear channels in environments such as office and industrial parks. In such enviroments there can be many small company users, each with different equipment and widely varying MIS and networking management approaches. This will be made more serious by the fact that some of these small companies will have multiple offices and sites within the same office parks which need connectivity. Yet htis is exactly the environment where wireless data links may be most needed.

SuggestedRemedy

Discourage the use of the channel agility option by striking it from the high rate standard.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **F.2 Operating Channel** *P* **63** *L* **7** # **286**

Stanley Reible MICRILOR, Inc.

Comment Type **E** *Comment Status* **D**

The channel frequency of 247 MHz2 must be the trick entry. (Are we looking)

SuggestedRemedy

Try 2472 MHz

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **F.2 Operating Chan**

Cl **XX** *SC* **MAC changes to suppo** *P* **multiple** *L* # **297**

David Bagby 3Com Corporation

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

Review Comment 7: Technical Required
Essentially all the proposed changes to the MAC portions of the 802.11 standard are present to support the options addressed in previous review comments (1 thru 6). I think there are additional problems that are created by the proposed MAC changes.

New bits have been defined in the capability information field. However, the MAC header version has not been updated. How is a station supposed to know how to parse the information? If you change the version level then only new implementation (presumably those that come with an 802.11b implementation) will understand the new capability bits. That would of course also prevent the long PHY header interoperability capability since the old version MACs will not understand the new version mac info.

If you don't change the version information, then what problems may occur? What will a new MAC implementation do when it gets an old MAC capability frame? Will it take action based on the values of the newly defined bits? Will the action be correct? What will happen if an old MAC gets a new MAC header with information in bits that were specified as reserved.

I believe these problems arise because the 802.11b draft proposes putting PHY capabilities into the MAC capability field. The MAC Capabilities field is for MAC capabilities. Mixing PHY info into the MAC capability field makes the MAC version dependent upon the PHY being used. That violates one of the prime design goals of 802.11: A single MAC for multiple PHYs. How should the bits be set in a new MAC header when it's running some other PHY (802.11a or a later developed PHY…)?

I also note that the charter of 802.11b was to create a PHY specification. It was not to change the MAC. Personally, I would accept minor changes to the MAC that do not cause any issues with existing 802.11 MAC implementations – but the changes proposed in 802.11b probably fail that test. Until an analysis of all possible combinations of interactions between "old" and "new" MAC implementations containing the proposed changes is done, presented and circulated for review, and deemed not to contain any problems, I will have to vote no on the 802.11b draft.

Please note that there is an easy way out of the problem: Adopt all the other 802.11b PHY changes requested in my review comments. That would eliminate the PHY options that are the source of the problems; there would be no need for any of the changes proposed to the 802.11 MAC specification, and without the proposed changes, this particular set of issues disappears.

SuggestedRemedy

Required change:
Adopt all the other 802.11b PHY changes requested in my review comments; eliminating the need for any of the changes proposed to the 802.11 MAC specification; and then delete the corresponding MAC changes.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **many** *P* **many** *L* # **298**

John H. Cafarella MICRILOR, Inc.

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

My concern here is the existence of too many options: 1) for the high-rate PHY there are 11- and 5.5-Mbps rates using either CCK or PBCC; 2) the long and short PLCP Headers; and 3) the frequency-agility option. This standard is all on paper, and is a design by committee. Unlike the adoption of 802.3 and the original 802.11, where there was considerable experience before the standards, there is no practical experience with this complex collection of stuff.

SuggestedRemedy

1) Keep CCK or PBCC, not both (prefer keep PBCC);
2) Keep long or short header (prefer short);
3) Eliminate frequency agility.

Make the standard simpler to implement and EASIER TO USE.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **Participants** *P* **1** *L* **-** # **287**

Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

There are no officers, WG members or sponsor pool members listed.

SuggestedRemedy

Add the correct lists

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **Participants**

Cl **XX** *SC* **PBCC related text** *P* **multiple** *L* # **299**

David Bagby 3Com Corporation

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

Review Comment 6: Technical Required
Prior to Sponsor ballot I had requested the deletion of the PBCC option. I again make the request as part of my sponsor ballot. The utility provided by the option is insufficient (in this reviewer's opinion) to merit the complexity involved. In my (informal) sampling of people planning to implement the 802.11b PHY, I did not find anyone that planned to implement the option. The option exists due to political deals made in earlier meetings. It's time to be pragmatic and clean up the side effects of past politics – delete the option that (I believe) will not be used. If this is done it makes the resolution to the next comment (#7) easier as a positive benefit.

SuggestedRemedy

Required change:
Delete PBCC option.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **PICs CF6** *P* **55** *L* # **300**

David Bagby 3Com Corporation

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

Review Comment 4: Technical Required
Item CF6 in the PICs (page 55) is OFDM PHY for the 5GHz band. Delete this line from the 802.11b PICs. It has no business existing in the 802.11b PHY draft (it should exist in the 802.11a draft instead).

SuggestedRemedy

Required change:
Delete item CF6 in the PICs (page 55) for the OFDM PHY for the 5GHz band.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **PICs HRDS3** *P* **56** *L* # **301**

David Bagby 3Com Corporation

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

Review Comment 5: Technical Required
Prior to the sponsor ballot I had requested during internal 802.11 ballots that the FH interoperability option be made mandatory. The group responded to that request by saying "Partially accepted, the FH PLCP frame format option has been deleted". Doing exactly the opposite of what was requested is really stretching the meaning of the phrase "partially accepted"…

However, my primary concern was that the option created interoperability issues. The deletion of the option does remedy my concern. I accept the change in draft 5.0. Please complete the deletion by making the following edit:

Delete PICs item HRDS3 page 56 "Channel Agility Option". Section 18.2 no longer has the option so the PICs can't reference it.

SuggestedRemedy

Required change:
Delete PICs item HRDS3 page 56 "Channel Agility Option".

Proposed Response *Response Status* **O**

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

Cl **XX** *SC* **PICs HRDS3**

Cl **XX** *SC* **PICs HRDS3&6** *P* **56** *L* # **302**

David Bagby 3Com Corporation

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

Review Comment 3: Technical Required
I had previously requested that the use of the short preamble be either deleted or made mandatory. The 802.11b group prior to sponsor ballot declined the request. The problems caused by the option specifications remain.

Please refer to the PICs in draft 5.0:
Item HRDS3 (page 56) is shown as optional and refers to section 18.2.
Item HRDS6 (page 56 - short preamble process on RX) is shown as optional and refers to section 18.2.6.
Neither the PICs nor the referenced text sections tie the two options together.

From what I've read that the following are possible compliant implementations:
Vender A: Implements Short header on TX and RX (both options).
Vender B: does not implement any short header options (neither Option)
Vender C: Implements short header on TX option, but not the RX option.

Once the use of short headers is turned on at a sending station here are some of the bad cases possible given the current draft:
Case 1: A's equipment always sends short headers, B can never talk to him. Result: non-interoperability.
Case 2: B can't talk to C. Result: non-interoperability
Case 3: C can't talk to C! Result: non-interoperability

SuggestedRemedy

Required change:
Here is what is required:
1) RX short header processing must be mandatory if the Tx short header option is implemented. That will prevent case 3 above.
2) The purpose of the short header is to provide performance (as the long header limits thruput). The purpose of the long header is antenna to antenna interoperability between 1 and 2 Mbps 802.11 DS PHYs (the FH is now irrelevant due to the removal if the FH compatibility stuff in D5.0) and an 802.11b PHY.
The use of an option is an attempt to have both. The option approach fails because it causes interoperability issues, effectively providing neither benefit.
Either
a) Delete the short header (effectively deciding that old PHY interoperability is more important than performance) or
b) Make the use of the short header mandatory (making performance more important than old PHY compatibility).

I can accept either choice a) or b).
My preference is that the standard take choice b) as there are other ways to achieve data interoperability between 1-2 Mbps DS PHYs and the proposed 802.11b PHY. It can be accomplished by multiple APs and let the interoperability occur in the DS; it is not necessary to have antenna to antenna interoperability between the various PHY specifications (this is how one moves data from a current FH PHY station and a DS PHY station). This gives the 802.11b system both data interoperability (the real user requirement) and performance.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **various** *P* **Many** *L* **various** # **290**

Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

There is no need for "IEEE 802.11" to be used throughout the document when referring to fields and other items. What else would we be talking about? See clauses 18.2.2.1, 18.2.3.3, 18.2.3.4

SuggestedRemedy

Delete all occurences of "IEEE 802.11" in clause titels, field definitions and descriptions.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **various** *P* **Many** *L* **various** # **289**

Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

All table and figure numbers are incorrect for placement into the standard in proper order.

SuggestedRemedy

Renumber all tables and figures for proper ordering in the standard.

Proposed Response *Response Status* **O**

Cl **XX** *SC* **various** *P* **Many** *L* **various** # **288**

Bob O'Hara Informed Technology, I

Comment Type **E** *Comment Status* **D**

The wrong version of the standard is cited throughout the document.

SuggestedRemedy

Replace all occurences of "802.11-1997" with 802.11-1999".

Proposed Response *Response Status* **O**