Thursday, July 29, 1999 11:18:20

P802.11a Draft D6.2 Comments and Resolutions

Cl **00** *SC* **Annex G** *P* *L* # **92**

Hitoshi Takanashi NTT MCL, Inc. Vote VAC

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

On behalf of Naftali Chayat (Chair of TGa):

In the informative annex there is a potential of misunderstanding which tables with coded bit listings (G.8, G.9, G.18 and G21) are related to the index "k" in the interleaver equations and which are related to the index "j". In order to reduce the potential for misunderstanding, it is suggested that the table headings will identify this clearly.

We would like to thank Ulrich Jagdhold, Institute for Semiconductor Physics Frankfurt (Oder), for pointing this out.

SuggestedRemedy

In the tables G.8 and G.18 in the first row of the table, replace all "##" with italic "k".

In the tables G.9 and G.21 in the first row of the table, replace all "##" with italic "j".

This is an editorial change which stresses the relation of the tables' contents to the equations which the table illustrate and it does not alter or attach any new technical meanings.

Proposed Response *Response Status* **C**

PROPOSED ACCEPT.

Changed as suggested.

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Cl **XX** *SC* **17.3.12** *P* **42** *L* **5** # **74**

John Deane CSIRO Australia Vote VAC

Comment Type **TR** *Comment Status* **R**

6. State RX SIGNAL PARITY cause for transition back to IDLE is PARITY FAIL or PMD-RSSI.ind below threshhold and PHY_CCA.ind(IDLE) is an action.

1. Cause of state transition RX IDLE to DETECT PLCP PREAMBLE not given.
Presumably PMD-RSSI.ind above the threshhold for preamble processing.

2. In DETECT PLCP PREAMBLE state the mechanism for 'wait for SIGNAL' is not clear.
Presumably 'wait for PMD-data.ind'

3. Cause of transition from DETECT PLCP PREAMBLE back to IDLE is not clear.
Presumably Timeout or PMD-RSSI.ind below threshhold.

4. Same transition 'PHY_CCA.ind(IDLE) is NOT a cause it is an action
BY the PLCP to the MAC layer!
So distinguish causes & actions.

5. State RXPLCP FIELDS cause for transition back to IDLE is unclear.
Presumably PMD-RSSI.ind below threshhold.

7. State RX SYMBOL exit conditions CCA(IDLE) & CCA(BUSY) are not defined.
Possibly PMD-RSSI.ind below threshhold.

SuggestedRemedy

Included in the comment.

Proposed Response *Response Status* **C**

REJECT. For item 6 only. All others have been accepted.
6. State RX SIGNAL PARITY cause for transition back to IDLE is PARITY FAIL or PMD-RSSI.ind below threshhold and PHY_CCA.ind(IDLE) is an action.
-> The IDLE indication is a signal which can be used to condition an action.
(This item will be discussed in the next meeting.)

The following have bee acepted by the commenter:

1. Cause of state transition RX IDLE to DETECT PLCP PREAMBLE not given.
Presumably PMD-RSSI.ind above the threshhold for preamble processing.
-> added "PHY-CCA.indicate (busy)"

2. In DETECT PLCP PREAMBLE state the mechanism for 'wait for SIGNAL' is not clear.
Presumably 'wait for PMD-data.ind'
-> Changed the contents of the box. The labels of the conditions were changed as well. Please look up the figure.

3. Cause of transition from DETECT PLCP PREAMBLE back to IDLE is not clear.
Presumably Timeout or PMD-RSSI.ind below threshhold.
-> The transition back to idle state can result eather from absence of signal or from failure to receive and decode properly the SIGNAL field. See the corrected figure (Fig. 125).

4. Same transition 'PHY_CCA.ind(IDLE) is NOT a cause it is an action
BY the PLCP to the MAC layer!
So distinguish causes & actions.
-> The IDLE indication is a signal which can be used to condition an action.

5. State RXPLCP FIELDS cause for transition back to IDLE is unclear.
Presumably PMD-RSSI.ind below threshhold.
? The IDLE indication is a signal which can be used to condition an action. This takes account of the case where signal is lost after successful decoding of the SIGNAL field.

7. State RX SYMBOL exit conditions CCA(IDLE) & CCA(BUSY) are not defined.
Possibly PMD-RSSI.ind below threshhold.
-> They are “PHY_CCA.ind(IDLE) and PHY_CCA.ind(BUSY).

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 Vote: E/ExCom VD/Disapprove VAC/Approve with Comments

Cl **XX** *SC* **17.3.12**

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Cl **XX** *SC* **17.3.3** *P* **21** *L* **11** # **88**

MASAHIRO MORIKURA NTT Vote VAC

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

The short preamble pattern was changed to improve the peak to average power ratio at the short preambles. However, the phase relation between short preamble (t1-t10) and long preamble (T1,T2) of draft 5.5 cause degradation in timing detection. This is because the matched filter output for detecting the short preamble pattern has large sidelobe in boundary region between t10 and T1. This large sidelobe badly affects the timing decision value when multipath delayed signals are superimposed.
To solve this problem, a modified short preamble pattern should be adopted. This modified short preamble pattern has the same peak to average power ratio and small sidelobe in boundary region.

SuggestedRemedy

Accept to change the equation (6) into:

S=sqrt(2)*{0,0,1+j,0,0,0,-1-j,0,0,0,1+j,0,0,0,-1-j,0,0,0,-1-j,0,0,0,1+j,
0,0,0,0,0,0,0,-1-j,0,0,0,-1-j,0,0,0,1+j,0,0,0,1+j,0,0,0,1+j,0,0,0,1+j,0,0}

Proposed Response *Response Status* **C**

PROPOSED ACCEPT.
Accept to change the equation (6) into

S=sqrt(13/6)*{0,0,1+j,0,0,0,-1-j,0,0,0,1+j,0,0,0,-1-j,0,0,0,-1-j,0,0,0,1+j,
0,0,0,0,0,0,0,-1-j,0,0,0,-1-j,0,0,0,1+j,0,0,0,1+j,0,0,0,1+j,0,0,0,1+j,0,0}

Cl **XX** *SC* **17.3.8.3.3** *P* **30** *L* **50** # **67**

Jeff Fischer MICRILOR, inc. Vote VD

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

It is impractical to build a radio with two different power amplifiers; their use dependent which channel is selected.

SuggestedRemedy

The precise backoff should be calculated and stated such that the adjacent channel rejection is met and the local regulations can be met with some practical power specifications. If the specifications mean that there must be power control that is effected differently across selected channels than this must be specified in the standard.

Proposed Response *Response Status* **U**

ACCEPT.
Changed:
"The outer channels may have to be amplified by an HPA (High Power Amplifier) which has more backoff than the inner channels. This issue dependes on the local regulations and HPA characteristics."
to:
"The outer channels may require setting the HPA (High Power Amplifier) backoff to a higher value than for the inner channels in order to pass the local regulations. This issue dependes on the local regulations and HPA characteristics."

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 Vote: E/ExCom VD/Disapprove VAC/Approve with Comments

Cl **XX** *SC* **17.3.8.3.3**