Tentative Minutes of the Direct Sequence PHY Sub Group, September 1994

IEEE 802.11 COMMITTEE

29 Aug. 1994
DS PHY Monday PM
attendees:
Jan Boer
Paul Struhsaker
Jeff Rackowitz
Farrakli Mohammadi
Maurice France
Al Petrick
John Fakatselis

Jan Boer moves to accept the July minutes
Maurice F seconds
5 for, 0 against, 0 abstain

Changes to CCA:
Jan Boer proposes two levels
-80 dbm for TX power > 100mW
-70 dbm for TX power <= 100mW

After debate the consensus is:
append 10.4.8.4
a)
-80 dBm for Tx power > 100mW
-76 dBm for 50 mW <TX power<= 100mW
-70 dbm for Tx power <= 50 mW
d) the ED detection time will be less than or equal to 25 usec
b) 11 ms
c) change to 2 resulting in 22 ms
dreature last paragraph from -67 dBm to "appropriate energy detect threshold"

discussion to 10.4.6.6 add

The time from transition of PMD_TXE from TX to RX until the radio is in receive mode
as indicated by the exposed CCA signal shall be less than or equal to 25 usec. A receiver input signal above
the ED threshold described in section 10.4.8.4 shall be present at the receiver immediately following the TX
to RX transition

New point: length vs usec in lengthfield in PLCP ... we need to keep with bits
Potentially strike 10.4.8.5 as ambiguous and untestable
30 Sept. 1994

attendees:
Jan Boer
Paul Struhsaker
Jeff Rackowitz
Farrakli Mohammadi
Maurice France
Al Petrick
John Fakatselis
Masahiro Ohki
James Harrer

DS PHY AM meeting

Jeff presented data on hardware requirements levied by the short RX to TX turnaround time
he is correct.

Discuss the final version of changes. 10.4.8.5, 10.4.8.4, etc.

Maurice F moves that we open 10.4.6.6 modify it with the following text and close the issue:
The time from transition of PMD_TXE from the TX state to the RX state until the radio is in receive mode
as indicated by the exposed CCA signal being less than or equal to 35 usec. A receiver input signal 3dB
above the ED threshold described in section 10.4.8.4 shall be present at the receiver.
Friendly amendment by Jan Boer
The TX to RX turnaround time shall be less than 10 usec including the power down ramp specified in
section 10.4.7.7.
Conformance shall be demonstrated as ( continue with the text)
The final version now reads:
The TX to RX turnaround time shall be less than 10 usec including the power down ramp specified in
section 10.4.7.7.
Conformance shall be demonstrated as The time from transition of PMD_TXE from the TX state to the RX
state until the radio is in receive mode as indicated by the exposed CCA signal being less than or equal to
35 usec. A receiver input signal 3dB above the ED threshold described in section 10.4.8.4 shall be present
at the receiver.
Jan Boer seconds
3 for , 0 against, 1 abstain.

10.4.6.10
Jan Boer moves that we change 10.4.6.10 to the following and close the issue:
Maurice: seconds
Two temperature ranges for full operation compliance to the DS PHY are specified. Type 1 is defined as
0\degree C to 40\degree C is designated for office environments. Type 2 is defined as -30\degree C to 70\degree C and is
designated for industrial environments.4 for, 0 against, 0 abstentions.

Maurice F moves to delete 10.4.8.5 untestable specification
Jeff R seconds
no discussion
5 for, 0 against, 0 abstentions

Al P motions to change CCA as follows and close this open issue:
Maurice F seconds
changes as follows:
a) -80 dBm for Tx power > 100mW
   -76 dBm for 50 mW < TX power <= 100mw
   -70 dbm for Tx power <= 50 mW
b) 11 ms
c) change count to 2 resulting in 22 ms
d) the ED detection time will be less than or equal to 25 use
change last paragraph from -67 dBm to "appropriate energy detect threshold"
add e) The CCA state machine shall be reset upon transition from the TX state to the RX state
discussion ... still a little worried about operational use.
3 for, 0 against, 2 abstain. passed.

break for lunch.

Afternoon session 30 Sept. 1994

Al P motions that we accept the following text for 10.4.7.8 and close the issue:
Maurice F seconds
The RF carrier suppression, measured at the channel center frequency, shall be at least 15 dB below the
peak SIN(x)/x power spectrum. The RF Carrier Suppression shall be measured transmitting an all 1's data
sequence with the scrambler disabled using QPSK modulation. A 100 kHz resolution bandwidth shall be
used to perform this measurement.
friendly amendment using QPSK modulation
discussion ... none
4 for, 0 against, 1 abstain.

Maurice moves that we accept the text in 10.4.7.9 and close the issue
Al P seconds
discussion .. not 0.35 error and the count = 1000 were typo errors corrected prior to this motion.
5 for, 0 against, 0 abstain

Maurice motions to open amend and close 10.4.7.4
   add dBr (dB relative to SinX/X) and replace dBc
   add 100KHz resolution BW for making the measurements
   make all frequencies relative to the channel center frequency fc
Al P seconds
   no discussion
5 for, 0 against, 0 abstain.

Close for the day

Wednesday AM Session Aug. 31 1994

Jan B motions to open amend and close 10.4.7.8 as follows
   change all 1's sequence to a repetitive 0101 sequence to ensure 90 deg phase transitions.
AL P seconds
discussion
4 for , 0 against, 0 abstain

Paul S asks group if any items in sections 10.6, 10.7 , 05 10.8 are open
NO they closed
straw poll show of hands that the items are closed, 4 for, 0 against 0 abstain.

PLCP

Tentative Minutes of the
DSSS PHY Sub Group
Jan Boer motions to change signaling bit to represent 100Kb/s increments in 10.2.3.3
Maurice seconds
discussion ...
5 for 0 against 0 abstain

Jan Boer motions to 10.2.4 that the scrambler be initialized to all 1’s prior to transmission,
no changes are required for reception.
Maurice seconds.
discussion ...
2 for 1 against, 2 abstain cannot open.

Jan moves to open issue 10.2.4
Maurice seconds
2 for 1 against, 2 abstain. not opened remains closed.

Ask to accept document 050r4 to be moved at the plenary session to be included into document as a
working document.
Paul S motions
Jan Boer seconds
4 for 1 against.

DS PHY THURS. AM session.

Editing the text of 94/050r4 for typographical, grammatical, and content errors,

Jan Boer moves that we accept all the text changes discussed this morning
to include edits to the PMD primitives and field definitions.
Minor text edits to the PLCP language
Inclusion of a temporary set of MIB variables to be updated prior to the next session
as document 050R5.
AL P seconds
5 for, 0 against, 0 abstain.

finish this AM session with discussion about the joint PHY meeting.