

**TENTATIVE MINUTES OF IEEE 802.11 FH PHY MEETING  
7/9/96 ENCHEDE NL**

Meeting opened by Dean Kawaguchi at 1:45 for the FH PHY

First order of business was approval of last meetings minutes.

FH PHY comment resolution for draft 4.0

Setting Agenda

- Comment resolution
- Japanese call sign

**COMMENT RESOLUTION 17** comments to be resolved.

Eran Shpak's comment #9 Higher than 2 Mb/s data rates must be part of this standard. Comment on section 14.

Motion: Comment rejected. Committee addressed trade of spectrum efficiency, implementation complexity and performance in multipath and interference environments. We compared several modulation methods with extensive analyses and simulation and chose FSK. More complex modulations may be used for future higher rate extensions of the FH PHY, but deleting the existing base modulations and rates throws away 5 years of work by P802.11 and member companies that are

Motion made by Naftali Chayat

Second by Nathan Silberman

Vote 8,0,0 Motion carries.

VH's Comment #8 comment on proper units on section 14

Motion: Comment accepted Will make editorial changes in section 14. change all locations that use Mbps to Mbit/s

Motion made by George

and seconded by Naftali

Vote unanimous motion passes.

Nathan will be the editor for this section.

AL's comment #10 on 127 bit sequence on section 14.3.2.3

Motion: Comment rejected. Comment is incorrect; The scrambler sequence is generated independent of the actual Data In.

Motion made by Naftali.  
Second Bob M.  
Vote: 6,0,1 motion passes

Meeting recess for 3:00 PM break

SAB's comment #11 on Sure slot time on section 14.3.3.2.1, 14.6.15.3,  
15.4.8.4.9.2.9

Motion: table until we can talk to SAB

Motion made by George  
second by Bob

Vote: carries unanimous

SAB's comment # 14 PHY\_CCARST in section 14.3.3.2

Motion: PHY\_CCARST is used within the MAC state machine. Now that the state machines are in an informative annex, the requirement needs to be explicitly stated in the main section. We recommend to the MAC group to make this change.

Motion made by Akira Miure

Second by Bob

Vote: carries unanimous

AL's comment #15 typo missing "of" in section 14.3.3.2.2  
comment accepted and "of" added to section

SAB's comment #16 "if an error was detected" on section 14.3.3.3.2

Motion: Comment accepted. Replace second paragraph with "If an error was detected during the reception of the packet the PLCP may send PHY\_RXEND.indicate (RXERROR) and terminate the receive procedure before the last bit arrives".

Motion made by Naftali

Second by George

Vote: 4,0,2 Motion carries

Chair turned over to by Dean to Naftali at 4:42 PM

AL's comment #17 on nomenclature consistency figure doesn't agree with text. On section 14.4.3.2

Motion: Comment accepted. Use standard format of PLME\_SET.request (parameter=value). change aCurrent\_Pwr\_State to aCurrentPwrState.

Motion made by Nathan  
second by Naftali  
Vote: 5,0,3 Motion passes

Comment #18  
Accept comment as editorial change

MS's comment #19 on power management on section 14.6  
Motion: Comment rejected. Many participants find this is achievable;  
widening would increase interference between colocated systems. This  
Motion made by Naftali  
Second by Bob  
Vote: 7,0,1 motion passed

HV's comment #20 Omission and inconsistent use of units on section  
14.6.10  
Motion: Accept change. Add Fclk definition. "An incoming bit stream at 1  
Mbit/s will be converted to symbol at Fclk = 1 Msymbol/s as shown in  
Table 43." Change +f to +fd and Fc+fto Fc+fd and  
Motion made by Nathan  
Second by Jeff  
Vote: 9,0,0 Motion carries.

Meeting adjourned for the day at 6:00 PM

**7/10/96**

AL's comment #21 Intention of language not clear. On section 14.6.14.4  
Motion: Comment accepted. Change text to read: Within the operational  
frequency band, the transmitter shall pass a transmit spectral mask test.  
... pseudorandom data patterns, the adjacent channel power, shall  
be ~~either less than 70dBm or~~ a function of the offset between channel  
number N and the assigned transmitter channel M where M is the actual  
transmitted center frequency and N a channel separated from it by integer  
numbers of MHz. Replace table with Channel Offsets |N-M| = 2 and |N-M|  
>=3 For each transmit center frequency M, two exceptions above the  
spectral mask are permitted within the operational frequency band provided  
they are less than -50dBc where each offset channel N exceeded counts as a  
separate exception.  
Motion made by Nathan

Second by Jeff

Vote: 8,0,0 Motion passes.

DRE's comment #22 on location of table 40, 41 and 42 in section 14.6.8  
Motion: Comment rejected. Tables are key definitions to hopping patterns as the underlying sequences are generated by computer random number generators which may differ between different computers.

Motion made by Naftali

Second Nathan

Vote: 8,0,0 Motion carries.

Naftali's comment #23 on multiple rate on section 14.7

Withdraws comment on the basis of the decision in the HSFH study group to not include 3Mbit/s PMD in D4.X but to bring it the FH PHY for consideration in future versions of the standard.

VH's comment #24 Inconsistent figures in section 14.7.1.

Comment accepted. Editorial changes changes made no vote take

SAB's comment #25 SIFS time in section 14.8.2,A4.4.5

Motion: Comment accepted. Delete tolerance from 14.8.2 and 14.8.8.1.1 and change A.4.5, line 14.65 column 1.a SIFS Time attribute 28us and is the PHY capable of meeting this performance within the +/- 5 us tolerance as specified in clause 9.2.3.1?

Motion made by Naftali.

Second by Bob M.

Vote: 6,0,3 Motion passes.

Meeting close at 12:00 noon

Meeting opened at 8:45 AM on 7/11/96

SAB's comment #11 Sure slot time in section 14.3.3.2.1, 14.6.15.3, 15.4.8.49.2.9 This comment was tabled from an earlier meeting to be reconsidered after a meeting of full session of 802.11 and talking with Simon Black.

Motion: Comment accepted.. Change third sentence of first paragraph in 14.3.3.2.1 ... within a MAC contention backoff slot time of 50 us.

Change aCCAAsmntTime from 29 us to 27 us in 14.8.2 (table), 14.8.2.1.4 and 14.8.2.1.5 .

Motion made by Naftali

Second: Bob Marshal

Vote: 7,0,1 Motion carries.

RM's comment on rate field in section 14.2.2. Ron's NO vote was overruled due to being late but the comments were addressed.

Motion: Comment rejected. 0.5 Mbit/s may be useful in the future, and 3 bits provided sufficient room for growth given the modulation type and bandwidth limitations. This was a hard fought compromise reach between the FH and MAC groups for support of the Multi-rate CCA.

Motion made by Naftali

Second Mack Sullivan

Vote: 8,0,2 motion carries.

RH's comments on France and Spain domain support in section 14.8.2  
Add France and Spain to MIB. Spain will be 50h France will be 60h.

Change FH MIB parameter values for 100 Kbit/s iner. On tables 47,49and 50 as per full 802.11 direction.

Modified 14.3.3.2. the word packet was replaced with PLCP\_PDU.

Annex D make change

Motion: to authorize to allow Dean to make editorial changes to Annex D.

Motion made by Nathan

Second:

Vote: 9,0,0 motion carries.

Straw ballot 2Mb and 3Mb PMD separate or together? As per request of full session to discuss this topic

Motion made by Naftali for separate

Vote: 7,0,0

