

August 29, 1994

Meeting of the  
High Speed Frequency Hopping Spread Spectrum PHY Group  
Document #IEEE P802.11-94/221

**START OF MEETING:**

The meeting convened at 1:30 p.m. on the afternoon of 8/29. It was noted that the morning was entirely taken up by the joint MAC/PHY of 802.11

**AGENDA DEFINED:**

The following agenda was proposed by Wayne Moyers:

- Approve minutes of previous meeting:
- Doc:IEEE P802.11-94/177 Jonathan Tate presenting, Pulse Engineering
- Discuss issues regarding CCA
- Doc:IEEE P802.11-94/184 (Document in work)
- Adjourn to the Frequency Hopping sub-group

Agenda accepted by group without dissent.

**ACCEPTANCE OF PREVIOUS MEETING MINUTES:**

The meeting begins with the following motion:

***Motion: I move that the minutes from the previous meeting be accepted.***

Motion made by Mack Sullivan, Proxim

Second: Wayne Moyers

No discussion

Vote: For: 3

Against: 0

Abstain: 1

The motion passes.

**PRESENTATION OF DOC:IEEE P802.11-94/177**

**TITLE: MODULATION SPECIFICATION FOR HS 4FSK**

The meeting proceeded with a presentation by Jonathan Tate from Pulse Engineering, as shown below:

**Discussion point which had unanimous agreement.**

The modulation accuracy number should be picked for both the 2FSK level and 4FSK level and it is noted that the 2FSK number can be different (i.e. looser in specification).

There was much discussion about modulation deviation specifications. What should they be?

**Key discussion point:**

The group debated whether tolerances for modulation deviation should be noted min/max, or minimum only. Michael suggests that the minimum be specified and the maximum be bounded by FCC, which is already defined. Jon and Wayne debate this point, suggesting that if both are not specified it may create interoperability problems. Michael says that the eye is proportionally expanded. The orthogonality is fully defined here by 4fsk, min. .14.

Michael states, "The higher the deviation the better the performance."  
Wayne is concerned about interoperability.

**MOTION:**

*The following motion is made by Jonathan Tate from Pulse Engineering.*

**It is moved that the following Carrier Frequency drift is accepted, as noted in DOC:IEEE P802.11-94/177.**

**CARRIER FREQUENCY DRIFT**

**Maximum rate of frequency drift: 10kHz per 100mS**

Second: Wayne Moyers

Discussion:

For: 4  
Against: 0  
Abstain: 0

The motion passes.

**EDITING CHANGES TO DOC:IEEE P802.11-93/210r2**

The following editing changes were made to DOC:IEEE P802.11-93/210r2 and approved.

<b>Page</b>	<b>No.</b>	<b>Change made</b>
2	12a	"or TBD" deleted
3	12b	add "(note)" to end of line.
3	26	delete "to appear in final specifications" and insert "controls."
3	28	remove "TBD" and insert "+/- 25 PPM max."
4	30	add "same as FKSS"
4	31	add "same as FKSS"
4	32	remove "&,*"
4	33	remove "TBD"

The meeting proceeded with the following two motions.

**MOTION:**

***Moved that the template is accepted as final.***

Motion made by Wayne.

Second by Michael.

**Votes: For: 4**

**Against: 0**

**Abstain: 0**

This motion passes.

**MOTION:**

***Moved that we do not see any reason to deviate at this time from the CCA as per the current work done in the frequency hopping group.***

Proposed by Michael

Second: Jonathan Tate

Vote: For: 4

Against: 0

Abstain: 0

This motion passes.

Pablo Brenner's paper was deferred to the MAC/PHY interface joint session to be held later today.

Adjourned by unanimous consent.