Tentative Minutes of Interim IR PHY Ad hoc Group
Monday, March 6, 1995

West Palm Beach, FL

Meeting called to order by Barry Dobyns at 9:20 AM. Minutes taken by Tom Baumgartner.

In attendance are Barry Dobyns, Photonics; Tom Baumgartner, Spectrix; Hiro Wakai, Sharp; and Adriano Moreira, U. of Aveiro.

Barry explained that Roger Samdahl, Photonics, has regretfully said that he can no longer participate in 802.11. Tom nominated Barry as temporary chair for this interim meeting. There being no other nominations, Barry takes the chair.

MOTION: Tom moved that editorial comments be assign to the editor to handle and bring back any technical issues that have been mislabeled. Seconded by Barry. Vote: 3-0-0. Motion passed.

The authors of technical comments who are not normally a member of the IR PHY group will be sought outside of the meeting for interaction regarding our decisions on their comments.

Adriano said that there were comments on IR PHY from KC Chen (sent by paper as page 11 of 95/18-g). Barry typed the technical comments from that paper into our working copy of document 95/18-12(c).

Discussed Wim's comment about needing signal quality for antenna diversity or choosing between multiple AP's. Need to raise with MAC whether they can handle not receiving an RSSI from PHY.

MOTION: Tom moved that we don't want to mandate the additional complexity for the small benefit to IR operation. Group will meet with Wim to try to convince him of the wisdom of our position. Second Adriano. Vote: 4-0-0. Motion passed.

Discussed Barry's comment about needing thermal operating range. Deferred to Adriano's comments later in table.

Discussed Mike Fischer comment on 12.1, 5th paragraph.

MOTION: by Tom to change sentence to add "reduced range". Second Adriano. Vote: 4-0-0. Motion passed.

Discussed Mike Fischer, Bob O'Hara, Isabel Lin, and Barry's comments on Figure 12-2 and referring to Section 2.9.

MOTION: by Tom to delete Figure 12-2 and change sentence in 12.3.1 to read "The relationship of this specification to the entire Baseband IR PHY Layer is shown in Figure 2-11 of Section 2.9, Reference Model." Second by Hiro. Vote: 4-0-0. Motion passed.

MOTION: by Tom to delete the word Baseband from the title of the IR PHY as an editorial change. Second by Adriano. Vote: 4-0-0. Motion passed.

Discussed Mike Fischer comment on 12.2.3 about MAC asking for transmission at speed not supported by PHY.

MOTION: by Tom to add statement that PHY will not transmit a packet when asked to transmit at a rate it doesn't support. The PHY will indicate an error back to the MAC by the error mechanisms defined in the PHY SAP. Second by Hiro. Vote: 4-0-0. Motion passed.

Discussed Mike Fischer comment on 12.2.3 about DCLA field.

MOTION: by Tom to add text in 12.2.3, 12.2.4.1, 12.2.4.2, 12.2.4.3, 12.2.4.4 that the SYNC, SFD, DR, and DCLA fields are not symbol modulated in L-PPM format. Second by Adriano. Vote: 4-0-0. Motion passed.

MOTION: by Adriano to change "empty slot" text in 12.2.4.1 to "absence of pulse in last slot." Second by Tom. Vote: 4-0-0. Motion passed.

Discussed Mike Fischer comment on 12.2.4.2 on Hamming distance of SFD. Adriano has presented a paper (94/153) showing that the best design for SFD is the one chosen. Longer SFD reduces the probability of correct detection of SFD. Longer SFD reduces the probability of incorrectly picking the SFD out of later part of the packet but the CRC will protect against this. Barry is concerned about the politics of not conforming to 802 requirement.

MOTION: by Adriano that we reject the comment because current design is best technical solution. Second by Tom. Vote: 4-0-0. Motion passed.

Discussed Wim comment on length field needing to be at basic rate always. This assumes that medium has fading and needs to calculate CCA by calculating time based on length. IR doesn't need this mechanism. This does bring up the need to modulate future higher IR data rates in such a way that the current CCA will detect its presence.

MOTION: by Tom that we reject this comment based on no technical need in IR which doesn't fade. Second by Adriano. Vote: 4-0-0. Motion passed.

Discussed Mike Fischer comment on whether DCLA field can support future data rates. We do not anticipate adding many other data rates. For those data rates the current DCLA is adequate.

MOTION: by Adriano that reject proposed changes in 12.2.4.4 since for the data rates we anticipate the DCLA field is adequate. Second by Tom. Vote: 4-0-0. Motion passed.

Discussed Mike Fischer comment on polynomial name being incorrect.

MOTION: by Adriano that we change the name of the CRC polynomial to CRC CCITT in the entire section. Second by Tom. Vote: 4-0-0. Motion passed.

MOTION: by Tom to break for lunch and resume at 1 PM.

Meeting resumed at 1:10 PM.

Discussed Tom's comment on 12.2.5.1 regarding Start_of_Data and Start_of_Activity confusion that really exist in Section 8. Any change we make now will have to be made again when they clean up mess in Section 8.

MOTION: by Tom that we accept my comment until and unless a change is necessitated by cleaning up the Section 8 mess. Second by Adriano. Vote: 4-0-0. Motion passes.

Discussed Tom's comment on 12.2.5.1 regarding End_of_Data.

MOTION: by Tom that we change to End_of_Data_and_Activity until and unless a change is necessitated by cleaning up the Section 8 mess. Second by Adriano. Vote: 4-0-4. Motion passed.

Discussed Tom's comment on 12.2.5.1 regarding transmit process description. The abstract interface description demonstrates the order of events even though no implementation will operate as such. Tom withdrew his comment.

Discussed Mike Fischer comment on 12.2.5.2 on length reported in the PHY_DATA.indicate (Start_of_Data). We are not clear what commentator wants? Action deferred; need to talk to him.

Discussed Rui Valadas comment on 12.3.2 regarding operating environment.

MOTION: by Tom to include the intent of Rui's comment into 12.1 introduction. Second by Adriano. Vote: 4-0-0. Motion passed.

Discussed Rui Valadas comment on 12.3.2 regarding operating temperature range.

MOTION: by Adriano to accept comment with added word minimum. Vote: 4-0-0. Motion passed.

Discussed Bob O'Hara comment on 12.3.3.2 regarding jitter measurement method.

MOTION: by Tom that we reject comment because the measurement method is more properly subject of test suite. Second by Adriano. Vote: 4-0-0. Motion passed.

Discussed Tom's comment on 12.3.3.3 regarding emitted power.
MOTION: by Adriano to change "average emitted power" to "total peak emitted power." Second by Hiro. Vote: 4-0-0. Motion passed.

MOTION: by Tom that the editor of this section be given the power to ripple the approved changes throughout the section, if there are other places that the change affects which were not recognized during the meeting. Second by Adriano. Vote: 4-0-0. Motion passes.

Discussed Tom comment on 12.3.3.3. The group agreed that other patterns make sense. If another pattern is presented the group will be pleased to consider it. Tom undertakes present a paper during this week.

Discussed Roger Samdahl comment on 12.3.3.7 (and 12.3.3.8) regarding un-modulated background noise.

MOTION: by Tom to add the word un-modulated before background to 12.3.3.7 and 12.3.3.8. Second by Adriano. Vote: 4-0-0. Motion passed.

Discussed Roger Samdahl comment on 12.3.3.8.

MOTION: by Tom to reject comment because can't find reference. Second by Adriano. Vote: 4-0-0. Motion passed.

Discussed Roger Samdahl comment on 12.3.3.9 regarding receiver field of view. Adriano said that we have to use term "received optical power" instead of receiver sensitivity. There was much discussion of what is the appropriate field of view. Agreed, after much discussion, to specify in received optical power at 20 degree increments.

MOTION: by Tom to specify the field of view as more than 65% for angles less than 20, 55% for less than 40, 35% for less than 60, 10% for less than 80. Replace paragraph 2 and 3. Second by Adriano. Vote: 4-0-1. Motion passed.

MOTION: by Tom to adjourn for the 802.11 Plenary.

Meeting adjourned at 3:10 PM