## IEEE P802.11 Wireless LANs

## **Report of Comment Resolution Group 2 for TGb**

**Date:** January 13, 1999

**Author:** Anil K. Sanwalka

Neesus Datacom Consultants

100 Dynamic Dr, Suite 201, Toronto, Ont, M1V 5C4

Phone: (416) 754-8007 Fax: (416) 754-8006 e-Mail: anil@neesus.com

## **Abstract**

doc.: IEEE 802.11-99/030

3, 140 Remove occurrences of the word "frame".

**Accepted**. Should probably be picked up by the editorial group.

7,67. Remove the usage of the word "shall" from the overview clause.

**Accepted**. Instructions to the editor provided in 99/31.

9, 10, 11, 16, 21, 22, 23, 55, 140, 141

This group of comments is related to the PBCC and short preamble options. There was a comment to remove the PBCC option. There were comments to make short preamble mandatory. There was a comment to make long preamble optional. There was also a comment to remove the CCK modulation and make PBCC mandatory.

**Rejected**. Due to market considerations long preamble and CCK have been adopted as mandatory. Short preamble and PBCC have been added as options to allow higher performance upgrades in the future.

13, 26, 27, 28, 29, 41, 81, 98, 119, 131, 132, 155

This group of comments is related to the CCA requirements in clause 1.4.8.4. Jan Boer and Mark Webster presented a paper on this issue. The commentors feel that the HR/DSSS PHY must signal busy even when receiving a frame transmitted using the short preamble option and/or the PBCC option. We agreed with them, and changed CCA modes 2 and 3. There was also a comment on thresholds related to CCA.

Accepted. Changed CCA modes 2 and 3. The new CCA mode 2 declares busy on carrier sense and idle only after a timeout. CCA mode 3 requires that it indicate medium busy at least during the reception of PPDU with energy above the ED threshold. We resolved to remove requirements for the thresholds.

43, 47

This comment refers to descriptions in the current standard that are not consistent with the high rate PHY. In particular the definition of the station basic rate set is incorrect.

Accepted. Editor to adopt changes specified in 99/011

52. The commentor feels that 1.2.3 and subclauses should reference clause 15.

**Rejected**. Copying the appropriate text allows for clarity and ease of referencing when looking for information on this PHY. It is also noted that this is a different PHY that is interoperable with the DS PHY in clause 15, not the same PHY.

53. The complete HR/DSSS MIB is not described in the draft.

Accepted. Editor to copy DS portion of MIB from the 802.11 standard and modify for the HR/DSSS MIB.

54, 64. Fix figure 27 to include the PBCC and short preamble capability bits.

**Accepted**. Editor to make mods.

58, 74

There are comments that the new service primitives added (extended\_characteristic) are not adequately defined.

**Accepted**. Replace the extended characteristic primitives with the new primitives (TXTIME) which allow the MAC to get the frame duration from the PHY based on the TXVECTOR. This will also solve a similar problem for TGa.

- 59. Withdrawn.
- 63. Clarify use of the options.

**Accepted**. The use of the PBCC or the short preamble option is on a per MPDU basis and is specified in the TXVECTOR. Detection of the use of the FH option has been clarified by clarifying the PHY parameter set element.

66, 73 These comments refer to incorrect references to figures and tables.

**Accepted**. These seem to be editorial constructs and do not appear as problems in 2.0

68, 120 Specify initial state of scrambler for long preamble frame.

Accepted. Use the same initial state as a short preamble frame.

78. Fix layer reference model in Fig 11 so that the MAC mgmt is not above the convergence layer. **Accepted**. Editor to make specified changes.

79, 82, 91, 95

Fix the transmit and receive procedures for the impact of PBCC.

Accepted. Editor to make specified changes.

96, 150. TXVECTOR and RXVECTOR do not provide information on the preamble length.

Accepted. Editor to make specified changes.

104, 109, 114

There is no mechanism for transferring the preamble information across the PMD interface.

**Accepted.** Add PMD\_PREAMBLE request and indicate primitives. Editor to make suggested changes.

112, 117

There need to be fixes in PICS for the high rate PHY.

DeferAccepted. Add PMD\_PREAMBLE request and indicate primitives. Editor to make suggested changes.

126, 127, 128, 129, 135, 136

Clarify definition of PBCC.

**Accepted**. Editor to make suggested changes.

- There are problems with the convergence layer and PMD interface, shown in Figures 7 and 9. **Accepted.** Editor to make specified changes doc 99/31r1.
- There is some unnecessary complexity required for a PBCC implementation. Rejected: The commentor appears to have misunderstood the PBCC description. The issue has been clarified by the resolution of 129.
- 138, 157The description in clauses 1.2.6 and 1.4.5.5.3 implied that the MAC was required to do something. **Accepted**. Editor to make specified changes.

## 146, 162, 163, 164

The Verr formula given in clause 1.4.7.9 is incorrect.

Accepted. Editor to make specified changes.

<u>151</u>

No mechanism specified to pass modulation and preamble information across the MAC-PHY interface. In addition PMD primitives were defined incorrectly.

**Accepted**. Editor to make specified changes.

Remove the 180 degree phaase change on each odd symbol for the CCK modulation. 156. **Rejected.** The 180 degree phase change allows the DC bias to be removed from a transmit waveform.

page 3

doc.: IEEE 802.11-99/030