
**IEEE P802.11
Wireless LANs**

Tentative Meeting Minutes for Task Group B, (2.4 GHz)

Meeting Sept., 8, 1997 at the Grafton Radisson Edwardian Hotel in London

Group B on high rate extensions for 2.4 GHz Chaired by John Fakatselis
Carl Andren was asked and accepted as secretary when no one volunteered.
No editor assigned yet for the Group.

The group approved the agenda presented by the chair.(attachment 1)

There will be 5 submissions for presentations.
John Fakatselis on the 5 PAR criteria
John Cafferella on a high rate technique
Bob O'hara on the effects of long preambles
Dean Kawaguchi on the performance requirements
Carl Andren on a high rate suggestion

The Bob o'Hara presentation was moved for the November meeting due to Bob's absence.

It was suggested that Group B join the FCC telecon arranged by Group A.

A question on whether or not to include a section describing how a reader of the standard would select the proper PHY was discussed without resolution.

John F. discussed Process of PHY layer selection without comment. (attachment 2)

John F. presented the milestones (attachment 2)
The group suggested that the schedule should be parallel to the Tga schedule.

The 5 criterion were discussed based on submission 97/79 and wordsmithed by the representatives of the 15 companies present.

Motion to adjourn, 7-0-0

Meeting Sept 9, 1997
Spent the day editing the PAR document . A new version was created by the group (97/79 (r1)).

The next step is selecting some evaluation criteria, then presenting candidates.

Sept 10, 1997, no TGB meeting.

Sept. 10, 97 evening meeting report

Sept. 11, 1997

A discussion of the evaluation criteria passed out by John Fakatselis was based on the criterion developed by the 5 GHz group. This was followed by presentations of suggested techniques.

Presentation by: Dean Kawaguchi, Symbol Technologies, P802.11-97/77a

Suggests interoperability with DS and FH low rate PHYs. His suggestion is to use a FSK modulation with MOK spreading for interoperability with the FH PHYs. He did not explain how the system would switch bandwidths between the low rate preamble and the PDU.

He has experience with systems with 35 APs and 1300 stations. Wants to have interoperability with FH installed base. Need great interference rejection, for example, electronic shelf labels put out 1 W.

He suggested to use binary GFSK at 10 and 20 MCps with a deviation of 7 and 14 MHz peak to peak. With this deviation, the 10 dB bandwidth is 11 and 22 MHz. This scheme can have low rate or high rate preamble.

Presentation by: John Caferella, Microlor, P802.11-97/82

"Be all you can be", he says. That is, do the best you can to maximize throughput (don't use a low rate, interoperable preamble).

He referenced Bob Kahn, 1978 IEEE transactions about lessons learned on packet radio.

Diversity on TX by changing antennas for any retransmissions.

Higher bandwidth reduces multipath problems.

Chan Rypinski will put something on the reflector about the NTIA data.

PA efficiency can drop from 50% to 10% if you use PSK vs MSK.

Two stations operating in different nets and close to each other can use the retransmission protocol to solve the near far problem. Both stations would not be transmitting at the same time very often. They would also use different cover sequences to avoid being interrupted by the other networks.

There are 8 really good cover codes of length 16

Presentation by: Carl Andren, Harris, P802.11-97/87

Harris has a chip to implement its suggestion of QMBOK modulation. It is in the testing phase and initial results were presented. John C. asked if the 03H cover was optimum in the multipath sense.

Discussion of the PAR scope.

John F. presented the PAR 97/79 (r1). Further changes were made by the group leading to 97/79 (r2).

Motion 1 Naftali/Carl A. moved to accept 97/79-rev 2 which is the new version of the PAR.

12/0/0

Motion 1 passes

John F. went over the selection criterion derived from the 5 GHz work. Deleted range since this depends on the channel model used. Wordsmithed other stuff. Added conditions for some of the criteria.

Added definition of slot time (90% detection probability for a signal starting in the middle of the slot time, no multipath, no diversity, at sensitivity level).

Motion 2 William Roberts/Vic moved to accept the deadline for skeletal submissions on modulation schemes addressing the selection criteria as given in document 97/94 to be the meeting in November 1997

8/0/0

Motion 2 passes

The next meeting agenda goals were presented, discussed and accepted by the group. (attachment 3)

meeting adjourned

minutes prepared by: Carl Andren, Harris semiconductor.

Attachment 1.

**802.11 TGb 2.4 GHZ HIGH RATE EXTENSION
09/08/97 LONDON U.K
AGENDA**

- 1. INTRODUCTIONS**
- 2. ELECTION OF SECRETARY AND EDITOR**
- 3. AGENDA REVIEW**

- 4. REVISE AND FINALIZE 5 PAR CRITERIA**
- 5. PROJECT SCHEDULE AND MAJOR MILESTONES**
- 6. MEETINGS AND PROCESS TO DEVELOP DRAFT**

----- MON/TUES.

- 7. TECHNICAL / BRAISTORMING**
 - 7.1 PHY BASELINE (KEY PARAMETERS AND REQUIREMENTS)**
 - 7.2 RATES, SENSITIVITY, MULTIPATH/PER ETC.**
 - 7.3 MAC BASELINE**
 - 7.4 EVALUATION AND RATING CRITERIA FOR SUBMITTED SOLUTIONS**

- 8. SUBMISSIONS**
- 9. ATTEND COMMON BRAN/802 MEETING.**
- 10. NEXT MEETING GOALS/AGENDA.**

----- THURS./ FRIDAY

Attachment 2.

**2.4 GHZ HIGH RATE EXTENSION
SUPPLEMENT DEVELOPMENT PROCESS
09/09/97**

- SUBMISSION OF CANDIDATE SOLUTIONS BY MEMBERSHIP
- EVALUATION OF CANDIDATE SOLUTIONS/ SELECTION OF BASELINE APPROACH
- REQUIREMENTS AND SPECIFICATIONS DOCUMENT
- FINAL SUPPLEMENT DOCUMENT / APPROVAL PROCESS

MILESTONES	# OF MEETINGS	DATE	COMMENTS
SUBMISSIONS presented	1- 8	Nov 97	Review all approaches based on pre-defined criteria.
DOWN SELECTION & SYSTEM BASELINE	2	March 98/ -	Based on evaluation of submissions decide on: Requirements, Architecture, MAC/PHY interface, MAC.
DOCUMENT OUTLINE		March 98	
FIRST DRAFT COMPLETE	1-	May 98	
802.11 BALLOT PROCESS COMPLETE			
SPONSOR BALLOT PROCESS COMPLETE			
FINAL DRAFT TO REVCOM		12/99	

Attachment 3.

PROPOSED AGENDA GOALS FOR NOVEMBER 1997 TGb MEETING

- **PAR OPEN ISSUES.**
- **TGb SCHEDULE.**
- **PROPOSAL EVALUATION PROCESS.**
- **TECHNICAL SUBMISSIONS**
- **TECHNICAL DISCUSSIONS**
 - **COMPATIBILITY/CO- EXISTENCE**
 - **MULTIPATH (CHANNEL MODELS).**

Appendix 1 Attendance list

First name	Last name	status	Company	Communications
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Appendix 1 Attendance list

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