

May '94 MAC group report

LLC

MAC

PHY

IEEE 802.11 MAC Report May 1994

David Bagby

Unbelievable Coincidence..

- **A bunch of us just happened to be in Oshawa at the same hotel (several of us thought an 802.11 meeting would be held, but we were mistaken), so we hung around for a few days and kicked around some MAC topics for grins... here is what we talked about.**

IEEE 802.11 MAC Report May 1994

David Bagby

MAC agenda from Mar

- **DTBS improvement finalization.**
- **Complete M/P interface**
 - If not done in May schedule is in jeopardy!
 - MAC fragmentation decision
 - Windowing decision
 - Multi PHY rate impact exploration.
- **Simulation results now what simulator issue resolved.**
- **Deferred draft vs issues log cross check.**
- **MAC schedule review for progress check.**

IEEE 802.11 MAC Report May 1994

David Bagby

Monday:

- **agenda approval**
 - informal, no quorum
- **minutes approval**
 - not done, no quorum
- **Simulation group report**
 - no progress to report
- **Mac editing group report**
 - no report, no quorum, believe that decisions from March incorporated in draft.
- **Draft vs issues log cross check.**
 - Due diligence - check foundation against closed issues to identify areas for correction.
 - » hit list created - doc 94/??? (get num from vic)
 - » subjects assigned as action items
 - » results due back to editors by ?????

IEEE 802.11 MAC Report May 1994

David Bagby

Tuesday

- **Multi PHY rate impact exploration.**
 - 94/119
 - 94/115
 - Much discussion
 - no consensus achieved.

IEEE 802.11 MAC Report May 1994

David Bagby

Wednesday

- **DTBS improvement finalization (mar motions)**
 - **Motion: To add 'distrib time bounded' service to the foundation MAC and to determine by the end of the May 1994 meeting whether one or both of the TBSs will remain in the standard.**
 - » **Approved: 25-1-5**
 - » **Plenary vote: 39-0-9**
 - **Motion: To add 'priority access mechanism' to the DCF of the 802.11 MAC.**
 - » **MAC vote 17-2-9**
 - » **Plenary vote: 38-0-9**
 - **Motion: To use the mechanisms proposed in doc 58 as a basis for the "priority access method" to be included in the DCF, and to further investigate its sensitivity to relevant parameters.**
 - » **Postponed to definite time (May 94) 19-4-4**
 - » **Motion Not completed at this meeting.**

IEEE 802.11 MAC Report May 1994

David Bagby

Wednesday

- Papers 94/116, 94/121 presentation and panel discussion.
- Poll for sense of group at end of panel discussion to be reported to July plenary.
 - Dual vote notation: all voting / voting members
 - Both: 0 / 0
 - One = Current TB service 1 / 1
 - One = Dist TB service 12 / 9
 - "one" sub-total: 13 / 10
 - Abstains: 5 / 5
- rec: DTB as the one TB service.

IEEE 802.11 MAC Report May 1994

David Bagby

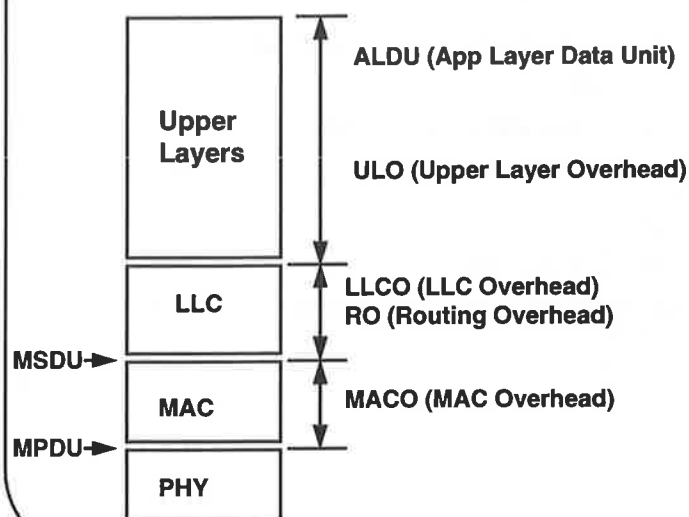
Thursday (morn)

- March MAC fragmentation decision
- Moved: 802.11 agrees to add fragmentation functionality to the MAC or a convergence layer when it is shown to be required by phy frame length limitations or performance simulations and/or empirical data.
 - Laid on table 3/9/94 with intent to discuss in joint mac/phy mtg before taking back up again in the mac group...
 - Since joint M/P after MAC mtg, was pushed to May agenda.

IEEE 802.11 MAC Report May 1994

David Bagby

The Layer Overhead Picture:



IEEE 802.11 MAC Report May 1994

David Bagby

Variable Definitions:

- **ULO: Upper Layer Overhead.**
 - MAX overhead from all known upper layers.
 - Value = 74 octets.
- **LLCO: LLC Overhead**
 - MAX overhead of LLC layers
 - Value = 8 octets.
- **RO: Routing Overhead**
 - MAX overhead to support Source Rout and Transparent
 - Value = 30 octets.
- **MACO: MAC Frame Header Overhead**
 - Size from 802.11 draft document.
 - Value automatically incorporated in calculations as draft changes.
 - Value in octets.

IEEE 802.11 MAC Report May 1994

David Bagby

Variable Definitions (all in octets):

- **ALDU: Application Layer Data Unit.**
 - Value in octets.
- **MSDU: MAC Service Data Unit.**
 - The size of the data transferred between LLC and MAC layers.
 - Value in octets.
- **MPDU: MAC Protocol Data Unit.**
 - The size of the data transferred between the MAC and PHY layers.
 - Value in octets.

IEEE 802.11 MAC Report May 1994

David Bagby

Our Requirement:

- **Determine value for MSDU.**
- **Determine value for MPDU.**

IEEE 802.11 MAC Report May 1994

David Bagby

Frag decision:

- For 802.11 MAC include fragmentation functionality.
- 12, 1, 2

IEEE 802.11 MAC Report May 1994

David Bagby

MSDU discussion:

- MSDU size:
- favorite, can live with, never
- 1.2k (min working): 0, 1, 12
- 1.5 (enet): 0, 9, 2
- 2K (fits phy info): 12, 17, 0
- 4K (token): 5, 13, 2
- note: numbers are approx value, overhead to be added
- total number in room = 17
- Recommendation is 2k.

IEEE 802.11 MAC Report May 1994

David Bagby

MPDU limits discussion:

- **The Phy supported MPDU range shall be fixed in each PHY specification. Two numbers will be speced, the “sunny” number and the “rainy” number.**
 - phy optimistic #
 - » clear day
 - and phy pessi #
 - » rainy day
- **For having this in all phy specs: 13, 0, 1**

IEEE 802.11 MAC Report May 1994

David Bagby

Active MPDU value - MIB variable

- **managed object.**
- **sets current active maximum MPDU value in use for a BSS.**
 - variable is per station.
 - value of variable is consistant accross a BSS.
 - remember the value is a maximum.
- **can be inquired.**
- **constrained to values between sunny and rainy.**
- **range limits also inquireable but not settable.**
- **rec for these: 11, 1, 1**

IEEE 802.11 MAC Report May 1994

David Bagby

Default value of “active MPDU”:

- sunny value: 8
- rainy value: 3
- Rec: Sunny value

IEEE 802.11 MAC Report May 1994

David Bagby

Who can set “active max mpdu” mib variable

- Set via mac mgt, phy can not set it:
- Vote: 11, 1, 4

IEEE 802.11 MAC Report May 1994

David Bagby

MPDU Floor:

- **A lower limit on MPDU size is set. This shall be called MPDU_floor.**
 - Any MPDU value above MPDU_floor is fine.
 - Any MPDU value above MSDU is BOTH fine AND superflous.
 - PHY proposals with MPDUs < MPDU_floor can NOT be an 802.11 phy.
 - Value is in octets.
- **vote for floor existance: 9, 0, 4**

IEEE 802.11 MAC Report May 1994

David Bagby

MPDU Floor:

- **Floor value:**

-	fav, ok, never
- 128:	5, 9, 3
- 256:	5, 11, 0
- 512:	0, 9, 4
- 1024:	0, 5, 9
- **rec = 256**

IEEE 802.11 MAC Report May 1994

David Bagby

Thursday (morn)

- **Windowing decision**
 - Dependent on fragmentation decision
 - Not enough understanding / communication on subject yet.
 - Deferred to July by group consensus
- **94/107**
- **94/106**
- **MAC report review**
 - moot, no quorum, no plenary this week, informational only...

IEEE 802.11 MAC Report May 1994

David Bagby

Other subjects pushed to July.

- **Formal Adoption of recommendations**
- **94/22 - The RT Encryption Algorithm from March**

IEEE 802.11 MAC Report May 1994

David Bagby

MAC group report

- That's all folks... See you when Micky's big hand is on the ...