Tentative MAC Minutes
Tuesday, March 12, 1996

The meeting was called to order by chairman Dave Bagby at 8:35 AM. Carolyn Heide secretary.

Goals - Process letter ballot comments and forward d3.1 to sponsor ballot.

Administration

Motion #1:	**To approve the minutes from the November (95/235) and January (96/21) MAC meetings, with the results of Motion 35 changed to 'passes' in the November meeting.**

Moved by:	Carolyn Heide
Seconded by:	Chris Zegelin

Motion 1 Discussion: none

Approved: (no nays)   *Motion #1 passes*

Agenda

Process comments; there are no papers.

Work plan, break into small groups

Simon Black, Dave Bagby and Tom Tsoulogiannis will head the small groups to address comments. Comments will be processed by priority: first, the comments that are reasons for 'no' vote, within those, first the big 'T' then the little 't' comments; then the 'yes' votes with the big T votes and then the little 't' votes. The editorials can be picked up along the way or left to last.

The may/shall/will comments that we voted to accept at plenary yesterday must be implemented as encountered.

The small groups will identify comments which need the full group to address and bring them back to the full group whenever it reconvenes.

Break to small groups 9 AM, reconvene at 1:30 PM

Brief status review per group.

Break to small groups 1:35 PM, reconvene at 4:55 PM

Brief status review per group. Specifically pointed out comments resolved that people might object to, and comments deferred. The comments and modified section text for all sections were zipped into files so people could review them overnight and come forward with objections to the resolutions.

Multirate, patents, broadcast reliability (?) identified as issues outstanding.

Meeting adjourned: 5:30 PM

Wednesday AM, March 13, 1996

The meeting was called to order by chairman Dave Bagby at 8:30 AM. Carolyn Heide secretary.

Brief status review per group.

Break to small groups 8:45 AM, reconvene at 11:30 AM

Brief status review per group.

Meeting adjourned to small group: noon

Wednesday PM, March 13, 1996

The meeting was called to order by chairman Dave Bagby at 4:50 PM. Carolyn Heide secretary.

Collection of changed comments and clause text files.

Discussion of outstanding issues:

Forcing management elements to be an even number of octets
     - Resolved to remain unchanged, as reflected in the comment resolutions

Adopting the recommendations of the clause 9 group with respect to CWmin and CWmax
     - The group here cannot come to quick resolution

Correction to shared key transaction 2 status code needs to be reflected in section 7
     - Text agreed upon and placed into section 7

Can there be more than one outstanding transmit MPDU in the DCF?
     - The group here cannot come to quick resolution

Meeting adjourned: 6:30 PM

Thursday AM, March 14, 1996

The meeting was called to order by chairman Dave Bagby at 8:30 AM. Carolyn Heide secretary.

Clause 1

Changes were yesterday circulated on disk. No 'major' changes need group discussion.

Motion #2:   **To approve the changes to Clause 1 due to letter ballot resolution.**

Moved by: Michael Fischer
Seconded by: Bob O'Hara

Motion 2 Discussion: none

Approved: 12   Opposed: 0   Abstain: 1   *Motion #2 passes*

Clause 2

Changes were yesterday circulated on disk. No 'major' changes need group discussion.

Motion #3:   **To approve the changes to Clause 2 due to letter ballot resolution.**

Moved by: Michael Fischer
Seconded by: Bob O'Hara

Motion 3 Discussion: none

Approved: 12   Opposed: 0   Abstain: 1   *Motion #3 passes*

Clause 3

Changes were yesterday circulated on disk. No 'major' changes need group discussion.

Motion #4:   **To approve the changes to Clause 3 due to letter ballot resolution.**

Moved by: Michael Fischer
Seconded by: Bob O'Hara

Motion 4 Discussion: none

Approved: 12   Opposed: 0   Abstain: 2   *Motion #4 passes*

Clause 4

Changes were yesterday circulated on disk. No 'major' changes need group discussion.

Motion #5:   **To approve the changes to Clause 4 due to letter ballot resolution.**

Moved by: Michael Fischer
Seconded by: Bob O'Hara

Motion 5 Discussion: none

Approved: 14   Opposed: 0   Abstain: 3   *Motion #5 passes*

Clause 5

Changes were yesterday circulated on disk. There was brief description of declined comments and 'major' areas of change .

Motion #6:   **To approve the changes to Clause 5 due to letter ballot resolution.**

Moved by: Michael Fischer
Seconded by: Sarosh Vesuna

Motion 6 Discussion: none

Approved: 12   Opposed: 0   Abstain: 4   *Motion #6 passes*

Clause 6

Changes were yesterday circulated on disk. There was brief description of declined comments and 'major' areas of change .

Motion #7:   **To approve the changes to Clause 6 due to letter ballot resolution.**

Moved by: Michael Fischer
Seconded by: Sarosh Vesuna

Motion 7 Discussion: none

Approved: 15   Opposed: 0   Abstain: 2   *Motion #7 passes*

Clause 7

Changes were yesterday circulated on disk. There was brief description of declined comments and 'major' areas of change .

Part of comment 34 was not addressed according to the author. That comment is still open.

Comment 35 resolution has a question mark in it - because it was passed on to clause 11, it doesn't belong in clause 7.

Motion #8:	**To approve the changes to Clause 7 due to letter ballot resolution.**

Moved by: Chris Zegelin
Seconded by: Johnny Zweig

Motion 8 Discussion:
What about comment 34? It remains open.
There is also a change in clause 11 about redefining in BSS ID in an IBSS that needs to be incorporated into clause 7.

Approved: 17   Opposed: 0   Abstain: 2   *Motion #8 passes*

Clause 8

Changes were yesterday circulated on disk. There was brief description of declined comments and 'major' areas of change .

Motion #9:	**To approve the changes to Clause 8 due to letter ballot resolution.**

Moved by: Michael Fischer
Seconded by: Chris Zegelin

Motion 9 Discussion: none

Approved: 17   Opposed: 0   Abstain: 2   *Motion #9 passes*

Clause 10

Changes were yesterday circulated on disk. There was brief description of declined comments and 'major' areas of change .

Motion #10:	**To approve the changes to Clause 10 due to letter ballot resolution.**

Moved by: Michael Fischer
Seconded by: Bob O'Hara

Motion 10 Discussion: none

Approved: 18   Opposed: 0   Abstain: 1   *Motion #10 passes*

General and Annex Clauses

Changes all made as a result of plenary motions.

Clause 11

Changes were yesterday circulated on disk. There was brief description of declined comments and 'major' areas of change .

There are a number of issues which need discussion still to close comments.

Comment 36 Discussion:

A power save poll (PSP) STA that has been asleep and awoke because it wants to send, has no sense of the state of the network in its area. There is a likelihood that the STA can sense not busy and send, thus colliding with another STA. This mechanism forces that STA to wait until it hears something or it has waited long enough that it could not collide with anything in progress.

Trying to stop a PSP STA from screwing up everyone else.

The objection is that a PSP STA will have to stay awake for a long period of time to do this, which defeats the power save they are trying to accomplish.

If they did collide they would have to stay wake even longer, but how often will that happen?

This is the this same problem as in the active scanning situation and the same solution has been applied here. The same aProbe_Delay MIB attribute is used, so that can be set low (or even zero) in any implementation if you are worried about it.

Comment 43 Discussion:

The comment says if you know have data, you have to get it. So once the more data bit indicates that there is more data for me, I should stay awake to get it. Poll once, and stay awake until I get it all. Without the change you have to poll for each data, and it says that you "shall" poll for it and stay awake until you get it all, polling for each individual one. If you must stay awake, why not just send it all with the repeated polling.

PS mechanism should allow the STA to decide whether or not it goes to get the data. The fact that there is more data is interesting to it, but it should be able to decide whether or not to go and get it. The text as is does not mandate (when it says the STA shall poll) that the continued polling to get the rest of the data must happen right away.

As is it also provides a flow control mechanism for the PS STA - the AP will not deluge it with continued data. Buffer management may be a consideration for PS-Poll STAs.

As is it is a great simplification, and allows flexibility in implementations for degree of power save and buffer management.

There are a number of people who say that accepting this comment would change there yes votes to no votes.

There is text read from the draft that says the that the STA shall stay awake until the AP indicates that there is no more data for it. This comment addresses that point, attempting to make that time as short as possible and to have that STA transmit as little as possible because it is trying to save power.

Basically, different implementations have different goals, there are two that seem incompatible here.

Proposal: allow APs to be designed to do it either way, and they are different. This is not met with favor.

Proposal: remove the shall, so you can go to sleep or not between polls as you choose.

Everyone seems to believe that the problem is ambiguous text, and that could be fixed. But we will not have time to craft the text today and still get approval on what we have done and all agree upon.

Conclusion: Back out the text that was put in because of this and leave the comment open.

Motion #11:	**To approve the changes to Clause 11 due to letter ballot resolution.**

Moved by:	Bob O'Hara
Seconded by:	Phil Belanger

Motion 11 Discussion: none

Approved: 7   Opposed: 0   Abstain: 0   *Motion #11 passes*

Clause 9

Changes were yesterday circulated on disk. There was brief description of declined comments and 'major' areas of change .

Dynamic CWmax, CWmin Issue Discussion

Many people feel that the CWmin value is not good. But moving the values into the beacon is not the right solution.

Moving them to the beacon makes for nice flexibility, but people are frightened to make a change that large at this point. The stability might be affected by stations that get out of step.

Clause 11 changes were made with the feeling that, although we may not be sure what they should be, we believe they should be fixed.

There is concern about the overlap problem - overlapping BSSs where they have different values may allow one BSS to have priority over another.

Most of the time, in the non-contentious, low traffic the whole thing is really irrelevant.

Choices here are (1) pick numbers that suite one scenario, (2) pick numbers that suite another scenario, or (3) make it changeable. Making it changeable suites all three.

There are people who feel this will change their no to a yes. This will resolve the min of 7 problem.

The change has IBSSs using fixed values and only infrastructure being dynamic. Overlapping coordinated BSSs can arrange to use the same value. The only overlap problem is uncoordinated overlapping BSSs, and there is some feeling that they don't work anyway.

The problem this is solving is the correct values for CWmin and CWmax - there is great disagreement on what are the correct values because there aren't correct values. Every scenario needs different values.

Conclusion: Back out the text that was put in because of this and leave the comment open.

Motion #12:	**To adopt the dynamic mechanism per text in edited section 6 document.**

Moved by: Johnny Zweig
Seconded by: Bob O'Hara

Motion 12 Discussion: none

Approved: 12   Opposed: 5   Abstain: 3   *Motion #12 passes*

Motion #13:	**If motion 12 is not adopted by the working group then do this: adopt static values on a per PHY basis the values FH: 15, DS: 31 IR: 63.**

Moved by: Chris Zegelin
Seconded by: Wim Diepstraten

Motion 13 Discussion:
How is the information going to be presented to the plenary? If we just say please ratify the changes in clause 9, this issue will not come up.
Call the question Bob O'Hara, Carolyn Heide (no nays)

Approved: 16   Opposed: 0   Abstain: 0   *Motion #13 passes*

Point of clarification: how to interpret the words 'not adopted' in motion 13? Should the plenary table the motion, or if the motion never gets asked, that is 'not adopted'. The mover says that agrees with his intent.

Motion #14:	**To approve the changes to Clause 9 due to letter ballot resolution.**

Moved by: Carolyn Heide
Seconded by: Bob O'Hara

Motion 14 Discussion: none

Approved: 7   Opposed: 0   Abstain: 5   *Motion #14 passes*

Goals for May meeting

- Complete processing D3 LB comments

- Simon Black will bring an updated PICS

- Michael Fischer will bring new state machines

- MAC group will send out a request for all MAC members to tell us if they believe we have made net gain in satisfaction with the D3.1 work (i.e. and informal confirmation ballot). This will be done via email (chair to email)

Meeting adjourned: 11:50 AM