

## Tentative MAC Minutes Tuesday AM, July 11, 1995

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

### Administration

Approval of May minutes 95/089a: comments none, approved by consensus.

No papers other than those registered yesterday in the working group meeting.

### Goals, set in May meeting

Send draft D1.3 for letter ballot, for approval for Sponsor letter ballot

### Operating Rules, set in May meeting

No postponing decisions. All issues will be decided this meeting. In case that can't be accomplished, consider: should sections that are incomplete at the end of the week be moved to separate clauses left undefined, so the rest of the draft can move forward.

### Ordering of Work

As always, first we things we decided to work on last meeting, then papers submitted before this meeting, then papers brought to this meeting.

We will break into small groups Tuesday AM, then get together again as a large group Tuesday PM. Note, section numbers referred to from here are draft d1.2 section numbers.

Sections 1 and 2 are done. Section 7 is being handled in the full working group. The following small sections groups will meet:

- Section 4, led by Chris Zegelin;
- Sections 3 and 5, led by Dave Bagby;
- Section 6, led by Mike Fischer
- Section 8, led by Bob O'Hara

## Tuesday PM, July 11, 1995

The meeting was called to order by chairman Dave Bagby at 1:10 PM. Carolyn Heide secretary.

Section 3: was going to fix some text, but as that submission isn't here will leave the text unfixed and let letter ballot comments bring it up.

Section 5: about 1/2 done, can be done today.

Section 4: some feel all original comments have been resolved by D1.2, others don't. There are papers to look at too.

Section 5: completely all comments that had been deferred from original section 5 comments. One more comment found in the general comments section. Straw poll on multirate removal for purposes of simplicity (marginally more in favor, almost as many abstain as in favor). Straw poll on eliminating hop dwell optimization using fragmentation (marginally more in favor, almost as many abstain as in favor)

Section 6: must break down smaller to get done.

Break back into small groups.

The meeting was called to order by chairman Dave Bagby at 3:30 PM. Carolyn Heide secretary.

### Small Group Reports

Section 3, Dave Bagby -

- can not do text improvement to updated LLC document in real time
- not needed as result of letter ballot comment, can pick up from tom s during next ballot
- editorial reference to ISO LLC document needs to be added by editors so that service primitives parameters do not appear to be undefined terms. The small group believes this is something the editors can do for d1.3 without vote.
- the editors are not so sure, so someone will check with Tom Siep before adding ISO reference.

Section 4, Simon Black -

**Motion #1:** To accept 95/142 with the exception of last sentence, third paragraph, "If multiple TIMs ... virtual bit map" of page 4, related to concatenated TIMs.

Moved by: Simon Black on behalf of section 4 group

Seconded by: Chris Zegelin

**Motion 1 Discussion:** none

Approved: 19      Opposed: 0      Abstain: 1      **Motion #2 passes**

**Motion #2:** To adopt the text from 95/139.

Moved by: Simon Black on behalf of section 4 group

Seconded by: Michael Fischer

**Motion 2 Discussion:** none

Approved: 18      Opposed: 0      Abstain: 0      **Motion #2 passes**

**Motion #3:** To change one octet to two octets as correction to section 4.3.1.2 to not limit beacon interval to 256 milliseconds.

Moved by: Simon Black on behalf of section 4 group

Seconded by: Michael Fischer

**Motion 3 Discussion:** none

Approved: 21      Opposed: 0      Abstain: 1      **Motion #3 passes**

Section 5, Dave Bagby -

**Motion #4:** To adopt 138 with additional correction identified during small group review.

**amended:** To adopt 138 with additional correction identified during small group review, and by adding an octet to IV to make IV field 4 octets long to keep byte alignment.

Moved by: Dave Bagby for section 5 group

Seconded by: Tom Baumgatner

**Motion 4 Discussion:**

**Motion #5:** To amend to add an octet to IV to make IV field 4 octets long to keep byte alignment

Moved by: Michael Fischer  
Seconded by: Tom Tsoulogiannis

**Motion 5 Discussion:**

Discussion which clarifies that in d1.2 that this field is in fact 3 bytes.

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

**Motion 4 Discussion (con't):**

Some concern about how this works in the big picture. In the MSDU it was clear that it was below .10 above our MAC. But now do things have to bubble up the layers, get decrypted, then bubble back down. It's maybe not as simple as just changing MSDU to MPDU.

There is a long discussion about whether this makes implementation in silicon or software easier due to the amount of state information that would need to be saved and restored if decryption had to be done on each fragment as it was received. At worst it seemed to be equal, at best this might be an improvement.

Rick White calls the question, seconded by Tom Baumgartner (one nay)

Approved: 14      Opposed: 0      Abstain: 7      **Motion #4 passes**

Section 6, Michael Fischer -

Defer to tomorrow AM.

Section 8, Bob O'Hara -

8.1 & 8.2 have been covered

8.3 & 8.4 left to be addressed

Bob displays the first paragraph of section "8.1.2 Maintaining Synchronization":

Each station shall maintain a TSF timer with modulus  $2^{64}$  counting in increments of microseconds. Stations expect to receive Beacons at a nominal rate. The interval between Beacons is defined by the aBeacon\_Interval parameter of the station. A station sending a Beacon shall set the value of the Beacon's timestamp so that it equals the value of the station's TSF timer at the time that the first MAC-bit of the timestampBeacon is transmitted to the PHY adjusted by adding the transmitting station's delays through its local PHY. The algorithms below define a mechanism that maintains the synchronization of the TSF timers in a BSS within 4 microseconds plus the maximum propagation delay of the PHY.

**Motion #6:** To approve the above changes to section 8.1.2.

Moved by: Bob O'Hara on behalf of the section 8 group  
Seconded by: Michael Fischer

**Motion 6 Discussion:**

We need to have a bound on the possible differences between TSF timer values. Using the first byte sent to the PHY doesn't minimize this difference, using a byte farther into the header does. Different PHYs define the end of transmission differently so that's not a good place for it. This is a logical implementation independent of PHY peculiarities.

Why 4 microseconds? Plus or minus 2 at each of the transmitter and receiver, so worst case is off by is 4.

Approved: 11      Opposed: 4      Abstain: 6      **Motion #6 passes**

Bob displays the following text modified from section 8:

## 8.1.2.3 Synchronization Timer Accuracy

The Beacon's timestamp field shall not be filled in until after the CSMA deferral on the Beacon transmission. ~~The start of the MAC frame is used as the timing reference.~~ The timestamp value in the Beacon frame shall be the value of the TSF timer at the instant that the first bit of the ~~timestamp~~ MAC frame is transmitted to the PHY adjusted by adding the transmitting station's delays through its local PHY.

Upon receiving a Beacon ~~frame~~BSS with a valid CRC and BSS-ID, a Station shall update its TSF timer according to the following algorithm: The received timestamp value shall be adjusted by adding an amount equal to the receiving station's delay through its local PHY components plus the time since the first ~~MAC bit of the timestamp~~ was received at the MAC/PHY interface. In the case of an infrastructure BSS, the station's TSF timer shall then be set to the adjusted value of the timestamp. In the case of an ad hoc BSS, the station's TSF timer shall be set to the value of the adjusted received timestamp, if the value of the adjusted timestamp is greater than the value of the station's TSF timer. The accuracy of the TSF timer shall be +/- 0.01%.

**Motion #7:** To approve the above modifications to section 8.1.2.3.

Moved by: Bob O'Hara on behalf of section 8 group  
Seconded by: Michael Fischer

**Motion 7 Discussion:**

Tom Baumgartner calls the question, Rick White seconds (no nays).

Approved: 12      Opposed: 2      Abstain: 7      *Motion #7 passes*

**Papers****Power Management in an Ad Hoc Network, P802.11-95/137, by Rick White****Discussion:**

A lot of discussion about whether or not ATIMs should be acknowledged in this scheme. The paper specifies no ack, but that is not required for the scheme success.

Some people speak generally against power management in an ad hoc network.

Some people speak against this particular scheme. Continuous monitoring is no a good basis for making judgments in a wireless environment. There is concern about whether enough consideration has been given to the instability introduced by the increased contention in the ATIM window. Increased retries may be introduced.

Rick maintains that contention during the ATIM window could limit throughput in a network where there are many stations operating in power save mode, however when there is so much traffic in the ad hoc network that this becomes a problem the stations will not be asleep.

Rick makes motion #8, but it undergoes some friendly editing first thing tomorrow.

**Adjourned: 5:45 PM**

**Wednesday AM, July 12, 1995**

Meeting called to order at about 8 AM, by chairman Dave Bagby. Carolyn Heide secretary.

## Papers (con't)

(con't) Power Management in an Ad Hoc Network, P802.11-95/137, by Rick White

**Motion #8:** That the draft text for ad hoc power management in 137 be adopted and added to the next version of the draft standard with the following changes:

- ATIMs are acknowledged. If an Ack is not received, the transmitter will execute the backoff procedure;
- ATIMs are randomized after the beacon using the backoff procedure;
- Announced frames are randomized after the ATIM Window using the backoff procedure;
- A station must implement one of the power estimation approaches defined in the paper.

Moved by: Rick White  
Seconded by: Tom Baumgartner

**Motion 8 Discussion:**

There is concern about the delay introduced by acknowledgment to ATIM when the ack is not received. Rick points out that this is no different than any other time an ack is not received.

Once again people speak against power saving modes in ad hoc networks (some against any power save provisions at the MAC layer at all), claiming it will be taken care of by higher levels when it is desired.

Straw poll - how many think that power management should not be in the domain of the MAC (about 50/50, only about half the people in the room voted).

Objections to this particular scheme: requires stations to be awake for the ATIM Window on every beacon, which may be too much awake time due to other people's traffic; ATIM Window needs to be dynamically connected to load somehow or it will decrease performance.

Another opinion is that the awake time required by this is not a significant burden, and the power saving provision has been a major goal for this committee since the beginning of time.

Tom Baumgartner calls the question, seconded by Carolyn Heide (one nay)

Approved: 4            Opposed: 4            Abstain: 6            *Motion #8 fails*

Rick summarizes that although this may not have been a perfect solution, but it is better than what we had before, which is no power save mode in ad hoc networks. We should get something in there and then fix it. No power save mode for ad hoc is a huge mistake.

**Definition of Power Management bits in Section 4, P802.11-95/143, by Wim Diepstraten**

Before Wim gets started ...

**Motion #9:** adjourn to small groups to address letter ballot comments

Moved by: Bob O'Hara  
Seconded by: Roland Fournier

**Motion 9 Discussion:**

If we do this Dave would reconvene at 11 AM.

Approved: 6            Opposed: 0            Abstain: 12            *Motion #9 passes*

Break to small groups

The meeting was called to order by chairman Dave Bagby at around 11 AM. Carolyn Heide secretary.

**Group Reports**

## Section 4, Simon Black -

Section letter ballot comments are done. Looked at some papers:

95/144 - intent of the paper is to give information for about listen interval from the station to the AP. Interval is a MIB object, and is useful in the association and reassociation requests.

**Motion #10:**                    **To add listen interval from MIB to association request and reassociation request.**

Moved by:                    Simon Black on behalf of section 4 group  
Seconded by:                Chris Zegelin

**Motion 10 Discussion:**

This gives the AP an indication of the sleep interval for a station and therefore a basis for an aging of data for that station. Provides a way to get information from the station's MIB to the AP. Value in MIB is 0 for a CAM station.

Approved: 20                Opposed: 0                Abstain: 2                    **Motion #10 passes**

95/149 -

**Motion #11:**                    **That long duration intervals in the 802.11 standard be encoded in units of 1024 microseconds, and the text changes related thereto from 149r1 be incorporated into the draft standard. (This is motion #1 from 95/149Ar1)**

Moved by:                    Simon Black on behalf of the section 4 group  
Seconded by:                Michael Fischer

**Motion 11 Discussion:** none

Approved: 19                Opposed: 0                Abstain: 4                    **Motion #11 passes**

95/140 - section 4 text is minor to the paper, section 6 changes are the important part. If that gets approved we will make the section 4 changes.

Reviewed not adopted: 95/143, 95/145, 95/147

## Section 6, Michael Fischer

All letter ballot comments processed.

**Motion #12:**                    **That the operating rules for processing responses to d1.3 and subsequent letter ballot be updated:**  
a) **to allow rejection of comments which request removal of significant functionality, but do not provide analytical, empirical, or simulation results that support the technical decision being requested, and**  
b) **allow votes of "approved with comments" for the purposes of placing into the technical record of this working group analytical, empirical, or simulation results in support (of disputed) functionality already in the standard.**

Moved by:                    Michael Fischer on behalf of section 6 group  
Seconded by:                Carolyn Heide

**Motion 12 Discussion:**

There is discussion of the goof intent of this motion but the difficulty of weighing the validity of analytical, empirical or simulation results which might be provided. Market analysis, for instance, can be somewhat subjective. It also is putting more weight on removing things from the draft than was required to get them into it in the first place. It might however cause people to think a bit more rather than just saying something is stupid so take it out.

***Motion #12 ruled out of order***

Motion is ruled out of order because it requests to change the operating rules of 802.11 which come from the chair of that group. It is not a MAC subgroup issue. The fact that the motion was made will get reported to the full working group in the MAC group report.

***Motion #13:***                    **That the text changes relating to the PCF, contained in doc 95/140 be adopted and placed into the draft standard.**

Moved by:                    Michael Fischer on behalf section 6 group  
Seconded by:                Carolyn Heide

**Motion 13 Discussion:** none

Approved: 10                Opposed: 0                Abstain: 11                ***Motion #13 passes***

***Motion #14:***                    **that the following text be added to the end of sec 4.4**  
?) Beacon – Data/end\*  
?) Data\* – ACK – Data/end\*  
?) Data\* – \*CF-Ack – Data/end\*  
?) Data+CF-Poll – Data+CF-Ack – Data/end\*  
?) Data+CF-Poll – RTS – CTS – Data – ACK – Data/end\*  
?) Data+CF-Poll – Null – Data/end\*  
**Where “Data\*” can be any of the Data sub-types,  
“Data/end\*” can be any of the Data or CF-End sub-types,  
and “\*CF-Ack” can be Data+CF-Ack or CF-Ack(no data)**

Moved by:                    Michael Fischer for section 6 group  
Seconded by:                Wim Diepstraten

**Motion 14 Discussion:** none

Approved: 17                Opposed: 0                Abstain: 3                ***Motion #14 passes***

There are incomplete pieces of connection establishment mechanism. Despite repeated request, there have been no submissions to fix or complete, so the group recommends removal (d1.2 sect numbers) as per the following motion.

***Motion #15:***                    **That the connection mechanism be removed from the draft standard, but the means by which to encode connection IDs in the Duration/ID field be reserved in order to allow the future inclusion of connection-oriented services. This involves:**  
– Removing sections 3.2.3, 4.3.2.6, and 6.3.6.  
– Modifying section 4.1.2.3 to list the coding of connection IDs as a reserved usage (exact text to be written by editors, as this section is undergoing update by the section 4 sub-group)  
– Editorial changes to other sections as needed for consistency.

Moved by:                    Michael Fischer on behalf of the section 6 group  
Seconded by:                Carolyn Heide

**Motion 15 Discussion:**

TBS is required by the PAR and has always been considered essential to the standard. By some this is seen as removing TBS support. Others suggest that TBS is a good candidate for an empty clause to be defined.

Approved: 14      Opposed: 2      Abstain: 2      **Motion #15 passes**

There will be one more motion, deferred to tomorrow AM because it's not quite ready yet.

**Section 8, Bob O'Hara**

There is a missing paper on reassociation that was expected, but the letter ballot comments were revisited by the group and they decided no action was needed.

The group made some changes to active scanning period by defining MIB variables, text to be written values to be specified.

Bob displays the following text from section 8:

**8.1.3.2.2 Active Scanning Procedure**

A station using active scanning shall use the following procedure.

For each channel to be scanned:

- a) ~~Wait until a maxPLCP\_PDU time has expired,~~
- ba) wait until CCA indicates the medium is clear,
- cb) Send Probe with Broadcast Destination, ESSID, and broadcast BSSID,
- de) ~~Clear and start Probe\_Timer\_1,~~
- ed) If CCA indicates ~~no activity~~ Probe\_Timer reaches aMin\_Probe\_Response\_Time prior to expiration of Probe\_Timer\_1, then clear NAV and Scan next channel, start Probe\_Timer\_2
- ~~Else If CCA indicates no activity before the expiration of Probe\_Timer\_1 then Clear NAV, Scan next channel:~~
- fe) When Probe\_Timer\_2 reaches aMax\_Probe\_Response\_Time expires, process all received Probe Responses,
- gf) Clear NAV and Scan next channel.

**Motion #16:** To approve the about modifications to section 8.  
**Amended by motion 17:** Point (a) is:  
 "a) Wait until a aProbe\_Delay time has expired,"

Moved by: Bob O'Hara on behalf of section 8 group  
 Seconded by: Michael Fischer

**Motion 16 Discussion:**

**Motion #17:** to amend by changing point (a) "maxPLCP\_PDU" to aProbe\_Delay.

Moved by: Wim Diepstraten  
 Seconded by: Bob O'Hara

**Motion 17 Discussion:**

Greg Ennis calls the question, seconded by Tom Baumgartner (no nays)

Approved: 17      Opposed: 1      Abstain: 0      **Motion #17 passes**

**Motion 16 Discussion (con't):**

People understand the desire not to have a probing station arrive and just blast away probes. But this change could increase scanning time dramatically. Without a value specified this is ok, but it needs argument later when that comes up. Until then thus us supportable.

Approved: 16      Opposed: 1      Abstain: 1      *Motion #16 passes*

From section 8.2.1.4, Bob displays the following descriptive text for Figure 8-4:

The following figure illustrates the AP and station activity under the assumption that a DTIM is transmitted once every three TIMs. The top line in the figure represents the time axis, with the Beacon Interval shown together with a DTIM Interval of three Beacon Intervals. The second line depicts AP activity. The AP schedules Beacons for transmission every Beacon Interval, but the Beacons may be delayed if there is traffic. This is indicated as "busy medium" on the second line. For the purposes of this figure, the important fact about Beacons is that they contain TIMs, some of which may be DTIMs.

The third and fourth lines in the figure depict the activity of two stations operating with different power management requirements. Both stations power on their receivers whenever they need to listen for a TIM. This is indicated in the figure as a ramp-up of the receiver power prior to the target beacon transmission time. The first station, for example, powers up its receiver and receives a TIM in the first beacon which indicates the presence of a buffered frame for it. It generates a subsequent PS-Poll frame, which elicits the transmission of the buffered Data frame from the AP. Broadcast frames are sent by the AP subsequent to the transmission of a Beacon containing a DTIM.

**Motion #18:**                      **To approve the above modification to section 8.**

Moved by:                      Bob O'Hara on behalf of section 8 group  
Seconded by:                      Siros Vesuna

**Motion 18 Discussion:** none

Approved: 12      Opposed: 0      Abstain: 4      *Motion #18 passes*

Bob displays the following text from section 8.4.1.1

8.4.1.1 Station Management Attributes

8.4.1.1.1. agStation\_Config\_grp

aActing\_as\_AP\_Status,

aActing\_as\_Wireless\_AP\_Status,

aAssociated\_State,

aBeacon\_Period,

aPower\_Mgt\_State,

aPower\_Mgt\_CapabilityaPassive\_Scan\_Duration,

aListen\_Interval;

8.4.1.1.2 agAuthentication\_grp

aAuthentication\_Algorithms,

aSelected\_Authentication\_Algorithm,

aAuthentication\_Handshake\_State,

aAuthentication\_State,

aMin\_Authentication\_Required;

8.4.1.1.3 agPrivacy\_grp

aPrivacy\_Algorithms,

aSelected\_Privacy\_Algorithm,

aPrivacy\_Handshake\_State,

aPrivacy\_State,  
~~aMin\_Privacy\_Required;~~

#### 8.4.1.1.4 Not Grouped

aStation\_ID  
aCurrent\_BSS\_ID  
aCurrent\_ESS\_ID  
aKnown\_APs

#### 8.4.1.2 MAC Attributes

##### 8.4.1.2.1 agAddress\_grp

aMAC\_Address,  
aGroup\_Addresses;

##### 8.4.1.2.2 agOperation\_grp

~~aNAV;~~  
~~aNAV\_max;~~  
aRate\_Factor,  
aHandshake\_Overhead,  
aSIFS,  
aPIFS,  
aDIFS,  
aRTS\_Threshold,  
~~aSlot\_Time;~~  
aCW\_max,  
aCW\_min,  
aCTS\_Time,  
aACK\_Time,  
aRetry\_max,  
aMax\_Frame\_Length,  
aFragmentation\_Threshold;

##### 8.4.1.2.3 agCounters\_grp

aTransmitted\_Frame\_Count,  
aOctets\_Transmitted\_Count,  
aMulticast\_Transmitted\_Frame\_Count,  
aBroadcast\_Transmitted\_Frame\_Count,  
aFailed\_Count,  
aCollision\_Count,  
aSingle\_Collision\_Count,  
aMultiple\_Collision\_Count,  
aReceived\_Frame\_Count,  
aOctets\_Received\_Count,  
aMulticast\_Received\_Count,  
aBroadcast\_Received\_Count,  
aError\_Count,  
aFCS\_Error\_Count,  
aLength\_Mismatch\_Count,  
aFrame\_Too\_Long\_Count,  
aTotal\_Backoff\_Time;

##### 8.4.1.2.4 agStatus\_grp

~~aMAC\_Enable\_Status;~~

aTransmit\_Enable\_Status,  
aPromiscuous\_Status;

**Motion #19:** To accept changes shown above.

Moved by: Bob O'Hara on behalf of section 8 group  
Seconded by: Chris Zegelin

**Motion 19 Discussion:** none

Approved: 11      Opposed: 0      Abstain: 1      *Motion #19 passes*

**Adjourned:** 12:15 PM

### Wednesday PM, July 12, 1995

Meeting called to order at 4:15 PM, by chairman Dave Bagby. Carolyn Heide secretary.

#### Papers

**P802.11-95/14, Michael Fischer**

This paper has not yet been distributed.

We know what's there doesn't match the rest of the draft. So why not replace it with something that matches more closely - it is better than what's there now. There are nomenclature problems with things voted in today, but those are editorial changes. There is nothing new in this paper, it attempts to capture things already decided upon.

It would take some serious time to put them on the screen and trace through them.

**Motion #20:** That the updated state machines in document 94/ 14 be adopted as an improvement to d1.2, and be incorporated into the next draft.

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

**Motion 20 Discussion:**

Despite great faith in Michael's abilities, some people have a problem with adopting something without even having seen a paper. Others say that even if they had it they wouldn't have time to read it.

Approved: 4      Opposed: 3      Abstain: 3      *Motion #20 passes*

**Section 4 & 7 Cleanup Comments, P802.11-95/141, Wim Diepstraten**

**Motion #21:** To change name of PSP mode to PS mode.

Moved by: Wim Diepstraten  
Seconded by: Mike Fischer

**Motion 21 Discussion:**

There is concern that this is more than just a search and replace change, but Greg says he'll do it.

On the side of not making the change is that there is still polling involved in the DCF power save mode. On the other side, in the PCF there is no polling, so leaving polling in the name may be confusing rather than clarifying.

Approved: 6                      Opposed: 2                      Abstain: 4                      *Motion #21 passes*

**Proposal to include a "Preferred IV" list in a Beacon frame, P802.11-95/146, Wim Diepstraten**

There is concern that this infringes on intellectual property. There is an Apple patent that covers precisely this - caching of keys.

The question is raised to whether this is new functionality. also no text for draft standard. Straw polls: Is this new functionality? (10,0). Should the group consider it anyways? (7,5).

**Chair rules** to continue on and consider this new functionality. Bob O'Hara, seconded by Rick White **appeal the ruling** of the chair. Vote to overrule the ruling (4,5,6). Consideration of this new functionality continues.

Is there text for the draft available - definition of element is all that the author feels is necessary and it is there. Some people feel that is partial text, maybe more is needed.

When the section 5 small group thought about this paper, they decided to eject it because of the patent problem, and because they feel it is going the opposite direction to what we should be doing. The level of security is dependent on how often the IV changes. The intent was to avoid holding it constant, so going the other extreme from this would be proposal would be preferred. The group thought this idea might introduce new security holes.

There us a feeling that we are going way beyond wired-equivalent privacy that was our goal. This type of thing that Wim proposes that minimize computation is a good idea.

Others feel that the IV should be changed on every payload - this is going in the completely wrong direction

**Motion #22:**                      **To adopt 95/146.**

Moved by:                      Wim Diepstraten  
Seconded by:                      Greg Ennis

**Motion 22 Discussion:** none

Approved: 2                      Opposed: 6                      Abstain: 4                      *Motion #22 fails*

**Delivery Only PCF, P802.11-95/150, Michael Fischer**

We already allow a delivery only PCF, this paper proposes making that usable by being able to tell the stations that the AP is going to do that. Also, if someone made an AP to do this, the stations should know that they can ask all they want, they will never be put onto the polling list.

**Motion #23:**                      **That the text changes to explicitly allow and to indicate the capability of a delivery only PCF, as contained in document 95/150, be adopted and placed into the draft.**

Moved by:                      Michael Fischer  
Seconded by:                      Wim Diepstraten

**Motion 23 Discussion:**

In support, not only does this convey useful information but it fixes something that is broken by letting stations know they will never get polled by this type of AP.

Approved: 9                      Opposed: 0                      Abstain: 2                      *Motion #23 passes*

Adjourned: 5:10 PM

Thursday AM, July 13, 1995

Meeting called to order at 8:15 AM, by chairman Dave Bagby. Carolyn Heide secretary.

No announcements. Reviewed report to be made to working group.

Goals for August:

- process d2.0 letter ballot comments;
- complete work on section 8;
- outline conformance statements to correspond to d1.3, flesh out to match d1.3 .

There was a discussion about sending out the draft for letter ballot after the August meeting because there are only 6 weeks between now and then, while there are 10 weeks between the August and November meetings. Although people think that's a good idea there is concern about whether or not a draft can be sent out from an interim meeting, and about whether a letter ballot has to be open from one plenary to the next.

Break into small portions of Section 8 group

Meeting called to order at 11 AM, by chairman Dave Bagby. Carolyn Heide secretary.

Section 8 Report, Bob O'Hara

**Motion #24:** To accept the changes made to the MIB in section by the section 8 working group.

Moved by: Bob O'Hara  
Seconded by: Tom Baumgartner

**Motion 24 Discussion:**  
Document 95/178 has updated text. All remaining letter ballot comments have been addressed.

Approved: 18      Opposed: 0      Abstain: 2      *Motion #24 passes*

General

**Motion #25:** That chapters 1 through 8 of d1.3 be submitted to the 802.11 voting membership via letter ballot for approval to forward for sponsor group ballot.

Moved by: Simon Black  
Seconded by: Leon Scaldeferri

**Motion 25 Discussion:**  
About sending out the draft for letter ballot - apparently you can send it out at any time. At interims if there's a quorum, or even if there isn't a quorum as long as there was a motion passed when there was a quorum instructing the interim to do so.

Approved: 16      Opposed: 1      Abstain: 3      *Motion #25 passes*

Removed from the MAC group goals for the August meeting will be the work on section 8 comments, because they got done.

There is a discussion of the ethics of voting on the next letter ballot. Voters should try not to just repeat no votes because things didn't get fixed the way they wanted. Evaluate whether things work rather than whether you particular scheme for making them work was adopted.

There is a discussion of how important ad hoc power management is to people and whether it should be discussed at the August meeting. An ad hoc ad hoc power management group is formed - Rick White, Simon Black, Carolyn Heide and Johnny Zweig. An agenda item will be on the August meeting agenda to consider the output from this ad hoc group. Possibly their proposal will be available on the FTP server before August.

Submission 95/14, which was accepted by this group without having been seen, is still not available. If it is still not available that motion accepting it cannot be made to the full working group.

**Meeting adjourned: 11:20 AM**