Tentative Minutes of the IEEE P802.11 Working Group

Interim Meeting
Leiden, The Netherlands
May 11-14, 1992

Monday, May 11, 1992, AM

The meeting was called to order at 8:42 AM, Vic Hayes, chairman IEEE P802.11[1)], being in the chair. Document organization/copying responsibilities assumed by Nathan Silberman; pigeonholing by Jack Leib, later assumed by Jim Schooler; secretary Carolyn Heide.

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1. Opening

1.1 Roll Call: All people in the room were invited to mention their names and affiliation.

1.2 Voting rights: Vic explained how you get voting rights. Voting tokens were distributed in the attendance book to be picked up by voting members during attendance list circulation.

1.3 Attendance list, Registration: The attendance list was distributed - 75% attendance according to the attendance list is required to qualify for participation at a meeting, so make sure to sign the book. The chairman drew attention to the obligation to register for the meetings (and especially to pay the meeting fee).

1.4 Logistics: Document distribution is done using pigeon holes - you will find your copies and messages in the referenced location in the expanding file folders. Special plugs are required to connect your computer to the phone for E-mail use - Vic brought some for people to borrow. Breaks at 10 and 3, endless coffee is available from 10 onward.

1.5 Other announcements: none

2. Approval of the minutes of the previous meeting

2.1 Irvine meeting, Document IEEE P802.1192/45: cannot be approved because we don't have a quorum.

2.2 Matters arising from the minutes: note document 45a which is the rescheduling of standard release dates which was done in the Irvine meeting but did not make it into the minutes. Jim noted page 6 needs correction for Hideaki's name; page 14 TRY should be just TR; pages 15 and 17 have a strange alphanumeric spelling of "functional".

3. Reports

3.1 Reports from the Executive Committee. We had a document (92/42 ET NPRM Draft Comments) for approval by the ex comm. Vic submitted and it was approved. It was agreed that the text would be expanded with assistance from attorneys and the final approval would be made by the chairmen of 802 and of 802.11. As the FCC delayed the deadline for filing of comments to June 5, work on the expansion of text was rescheduled. We will file at the new closing date.

4. Registration of contributions

Appendix 2 lists the documents relevant for this meeting. Up to docs. 92/54 were available or announced to be before this meeting.

5. Adoption of Agenda

No PHY meeting will be held on Thursday morning due to room availability. Agenda adopted with this modification.

6.0 Liaison Bodies

6.1 Reports

- ANSI T1P1

No report available.

- ETSI

It is agreed to wait until Simon Black is here

- Japan

No report available. John says RCR first draft expected in June for a connectionless service at 2.4 GHz, 10 Mbit/s spread spectrum (draft document in Japanese only).

- CCIR TG 8/1

Bill Stevens says they (the US delegation to 8/1) lobbied for having high speed data added to the service definition in the FPLMTS service document. There is a controversy because of possible conflict with CCITT duplicate work.

Discussion:
Vic: Is it a problem in keeping high speed data in the program?
Bill: Participation may be a problem because APPLE is the only interested party so far. Invites anyone who would like to participate to see him - the more the better to fire more interest in 8/1.

6.2 Establish ad-hoc groups: Bill will chair a group in a small group to come up with something to send to CCIR 8/1 expressing our interest. First meeting at 8 PM Monday.

7. Regulatory bodies

7.1 Reports

- USA

No official report available.

Discussion:
Vic: UTC filed a petition to the FCC against the NPRM of ET.
Bob Buaas: There is a letter writing campaign launched at congress, specifically the Hollings committee, to bring pressure on the FCC.
Vic: UTC particularly said the high speed spectrum should not be assigned.
John Corey: Do we need a lobby of our own?
Bob: Write your congressman.
John: Is there is coordinating function for this letter writing campaign?
Vic: Individual companies could do this. It would be hard for us to take action because we have to go through the excom. Bob: are there guidelines for letter writing?
Chandos Rypinski: Letters are more effective if specific (1) how much are the utilities going to be hurt, expertise is needed for this. (2) the utilities are beneficiaries because they will be using it too; (3) economic benefits to the country are great. Then address the method for compensating people kicked out of the spectrum. This may not happen for years. Another thing is that the usefulness of wireless LANs must be addressed. Stay away from subjects in which you are not an expert.
Bob: When writing, express your own ides, don't endorse "canned" concepts, this detracts from broadness of the appeal. Try to get your company president to sign the letter - IBM and AT&T have declined to do so.
Nathan Silberman: Europe is ahead of USA and pointing this out this might get the senators' attention.
John: In Japan standard and spectrum have been coupled and they will have a ruling before the end of 1992. A connection oriented service is in progress. CT2 product specification is ISDN compatible upward of 64 kbit/s is in their second draft (digit cordless 2nd generation). The connectionless is 2.4 GHz, available in June (referred to earlier).
Bruce Tuch: Can we get those documents? (John has them in Japanese and can provide if someone can translate). Can be obtained from RCR

- Japan

No official report (see above)

- Australia

No report available.

- Europe

Agreed to be deferred until Simon is here. Vic doesn't think the CEPT did anything yet - next meeting 2 or 3 of June.

7.2 Establish ad-hoc groups - John Corey relates that the Hong Kong Post has assigned a full time person to the spread spectrum wireless LAN licensing issues and is providing a member to a Beijing committee which addresses the issue for all of China. They are looking for input on how to write licensing for Hong Kong and the area. Singapore Telecom also has a person assigned. John thinks we should write to them to give guidance, he doesn't think they have a liaison yet.
Vic thinks we maybe need a letter to them. John and Vic will take care of that Tues. night - China and Hong Kong and Singapore.

8. WLAN Requirements

8.1 Introduction of comments

IEEE P802.11-92/50 - Functional Requirements, Version 0.2, Dave Bagby Editor

Discussion:
Ken Biba: What is the status of this document?
Vic: There is the market document which will be filed. Then there is the stringent requirements document which will be discussed here.
François Simon: Will the market document take into concern the comments? Will these be incorporated?
Vic: We decided to include comments too. Ken will you do that update?
Ken: Yes if it's not urgent. (sec: there is general agreement that it's not) It isn't, so ok.
Vic: Letter ballot input, from the previous letter ballot, has been put together by François, this is document 92/48
François: Will provide an electronic copy to Ken.
Vic: Who can be editor of the functional requirements document.
Dave: Which document - 92/53? or the market requirements document? or 92/50? or 92/40?
Vic: Two documents. (1) market requirement appendices of Ken's original - It will be updated and filed.(2) the real functional requirements for WLAN that stated in Irvine. We think Dave Bagby is the editor of this document.
Dave: Will do this because it should be a short document that requires meeting work and flying time update only. Document summary for functional requirements: 92/40 is Irvine original; 92/50 is an updated one given out as people checked in to this meeting. This document is the result of the small group assigned at Irvine; 92/53 is comments on 92/40 by Wim Diepstraten. How to proceed? Perhaps people could read it at coffee break rather than having it read to them. What is the purpose of this spoken introduction?
Vic: To briefly explain what you did and why.
Dave: Best introduction you can get is to read the first page of doc 92/50.

IEEE P802.11-92/53 - Comments on the Draft requirements document IEEE 802.11 92/40, by Wim Diepstraten

Wim introduces the document as things that were discussed at the Irvine meeting - at that time he promised to put his thoughts on paper. 92/53 is comprised mostly of E-mail sent to Dave. It gives background on what he thinks are still controversial issues on implementation rather than functional requirements. It is applicable to 92/50 as well as 92/40.

Vic: Looking for chairman for the functional requirements group. Dave will do it, but should he since he is the editor. Carolyn Heide can take the minutes for that group - Dave feels he can chair as long as he doesn't have to record, so he will be chairman.

8.2 Establish ad-hoc groups: none needed at this time

9. PHY Subgroup

9.1 Introduction of submissions

IEEE P802.11-92/54 - Frequency Hopping Spread Spectrum PHY, by Nathan Silberman

Nat introduces the document as frequency hopping requirements and specification, and at the end is an example of link calculations for a frequency hopping system.

9.2 Goals for subgroup

Is there enough interest in the PHY only meeting - 5 people, this is enough to proceed, chaired by Bruce Tuch because Larry could not make it (with apologies).

Objectives: define simple channel model and interference model; trade offs between frequency hop and direct sequence. Contribution listed above, author is not here at this moment, so that may not be done. Conformance testing specification discussion too.

It is a small group, but will continue as long as productive.

10. MAC Subgroup

10.1 Introduction of submissions

IEEE P802.11-92/51 - A Wireless MAC Protocol comparison, by Wim Diepstraten

Wim describes his document as addressing the characteristics to be compared when evaluating performance of Mac protocols and containing global analysis showing the advantages of distributed access protocols. Methodology of comparing protocol is explained while comparing 3 protocol: WaveLAN CSMA, a CSMA plus ACK version of that protocol, and the 4-WAY LBT protocol. At the end of the document are a lot of graphs comparing aspects that must be looked into when comparing protocol.

IEEE P802.11-92/52 - On Simulating MAC Protocols, by Rajeev Krishnamoorthy

Rajeev introduces his document as similar to Wim's (92/51). It looks for a common framework for comparing MACs and addresses definition of assumptions needed. Contains the results of some simulations - listen-before-talk (LBT) in particular.

IEEE P802.11-92/55 - Assumptions that limit validity in modeling listen-before-send access methods, by Chandos Rypinski

Chan introduces this document as a description of his disagreements with some of the simulation assumptions about high frequency utilization.

IEEE P802.11-92/49 - Adaptive Distribute and Centralized Coordination, A Review of Some Properties of the Hybrid Protocol, by Ken Biba

Ken says his document attempts to explicate his protocol as to how WLANs can operate collocated. It answers that pressing question: If a centralized infrastructure exists could an ad hoc network spring up - yes, and he will explain why.

10.2 Goals for group

The chairman, Dave Bagby, doesn't know what the goals are exactly, but the key issues are tied to the functional requirements. Time to talk about the MAC/PHY interface is required. Also distributed systems - what are they and what is the interface and just what work needs to be done there? Submission will be reviewed. Was going to ask the group what they feel their goals should be when they get together.

11. Adjourn for subgroup and ad-hoc meetings: at 10:15. Will meet again Tuesday afternoon after the break.

Monday PM, 11 May, 1992
Functional requirements
refer to doc: 92/63

Tuesday AM, 12 May, 1992
MAC and PHY subgroups
refer to doc: 92/62 and 92/61

Tuesday PM, 12 May, 1992
Functional requirements
refer to doc: 92/63

Tuesday, May 12, 1992, Afternoon meeting

Reconvened full Working Group on Tuesday afternoon at 5:30 PM, Jim Schuessler secretary.

0. Opening

0.1 Announcements

The chairman reminds members to please pay your meeting fee of 100 Glds.

0.2 Temporary document list update

The Attendance List has now been circulated. Please check it for accuracy.

Ken Biba's document (IEEE 802.11-92/49) has been distributed.

0.3 Agenda adjustments

Previously we agreed to wait for Simon Black's reports, so here it is now.

6.1 Liaison Bodies Report - ETSI

Simon Black reports that only subgroup meetings have occurred since our last meeting. The next plenary is the last three days of June.

7.1 Regulatory Bodies

Simon Black also reports on CEPT. CEPT Working Group FM (Frequency. Management) has given the CEPT Radio LAN project team HIPERLAN go-ahead to look at 5.15 - 5.25GHz. Currently assigned to Aeronautical authorities, but it is unused. There is high hope that this will be fully allocated to HIPERLAN.

There is CEPT T/R 10-01 recommendation for spread spectrum radio LANs. It includes set of power levels, aggregate bit rate and other general requirements.

ETSI RES 2 is defining a standard which will define type approval within this band of 2.4 - 2.5GHz.

Dave Leeson asks if there is a RES 2 draft document and how to get it. The documents are only available to ETSI members.

Simon will give a full report on RES 10 after their next meeting.

12. Reports from sub and ad-hoc groups

12.1 Requirements

Has made progress on definitions primarily and passed a motion to not put the document out for letter ballot.

12.2 MAC, report by Dave Bagby

First hour was spent on procedural issue to facilitate progress. Briefly, it attempts to put hysteresis on re-opening a previously closed issue. A history will be maintained of open and closed issues.

Covered papers from Wim Diepstraten (92/52) and Rajeev Krishnamoorthy (92/51). Ken Biba has a new document which was not presented due to his lack of presence.

A small group will meet tonight to attempt to document those things or issues that have arisen previously.

Comment on Wim Diepstraten's document: Preamble length turned out to be very important variable controlling throughput. People had very different ideas of what acceptable preamble lengths were.

Discussion:
Bruce Tuch: Is this a ratio between preamble and packet length?
Chandos Rypinski: No, it depends on the absolute number.
Wim Diepstraten: Results show preamble influences different protocols differently.

12.3 PHY

Nathan Silberman presented a paper on frequency hopping spread spectrum. They also wanted to make progress on the channel model. Motorola representative presented channel models relative to ALTAIR. They are defining the interface specification between the PHY and MAC in the form of a service specification to the MAC. Group believes the PAR does not go far enough in this area so they will extend it. They need consensus within the whole group on the environment in which the PHY should work. This has marketing implications.

Discussion:
Dave Bagby: Asks if 2.45 GHz ISM band is focus?
Bruce Tuch: Yes. One aspect is where you use it (e.g. mall)
Dave: Also likes direction toward MAC/PHY interface. Asks if "intelligence" is below this line (in PHY)?
Bruce: Discussed it but it is not addressed yet.
Dave: Thinks this might be an item for both groups together.

Dave Leeson Thinks PHY Group can provide guidance on what performance (packet success rate) the MAC can expect. This should be conveyed to the MAC group. The error rate listed in the PAR is not being met at the PHY interface. One impression is that any problem that can be handled in software should be for cost reasons. (laughter)
Bruce: Group thinks adaptive data rates are attractive, but sees problem if they go below 1Mbit/s due to 802 requirement.
Chandos Rypinski: Is there work going on to increase data rate above 1Mbit/s?
Bruce: Yes, definitely. Comments that Nathan's document is closest to concrete proposal yet.
Dave Leeson: Comments that most interfaces only deal with physical laws, we, in 802.11, have regulatory laws as well. Example is too fast a hop rate in one case. It's not just the physics folks. Regulatory environment may be more restrictive.
Dave: Did you consider passing a draft proposal by regulatory. bodies to get preliminary response?
Bruce: No, but this is a good idea. (Dave Leeson agrees.)

13. Any other ad-hoc meetings: Vic Will prepare letter with John Corey to Singapore, Hongkong and China equivalents to our FCC.

14. Adjourn for subgroup and ad-hoc groups: Adjourned at 6:10pm

Wednesday AM, 13 May, 1992
Functional requirements
refer to doc: 92/63

Wednesday PM, 13 May, 1992
MAC and PHY subgroup meetings
refer to doc: 92/62 and 92/61

Thursday AM, 14 May, 1992
MAC and PHY subgroup meetings
refer to doc: 92/62 and 92/61

Thursday PM, 14 May, 1992

Reconvened at 11:28 Vic Hayes in the chair, Carolyn Heide secretary.

0. Opening

0.1 Announcements

Carolyn: Orest Stroroshchuk, of General Motors, volunteers to help with any IR channel characterization work that anyone would like to do. Please contact him to discuss further (Phone: 416 644 6994; FAX 416 644 1911).

KC Chen: Next month there will be in Chicago, on June 14-18, an international conference on communication at which there will be a number of wireless papers presented.

Simon Black: Solicits comment on how people see the liaison role working in the future. I try to give useful information, but as the information becomes greater and greater as more work gets done, what sorts of information should be relayed and how?

Bruce Tuch: Status relaying is very useful. What exactly is the question?
Simon: How much detail?
John: Would find it useful to also know the reaction of other groups to what we are doing? How much information do you take to them and how do they react?
Nathan Silberman: The information is very useful. Will we be able to have input into these bodies?
Simon: The ETSI bodies are very closed, while we are very open. The only document that RES10 has looked at from this group is the market requirement document. I am keen to make the liaison as close as possible.
Chandos Rypinski: I very much appreciate your reports - it is the only way I have of finding out this information.
Dave Bagby: Since ETSI is very closed, could we try to get some extra privileged status with them - as opposed to actually being members.
Secretary's note - I appear to have lost some data at this point, I remember my screen behaving strangely at the time. But my general recollection of the rest of the discussion was that Simon was going to go away and write some letters to himself - Simon of one committee to Simon of another. The other thing I recall was repeated appreciation for the good job Simon does for us as liaison.

0.2 Temporary document list update - none

0.3 Agenda adjustments - none

15. Tentative meeting schedule

Date	Month	Year	Place	Type	Location	Host
06-10	July	1992	Minneapolis, MN	Plenary	Radisson Plaza South	
14-17	September	1992	Dayton, OH	Inter	TBD	USAF
09-13	November	1992	La Jolla, CA	Plenary	Hyatt Regency Hotel	
TBD	January	1993	Los Angelos area	Inter	TBD	Xircom
08-12	March	1993	Baltimore, MD	Plenary	Omni, inner harbour	
TBD	May	1993	Baltimore area	Inter	TBD	Ship Star
12-16	July	1993	Denver, CO	Plenary	Sheraton Denver Technology Center	
TBD	September	1993	TBD	Inter	TBD	Open
08-12	November	1993	W Palm Beach, FL	Plenary	Ramada Resort	
TBD	January	1994	TBD	Inter	TBD	
07-11	March	1994	Vancouver, BC	Plenary	Hotel Vancouver	
TBD	May	1994	TBD	Inter	TBD	
11-15	July	1994	Orlando, FL	Plenary	Walt Disney Swan	
TBD	September	1994	TBD	Inter	TBD	
07-11	November	1994	Irvine, CA	Plenary	Irvine Marriott	

We received invitations to host a meeting from GM to Oshawa (Ontario, Canada), LXE to Atlanta (GA), DEC to Boston area, and ICIL to Hong Kong.

15.1 Objectives for the Minneapolis, MN, meeting

Functional requirements group - Ratify the base document in the 802.11 plenary, and consider any new issues brought to the meeting.

MAC Subgroup - define MAC/PHY interface by processing issues and papers submitted; gain better understanding of time bounded services. Papers submitted on these two issues will be given priority - any other submission will only be handled only if there is extra time. Group requests joint time with the PHY group. Requests that the 802.11 plenary spend time on determining how options will be handled in the standard.

Dave: Anyone interested in automatically getting interim MAC documents should get their E-mail addresses to Dave Bagby. Preferred documentation tool is MS-word when filed to Dave; for things passed electronically Postscript is preferred.

PHY Subgroup - work on the MAC/PHY interface definition; develop and expand the PHY issues list; and presentations of the 5 submissions expected.

Tentative agenda:

	Monday	Tuesday	Wednesday	Thursday	Friday
Morning	ExCom	802.11 Working Group (subgroup organization)	joint MAC/PHY	MAC | PHY	Plenary 802
Afternoon	Plenary 802	Functional Requirements Group	MAC | PHY	MAC | PHY	
	802.11 Full Working Group			802.11 Full Working Group	
Evening	optional task group	optional task group	social | optional task group	ExCom	

15.2 Last Mailing Date

Monday May 18, or latest Tuesday for papers from this meeting.

June 8 for submissions for the July meeting. It is acceptable to get them to Dayton by June 15th, but ONLY if Vic is notified before June 8th so he can make special arrangements with his Dayton office.

13.3 Any other intermediate meetings required - none

15.4 Confirmation of September meeting - yes

16. Reports from subgroups and ad-hoc groups

16.1 MAC Group Report

Report by chairman Dave Bagby: heard Ken Biba (92/49) and Chandos Rypinski (92/55) contributions. Heard report from issues group that met Tuesday evening, added some new issues to that list. Discussed actions for next meeting. The MAC group decided not to meet Monday morning at the next plenary.

16.2 PHY Group Report

Bruce Tuch, PHY temporary chairman is not here, general input says: they did MAC/PHY issues which caused them to give a list of issues to the MAC group; They adopted the issue list operation procedure as used in the MAC group. They also talked about channel models and discussed what they want to do next meeting. The PHY group decided not to meet Monday morning at the next plenary.

17. Review of Document List

17.1 Approval of output documents - none

17.2 Destination of input documents - all input papers will be distributed to the membership.

18. Other business

18.1 Functional Requirements Issues

Free association functional issues listing brought added the following issues:

(1) How to get the requirements for the Distribution System (John Corey)
(2) Do we support ad hoc networks (Wim Diepstraten)
(3) What is an ad-hoc network (?)
(4) What is the requirement for a single channel PHY (Wim)
(5) What environments are supported (Wim)
(6) How to characterize an environment (Wim)
(7) What are the requirements for mobility (John)
(8) What are the definitions for roaming and hand-off (Wim)
(9) What are the requirements for a mixed ad-hoc and infrastructure based networks (Wim)
(10) What the inter-networking requirements (802 and non-802 systems) (Wim)
(11) Is there a need for an administration services element within 802.11 (frequency selection, BSA allocation, cell distances for example) which are not done in the CF or DSS (John)
(12) What is the channel definition (Wim)
(13) What are the requirements for conformance and what are the compatibility requirements between differing levels if there are (Wim)

François Simon will accept responsibility for editor of the functional requirements issue list.

François: How do you know what is for the functional requirements and what is for the MAC. In these above issues, we have most of them in the MAC issues list already.
Vic: Easy - if it is a what issue it is a functional requirement, if it is a how it is a MAC.
Wim: Must these issues be resolved before letter ballot of the functional requirements (whenever that may happen, at some indefinite time in the future).
Dave Bogby: Yes. I would never release documents without their issues list solved.
John Corey: The functional requirements must be cut off before we go on to architecture. A lot of these issues are going to make people rethink where this standard is going. The functional requirements must be voted on before that stage.
Jim Schuessler: I agree with you except 'letter ballot' - something funny happens to people when a letter ballot is in front of them. We need to vote it internally only.
Dave: In 802 rules what requires a letter ballot and why?
Vic: I think - a letter ballot goes only to 802.11. You can only vote no on a letter ballot only for technical reasons.
Richard Parker: Do we want people to think - this is what happens when you use a letter ballot, people start to think. Not balloting gets you only the opinion of the attendees.
Dave: That is what I want.
Wim: Lets discuss this in the next meeting with the full membership.
Bob Buaas: The way we handle voting is awkward - anyone who came to this meeting can vote, not necessarily people with background. We don't want people to impede process if they are not informed. Perhaps in the subgroups only working group members should be able to vote.
Vic: This is 802 rules - that anyone can vote in subgroups.

Jim: Two things to say. (1) feels only the draft standard should be balloted; (2) has not seen new people impeding progress.
François: What do we do about two issues lists with duplicate information?
Dave: I brought up this procedure to try to help the MAC group, I never though everyone would adopt it before we have a feel for how to make it work. In an ideal world we would not be doing requirements specifications and the MAC development at the same time. What we do is we try and do the best we can - it might make a lot of sense to keep one global issue list for 802.11 because we don't make decision in the subgroups anyway. If the MAC group presents an issue, its arguments and the decision as made in the subgroup, it is likely the plenary working group will ratify that decision.
Richard: Keep one list, mark which of the 3 groups has to handle the issue.
Carolyn Heide: I think that there should be 3 lists. There are a lot of duplicate people in the subgroups, so not a lot of duplicate work will get done. When in issue is closed on one list simply close on the other.
John: Issues that are on multiple lists must not get solved differently in different groups.
Dave: Decisions only get taken in 802.11 full working group. The functional requirements is an ad-hoc group and can decide nothing. We should have started with a blank functional requirements document and voted each definition and line in one at a time, instead of trying to get approval on a long list that will get disapproved due to any single item disliked. Now, if we can get the document as stands approved, using the issues list to get one thing added at a time is the only way to proceed.
Wim: When we started the issue list in the MAC group we decided to add anything we thought of - when there is clear overlap we could concatenate double issues into whichever list it belongs.
Bob: If the functional requirements document doesn't get approved next time maybe we will start with a blank page, and go down the list issue by issue to determine things that have to stay issues and those that can get settled and put into the document. I support watts going on here is a debate as to a procedure under which we can all operate.
François: If this group will permit me I make one list and sort it at my own discretion.
John: Getting a procedure - within 802.11 full working group we don't have anything which says we must produce a functional requirements document. All we *have* to do is produce a draft standard. We want a process we can use to get there, that all of 802.11 understands. First we have to formalize that process.
Dave: We have a formal process for dealing with issues - it is almost what I proposed to the MAC group this week. I proposed it in a submission of March (or May?) 1991. Rather than just moving that we adopt that procedure I modified it to make it less formal - a year ago we were going to use IBIS notation to keep track of issues. Then we also decided that issues must remain open between two meeting .

Motion #1: ~~**That 802.11 reaffirm its commitment to handling issues as adopted in March 1991 (doc 91/?) with the following changes as already adopted by the MAC subgroup, PHY subgroup and functional requirements subgroup:**~~ **That 802.11 modify its existing procedure for handling issues by adopting the following changes (already adopted by the MAC, PHY and Functional Requirements subgroups):**

1. use of the sample issue form in document 92/58R1 instead of IBIS notation;

2. an issue cannot be closed in the meeting at which it was opened.

Moved by: Dave Bagby
Seconded by: Robert Buaas

Motion Discussion:
Vic: we don't have a quorum (groans around the room)
Don Johnson: What was the vote approving 91/28 (or whatever the document number of the original procedure was)?
Dave: I don't remember, but it was fairly high. When this was originally adopted, we thought 2/3 vote was official and it turns out 75% is official, so we chant actually use the 2/3 vote in the working group. Whatever number we use in the subgroup is fine, 802.11 may have to use 75%.
Vic: (looks up the old minutes) The original vote was (12, 0, 4).

Bill: Any interest, no matter how minor, is appreciated. Influence is most effective if it comes from a number of countries. All of our work to date is out the USA.

19. Meeting closed at 5 PM on the noise.

[redacted]

Appendix 1
Attendance list

Name	Affiliation	Communication	voting member
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Appendix 1
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Appendix 2
Document list

92/36	Liaison ETSI STC RES-10 (Simon Black, Symbionics)
92/37	Further simulations of the hybrid MAC Protocol (Mike Smith, Symbionics)
92/49	Adaptive Distributed and Centralized Coordination (Ken Biba, Xircom)
92/50	Draft Functional Requirments version 0.2 (Edited by Dave Bagby, Sun)
92/51	A Wireless MAC Protocol comparison (Wim Diepstraten, NCR)
92/52	On Simulating MAC Protocols (Rajeev Krishnamoorthy, NCR)
92/53	Comments on the draft Requirements document IEEE 802.11-92/40 (Wim Diepstraten, NCR)
92/54	Frequency Hopping Spread Spectrum PHY (Nathan Silberman, Cal Microwave)
92/55	Assumptions that limit validity in modelling listen-before-send access methods (Rypinski, LACE)
92/56	Proposal for a structured IEEE802.11 Document plan (John Corey, Integrated Concept International Ltd)
92/57	Draft Functional Requirments version 0.3 (May 1992, Fu Req)
92/58	Issue Processing -as adopted by the 802.11 MAC subgroup, the 802.11 Functional Requirements ad-hoc group and (indirectly by) the 802.11 PHY subgroup- Including a sample MAC group issue form and a rough list of issues to create the MAC subgroup issues log (Edited by Dave Bagby, Sun)
92/59	CCIR Taskgroup guidelines (Bill Stevens, Apple Computer)