
**IEEE P802.11
Wireless LANs**

**Tentative Minutes of the IEEE P802.11 Monday, 9 November 3:00 to 6:00
Opening Plenary IEEE 802.11**

**Full Working Group
IEEE 802 Plenary
Hyatt Regency Albuquerque, Albuquerque, NM
8 to 13 November 1998**

Monday, 9 November 3:00 to 6:00 Opening Plenary IEEE 802.11

- 1 **Opening Meeting called to order by:** Vic Hayes at 3:15 PM, Agenda of 52nd session of 802.11 is in doc.:IEEE P802.11 11-98/. George Fishel, Secretary¹⁾, is present and ready to take the notes.
- 2 **Objectives for this meeting:**
 - prepare 802.11a for ballot
 - process 802.11b ballot results
 - prepare PAR for WPAN
 - review Request for new Study group on Broadband Wireless
 - if needed: review of 802.11 rev for re-submission
- 3 **Roll Call:** People in the room were invited to introduce themselves by name and company. There were 72 people in the room.
- 4 **Voting rights:**
 - 4.1 Participation in debates, moving and seconding, is only permitted by voting members, in all 802.11 meetings (at all levels). The subgroup chairs may permit observers to participate in debates.

^{1)T} The officers of the Working Group are:

Mr. VICTOR HAYES
Chairman IEEE P802.11
Lucent Technologies
Phone: +31 30 609 7528
Fax: +31 30 609 7556
E-Mail: v.hayes@ieee.org

Mr. GEORGE FISHEL
Secretary IEEE P802.11
AMP Inc.
Phone: +1 717 810 4645
Fax: +1 717 810 4655
E-Mail: grfishel@amp.com

Mr. BOB O'HARA
Editor IEEE P802.11
Informed Technologies Inc.
Phone: +1 408 986 9596
Fax: +1 408 727 2654
E-Mail: bob@informed-technology.com

Mr. STUART KERRY
Vice-Chairman IEEE P802.11
OK-Brit
Phone: +1 408 267 4680
Fax: +1 408 267-4680
E-Mail: stuart@ok-brit.com

Mr. AL PETRICK
Co-Vice-Chairman IEEE802.11
Harris Semiconductor
Phone: +1 407 729-4944
Fax: +1 407 724-7886
E-Mail: apetrick@harris.com

Mr. JOHN FAKATSELIS
Chair IEEE802.11-TGb
Harris Semiconductor
Phone: +1 407 729 4733
Fax: +1 407 724 7886
E-Mail: Jfakat01s@harris.com

Mr. DAVE BAGBY
Chair IEEE P802.11-MAC group
3COM Corporation
Phone: +1 408 326 3762
Fax: +1 408 326 8880
E-Mail: david_bagby@3com.com

Mr. DEAN KAWAGUCHI
Chair IEEE P802.11-PHY group
Symbol Technologies Inc.
Phone: +1 408 369 2629
Fax: +1 408 369 2740
E-Mail: deank@psd.symbol.com

Mr. NAFTALI CHAYAT
Chair IEEE802.11-TGa
BreezeCom, Inc.
Phone: +972 3 645 6262
Fax: +972 3 645 6290
E-Mail: naftalic@breezecom.co.il

-
- 4.2 Voting at the working group level is by voting members only. Chair may permit observers to participate in debate.
 - 4.2.1 To become a voting member:
 - 4.2.1.1 Participate in at least 2 out of 4 consecutive plenary meetings. Voting rights start at third meeting.
 - 4.2.1.2 Participation in at least 75% in meetings, in the room
 - One interim may be exchanged for a plenary
 - Voting members will get a token to be used at votes
 - 4.2.1.3 All members have voting rights at task group meetings
 - 4.2.2 Voting rights can be maintained:
 - 4.2.2.1 By participation in 2 plenary meetings within 4 consecutive plenary meetings
 - 4.2.2.2 One interim may be substituted for a plenary
 - 4.2.3 Voting rights may be lost:
 - 4.2.3.1 After failing to pay the conference fee
 - 4.2.3.2 After missing two out of three consecutive letter ballots
 - 4.3 Current state of member status:
 - 4.3.1 Voting members (86) at the beginning of this meeting
 - 4.3.2 Aspiring voting members (22)
 - 4.3.3 Nearly voting members (59)
 - 4.4 Attendance List, Registration
 - 4.4.1 Administration: The attendance list was circulated, Richard Pain supervising - 75% attendance according to the attendance list is required to qualify for participating in the meeting as a whole, so make sure to sign the book. Copies of the attendance list are handed out before the end of each meeting.
 - 4.4.1.1 Important for administration of voting rights that the attendance book is used properly.
 - 4.4.1.2 Sign per meeting (morning, afternoon, evening). Do not sign ahead.
 - 4.4.1.3 Place initials. Do not cross or underline. You must attend the session after signing.
 - 4.4.1.4 Circle the letter corresponding to the meeting you attend when signing (F=full 802.11, P=PHY, M=MAC group).
 - 5 Registration:** You pay full plenary costs if you attend more than ½ hour of any meetings for the week. The fee is \$300 on-site or \$275 advanced registration for plenary. This will be the fee for this session and banquet on Wednesday. Payment will be handled at the IEEE desk on the second floor of the hotel. All attendees pay by credit card. Failure to pay causes loss of credit for voting rights and your name will be added to the deadbeat list.
 - 6 Check E-mail addresses in the book:**
 - 6.1 Some addresses have been struck, or have a \$-sign added to the right - those received complaints from the reflector
 - 6.2 Please strike your e-mail address if you do not use it. Mark bulk e-mail with YES if your email server allows long email files and you want to receive meeting documentation in this manner.
 - 7 Logistics:** Electronic distribution is the method of making documents available Ten copies will be made available for those without computers.
 - 7.1 Harry Worstel will manage Copying and collection of files. Cherry Tom assists in arranging documents. Harry has files on Flash PCMCIA card or on disk. Before a submission is presented, a document number must be assigned by Harry and a file copy on diskette in Office 95(Word 6.0, Power Point 4.0 or Excel 95) submitted using the 802.11 templates for record and distribution.
-

- 7.2 Coffee breaks at 10 AM and 3 PM. Noon to 1:00 PM lunch, printing is available in the hotel 802.11 office.
- 7.3 Document distribution: The primary dissemination of documentation is via electronic file distribution. However three (3) mediums will be used. They are: a) 802.11 network b) flash, memory card, and c) diskettes.
- 7.4 All files must use the IEEE802.11 templates for word documents and PowerPoint. Vic Hayes updated the template for PowerPoint files.
- 8 IEEE Patent Policy** Vic Hayes, 802.11 chair explained the IEEE Patent Policy as per Clause 5 of the IEEE Standards Bylaws and per Clause 6.3 of the IEEE Standards Operations Manual. He specifically asked for notification from members of patents applicable to the Published standards or draft standard and patent holders submit the requested statement.
- 9 Individual Representation:** All attendees are representing themselves as individuals and not companies and/or any special organization.
- 10 Anti-Trust Laws** Discussion of price is disallowed in 802.11 sessions due to the threat of price fixing. Price fixing discussions are governed by Anti-Trust Laws and are illegal.
- 11 Other announcements**
- 11.1 Volunteers needed for the preparation of the mailing on Thursday evening. Several people volunteered.
- 12 Recognition:** No input at this time
- 13 Approval of the minutes of previous meetings:**
- 13.1 Minutes of the La Jolla meeting approved 11-98/. Minutes available on the flash card, web site and the server.

MOTION #1 : to approve the meeting minutes from as modified in document 11-98/284La Jolla meeting, Moved by: John Fakatselis, Seconded by: Matthew Shoemaker

No discussion on the motion.

Motion on the floor to vote.

Motion is carried 35-0-3

14 Reports:

14.1 of the SAB meeting

14.2 of the Monday ExCom meetings

14.2.1 Report by Vic Hayes on the ExCom meeting on Monday morning.

14.2.1.1 Student reduced meeting fees

14.2.1.2 Short ballots of either 31 or 40 day electronic ballots only. ExCom will have meeting later in the week.

14.2.1.3 Final report Utrecht meeting

Motion #2: To approve the final report for the Utrecht meeting. Motion by Harry Worstel. and seconded by: Stuart Kerry.

No discussion on the motion.

Motion on the floor to vote.

Motion is carried 33-0-1

14.2.1.4 Final report Westford meeting

- 14.2.1.4.1 Approval of minutes for Westford will be postponed until Wednesday plenary, as recommended by Vic Hayes, Chair. This will give the body time to review the final draft
- 14.2.1.5 Letter ballot 14
- 14.2.1.6 Letter Ballot Report by Vic on letter ballot 15. The vote has failed at this point. Vic will accept votes until 7:00 PM
- 14.3 Report by Vic on letter ballot 14. Some members sent ballots 1 day late and will not be counted but a motion was entertained to allow those that were late to maintain voting rights.

Motion #3: To allow those that were within 24 hours of the deadline for the vote to maintain voting rights. Motion made by Stan Reible and seconded by: John Fakatselis.

No discussion on the motion.
Motion on the floor to vote.
Motion is carried: 28-3-11

15 Review of Contributions: The list of document submissions was reviewed by Vic Hayes.

15.1 98/ through 98/

16 Unfinished business:

17 New Business:

Motion #4: to disapprove the proposed parallel meeting of TGa and TGb made by Harry Worsted and seconded by Cherry Tom

Motion #4 fails: 9-16-8

17.1 Adoption of Agenda

Motion #5: to adopt the agenda contained in document IEEE 802.11-98/347r1. Motion made by: Ken Clemens and seconded by: Bob O'Hara

Discussion on the motion.
Motion on the floor to vote.
Motion passes: 17-3-2

The Plenary *continued* with the modified agenda, next agenda item was Unfinished Business.

19 Unfinished Business:

19.1 TGa report by Naftali Chayat and the following motions were presented:

Motion #6: To add the 9 Mbit/s rate to the motion made by Naftali Chayat and seconded by: Hitoshi Takanashi

Motion passes 23-1-11

Motion #7: To accept an approved version of the TGa document Naftali Chayat/Richard Van Nee

Motion Passes 25-0-10

- 19.2 Naftali continued with the report on the negotiations with BRAN
- 19.3 TGb meeting report by John Fakatselis No meeting today.
- 19.4 Study Group WPAN Ian Gifford report on the events of the WPAN
- 19.5 802.11rev State Diagrams Report by

20 New Business

- 20.1 LB14 Disposition of votes received late
- 20.2 LB15 Extension of closing time due to technical problems
- 20.3 Proposal for change of 802 Operating rules
- 20.4 FCC filing re Lighting devices

- 20.5 Petition HomeRF group to widen FH band
 - 20.6 New IEEE Publication to keep up with regulatory changes
 - 20.7 Report by Al Petrick on the LMDS tutorial that will be presented
- 21 Meeting adjourned for the day by Vic Hayes at 5:35 PM and gave the last 20 minutes to TGa for a micro meeting**

Wednesday, 11 November 1:00 to 6:00 PM Full WG IEEE 802.11

- 22 Meeting called to order by Vic Hayes at 1:15 PM and George Fishel, Secretary was ready to take the meeting notes.
- 23 Introductions of members present. A total of 66 people were present.
- 24 Document distribution Harry gave a report on the documents on the server.
- 25 Old Business
 - 25.1 Approval of minutes from Westford
- 26 New Business
 - 26.1 TGa meeting tonight at 8:00 PM
- 27 Approval of the Agenda for the day.

Motion #8: to approve the agenda for the day as modified. Motion Naftali Chayat second Anil Sanwalka

Motion Passes: 39-0-0

28 Announcements:

- 28.1 Documentation and the format of submissions. Vic has stated that the submissions are not set up correctly and if submitters do not have document in order they will be able to present. The headers and footers must be in place and the format must be correct submitted in the correct version of Word, Power Point, XL.
- 28.2 A request was made
- 28.3 Approval of the LaJolla minutes

Motion #9: To approve the minutes of the Westford meeting motion by John Fakatselis seconded Tim Blaney

Motion passes: 20-0-7

29 Old Business:

- 29.1 Report from TGa by Naftali Chayat

Motion #10 to accept changes to as proposed TGa document Richard Van Nee/Hitoshi Takanashi

Motion passes: 32-0-6

Motion # 11 the stuffed bits will be generated Naftali Chayat / Richard Van Nee

Motion Passes 23-0-10

Motion # 12 to approve the text changes as amended in the Tuesday session. Naftali Chayat / Hitoshi Takanashi

Motion Passes: 22-0-11

- 30.1 Report from TGb by John Fakatselis

- 30.1.1 Reported on the comment resolution for the TGb ballot.
- 30.1.2 Re-circulation ballot in progress a discussion on the rules on this process.
- 30.1.3 Report by Phil Belanger on comment resolution. He contends the new PHY in TGb has six different options that prevent interoperability. He made the following motion:

Motion # 13: Remove the optional HR/DSSS/FH mode of the HR/DSSS PHY before submitting the IEEE 802.11b draft for sponsor ballot motion by: Phil Belanger seconded by: Bob O'Hara.

Discussion followed:

Motion # 14: to call the question on Motion # 13 made by: Phil Belanger seconded by: John Fakatselis.

No disagreement to calling the Question is called on motion # 14.

Vote on the Floor:

Motion # 13 fails 16-9-14 Need 75% on technical motion.

Point of order that we need one solution per application and that this looks like multiple solutions to the same par

without answering the 5 questions.

The chair ruled the extension to the high rate HR/DSSS/FH PHY is not a second PHY and the session was not out of order.

30.2 Report By Ian Gifford on the WPAN activity

Motion # 15 to have the 802.11 working group endorse the WPAN SG's decision to create an 802.11 MAC Lite & corresponding PHY layers based on a derivative of the 802.11 MAC & PHY layer. Motion made by: Ian Gifford and seconded Tim Blaney

No vote taken at this time.

Motion # 16 to amend motion # 15 to the present text by Naftali Chayat and seconded by: Bob O'Hara to the present text.

Motion # 16 passes by unanimous consent.

Motion #17 to amend motion 15 again to the following Made by: Tom Tsoulogiannis and seconded by John Fakatselis.

Discussion Followed on Motion # 17

Chair limits the time for debate to 2 min by unanimous consent.

Motion # 18: to call the Question on motion # 17 Question Called by unanimous consent.

Motion #17 passes: 18-12-17 Motion #15 amended to the following:

Amended Motion # 15 to have the 802.11 working group endorse the WPAN SG's decision to create an 802.11 MAC Lite & corresponding PHY layers based on a interoperable derivative of the 802.11 MAC & PHY layer.

Motion # 19 To postpone action on motion # 15 Tim Blaney/ Ian Gifford

Motion #19 Fails 10-17-11

Vote on amended Motion # 15

Amended motion # 15 passes 33-6-5

Motion # 20 To extend the timeframe for the WPAN to the next Plenary with the goal of assuring continuity and to submit the PAR to our sponsor at the January 99 interim meeting Ian Gifford /Tim Blaney

Motion # 20 passes 34-0-1

Motion # 21 move to recommend that the 802.11 Working Group investigate the need for co-existence with other Wireless Network Systems Ian Gifford/ Tim Blaney

Motion# 22 to call the question on Motion # 21 Passes by unanimous consent.

Vote on Motion #21

Motion Passes 32-0-2

30.3 Report on RevCom by Bob O'Hara

Straw vote

0-14-12

30.4 FCC Filing Report by Jim on the NPRM on lighting controls at 2.4 GHz

Motion # 23 Move to approve the draft text of the document to the FCC Doc # IEEE 802.11-98/390r1 Don Johnson and Jim Zyren

Motion # 23 Passes 29-0-3

30.5 Proposed Rule Change proposal to ExCom presentation by Al Petrick.

Motion # 24 to adopt the proposed text as presented by: Al Petrick and Seconded by: Stuart Kerry

Vote on Motion # 24

Motion Passes 32-0-3

30.6 Meeting in Japan update Presentation.

Straw vote to go to Japan 33-0-1

Vote on meeting locations 36 for May 10 and 2 for the later date.

30.7 Demo of the SDL simulator

30.7.1 This is being used to correct the state diagrams

31 Adjourn to Study groups at 4:50 PM

Thursday, 12 November 3:00 to 6:00 PM Full WG Closing Plenary of IEEE 802.11

31 The closing plenary was opened by Vic Hayes at 3:05 PM and George Fishel, Secretary was ready to take notes.

32 Announcements:

32.2 Harry reported that the documents are still coming in that are not in the correct form. All members that are making presentations should work to have complete documents.

33 Revised documents List:

33.2 Harry reports that he thinks he has all of the documents for today. Please make sure that all presenters have documents on the flash disk.

34 Attendance List :

34.2 Make sure that the information on this list is correct.

35 Agenda Additions:

Motion #25 to approve modified agenda. Motion by: Anil Sanwalka Seconded by: Richard Pain

Vote on the floor

Motion # 25 approved 38-0-0

35 TGb report by John Fakatselis.

35.2 Report # 374 is the document containing the TGb report.

35.3 Gave a report on comment resolution that was received on the TGb letter ballot.

35.4 John reported that they had seven NO votes that had comments that were addressed and changed their NO votes to YES. This provides a vote of 75% approval and ballot # 15 should be approved.

Motion # 26: Motion to accept the comment resolution on their entirely as reviewed and/or presented and agreed upon and asked the plenary for approval of these resolution as in document 98/405 as amended to adopt the new text provided to the editor to make the MAC changes John Fakatselis/ Ken Rollins

Vote on the floor:

Motion approved 32-0-6

Motion # 27 For the editor of TGb to include the resolutions in the draft text as given in Doc. 98/405 and send the updated draft for reconfirmation WG letter ballot via email. John Fakatselis/ Harry Worstel

Motion #27 to vote on the floor:

Motion carries 30-0-4

Motion # 28: To empower the interim meeting to resolve comments, update the draft and issue a letter ballot to submit the draft to sponsor ballot. Tom Tsoulogiannis/ John Fakatselis

Discussion followed;

Motions passes 31-0-6

36 Report on TGa by Naftali Chayat

Motion # 29: to approve the TGa motions Naftali Chayat/ Richard Van Nee

Motion approved

31-0-6

Motion # 30 to change the channel spacing Naftali Chayat/ Richard Van Nee

Motion approved

31-0-6

Motion # 31 to send the TGa draft Richard Van Nee/Hitoshi Takanashi

Motion approved

36-0-0

Motion # 32 to empower the interim Naftali Chayat/ Hitoshi Takanashi

Motion approved

35-0-1

36.2 Richard Pain presented a draft letter to ETSI BBAN

Motion # 33 to accept document 98/402 to be issued to STSI BRAN Naftali Chayat/Richard Van Nee

Motion # 33 approved 30-0-4

37 Report on the WPAN activity by Ian Gifford and Bob

37.2 Bob gave a report on the interoperability study and some definitions.

37.3 A chart was presented on this subject by Bruce Kraemer. Bruce presented an additional chart that proposed 5 classes of interoperability.

Motion # 34 to submit the WPAN PAR 98/162-r7 and the 5 criteria 98/161r4 to WG letter ballot for approval to submit to ExCom Bob Heile/ Bruce Kraemer

Motion was tabled at the request of the chair until copies of documents could be circulated to members.

38 Report from RevCom by Bob O'Hara

Motion # 35 to empower those people who volunteer to participate in a ballot resolution group to resolve any comments received from the sponsor default conformation ballot and to either submit the revised 802.11rev draft to the IEEE RevCom or to another sponsor default conformation ballot. Bob O'Hara/Victoria Poncini

Motion # 35 passes 24-0-5

Motion # 36 To empower the interim meeting to submit a par for supplement to IEEE 802.11 to ExCom. Bob O'Hara/Victoria Poncini

Motion # 36 passes 32-0-0

Motion # 34 to submit the WPAN PAR 98/162-r7 and the 5 criteria 98/161r4 to WG letter ballot for approval to submit to ExCom Bob Heile/ Bruce Kraemer

Motion #34 passes 24-0-5

39 Rules change report given by Vic Hayes.

39.2 Vic has a proposal that he will submit to ExCom that will allow for shorter electronic ballot.

39.3 Vic asked if the group had any questions.

39.4 Discussion followed on how a voter could confirm that a ballot was received.

40 Report on ITU-R activity by George Fishel:

40.2 Document 98/381r1 contains the test of the document presented to the ITU-R JRG 8a-9b

41 Next Meeting:

41.2 Walt Disney Village Grosvenor Resort, Orlando FL, 11 to 15 January 1999.

41.3 Objectives for next meeting

41.4 Resolve comments on to LB response and resubmit draft standard to WG

41.5 Submit WPAN PAR to ExCom

41.6 Submit a supplemental PAR to ExCom

41.7 Will be conducted the week of January 11th and will include the Nwest people and will be in Orlando FL.

41.8 A cost of \$200 will be assessed each participant as shared meeting expense.

41.9 Interim meeting in September 13 to 17 1999 will be at the Hilton In Santa Rosa CA. A straw ballot was taken to see how many would attend the Santa Rosa meeting. 39-0-0

42 Meeting concluded at 5:28 PM.

Respectfully submitted to IEEE 802.11 by the Secretary, George Fishel, AMP Incorporated.

Tentative schedule for future meetings**1999**

Jan 11-15 - Lake Buena Vista, FL, Interim (Harris)

March 8-12 - Hyatt Regency, Town Lake, Austin, TX, Plenary

May 10-14 - Shinagawa? Prince Hotel, Tokyo, Japan, Interim (NTT, Clarion, NEC)

July 5-9 - Queen Elizabeth, Montreal, PQ

Sept 13-17 - Hilton, Santa Rosa, CA, Interim (Alantro)

November 8-12 - Hyatt Regency, Kauai, Koloa, HI, Plenary

2000

January TBD - Israel?, Interim (Breezecom)

March 6-10 - Hyatt Regency, Albuquerque, NM, Plenary

July 10-14 - Hyatt Regency La Jolla, San Diego, CA, Plenary

November 6-10 - Hyatt Regency, Tampa, FL

Attendance List

Full name	att. %	memstatus	company	phone	e_mail
Dr. Reza Ahy	75	voter	BNA	+1 650 961 9900	rahy@earthlink.net
Mr. Carl F. Andren	100	voter	HARRIS Corporation	+1 407 724 7535	candren@harris.com
Mr. Shigeyuki Asami	100	aspirant	Japan Radio Co Ltd	+81 422 45 9231	asami@lab.jrc.co.jp
Mr. James R. Baker	100	voter	Nortel Networks Inc.	+1 925 737 1646	jbaker@baynetworks.com
Mr. Kevin M. Barry	100	aspirant	SITA	+1 516 244 4345	kbarry@sitaaps.org
Mr. Phil Belanger	99	voter	Aironet Wireless Communications Inc.	+1 330 664 7953	pbela@aironet.com
Mr. Timothy J. Blaney	75	voter	Commcepts	+1 530 273 3482	tim@wireless-network.com
Mr. Richard C. Braley	40	aspirant	Federal Express Corporation	+1 901 375 6535	rcbraley@fedex.com
Mr. Duane Buddrius	100	nonvoter	Solectek Corporation	+1 619 450 1220 X3011	dbuddriu@solectek.com
Dr. Greg Caso	100	nonvoter	Escape Communications, Inc.	+1 310 318 2983	gcaso@escapecom.com
Mr. Naftali Chayat	100	voter	BreezeCom	+972 3 645 6262	naftalic@breezecom.co.il
Mr. Ken Clements	100	voter	Innovation on Demand, Inc.	+1 408 353 5027	Ken@InnovationOnDmnd.com
Mr. Michael S. Dollard	45	nonvoter	Aironet Wireless Communications Inc.	+1 330 664 7358	mdoll@aironet.com
Mr. Richard Eckard	100	voter	GTE Laboratories Inc.	+1 781 466 2780	reckard@gte.com
Mr. Greg Ennis	100	voter		+1 408 358 5544	gennis@mindspring.com
Mr. John Fakatselis	100	voter	HARRIS Corporation	+1 407 729 4733	jfakat01@harris.com
Mr. George Fishel	100	voter	AMP Inc.	+1 717 810 4645	grfishel@amp.com
Mr. John Fisher	100	voter	Proxim Inc.	+1 650 526 3703	johnf@proxim.com
Mr. Ian Gifford	100	voter	AMP-M/A-COM Div.	+1 978 442 4650	giffordi@amp.com
Mr. Tim Godfrey	100	voter	Choice Microsystems	+1 913 706 3777	tgodfrey@choicemicro.com
Dr. Steven D. Gray	100	aspirant	Nokia Research Center	+1 972 894 4422	steven.gray@research.nokia.com
Mr. Jan Haagh	90	voter	Lucent Technologies Nederland	+31 3060 97464	haagh@lucent.com
Mr. Kei Hara	100	voter	Silicon Dynamics	+1 408 245 6600	hara@sidynamics.com
Mr. Victor Hayes	100	voter	Lucent Technologies Nederland	+31 30 609 7528	vichayes@lucent.com
Mr. Robert D. Hear	30	nonvoter	Contec Info Systems	+1 401 739 5800X352	bhear@comtecis.com
Mr. Allen Heberling	100	nonvoter	Eastman Kodak, Co	+1 716-588-1939	heberlin@kodak.com
Mr. Robert Heile	100	voter	GTE Internetworking Technologies	+1 617 873 4835	bheile@bbn.com
Mr. Juha Heiskala	100	voter	Nokia Research Center	+358 9 4376 6812	juha.heiskala@research.nokia.com
Mr. Kazutoshi Hirohashi	100	nonvoter	HITS	+81 462 77 9464	mumu@hits.co.jp
Mr. Frank Hui	11	nonvoter	Advanced Communication Devices Corp.	+1 408 433 9898X115	frank@acdcorp.com
Mr. Donald C. Johnson	100	voter	WLAN Consulting Inc.	+1 937 434 8389	johnsdb@aol.com
Mr. Tal Kaitz	99	aspirant	BreezeCom	+972 3 6456273/262	talk@breezecom.co.il
Mr. Mika Kasslin	100	aspirant	Nokia Research Center	+358 9 4376 6294	mika.kasslin@research.nokia.com
Mr. Dean M. Kawaguchi	100	voter	Symbol Technologies Inc.	+1 408 369 2629	deank@psd.symbol.com
Mr. Stuart J. Kerry	100	voter	OK-Brit	+1 408 267 4680	stuart@ok-brit.com
Dr. Amarpal Khanna	11	nonvoter	Hewlett Packard	+1 408 970 3108	paul_khanna@hp.com
Dipl. Ing. Jamshid Khun-Jush	99	nonvoter	Ericsson Eurolab Deutschland GmbH	+49 911 5217 260	jamshid.khun-jush@eedn.ericsson.se
Mr. Patrick Kinney	100	voter	Intermec Technologies Corp. (Norand)	+1 319 369 3593	kinneypw@norand.com
Mr. Duncan Kitchin	100	nonvoter	Symbionics	+44 1223 421025	dmc@symbionics.co.uk
Dr. Steven Knudsen	99	aspirant	WiLAN	+1 403 207 6321	stevenk@wi-lan.com
Mr. Bruce P. Kraemer	100	voter	HARRIS Corporation	+1 407 729 5683	bkraemer@harris.com
Mr. Jim Kubinec	75	nonvoter	Advanced Micro Devices	+1 408 749 4949	jim.kubinec@amd.com
Mr. David S. Landeta	100	nonvoter	HARRIS Corporation	+1 407 729 5540	dlandeta@harris.com
Dr. Jim Lansford	60	nonvoter	Intel Corporation	+1 405 377 6170	jim.lansford@intel.com

Attendance List (2)

Full name	att. %	memstatus	company	phone	e_mail
Mr. James S. Li	80	voter	Institute for Information Industry	+886 2 564 3588 X147	jamesli@iii.org.tw
Mr. Stanley Ling	100	aspirant	Alantro Communications	+1 707 521 3071	sling@alantro.com
Mr. Brian Markwalter	100	nonvoter	Intellon Corporation	+1 352 237 7416	brian.markwalter@intellon.com
Mr. Nobuo Matsuo	100	nonvoter	Matsushita Electric Works R&D Lab Inc.	+1 650 938 6639	mat@ca.mew.com
Dr. Akira Miura	100	voter	AJM Consulting Company	+1 541 338 0750	miura_akira@msn.com
Mr. Sanjay Moghe	11	nonvoter	ADC Telecommunications	+1 612 946 3522	anjay_moghe@adc.com
Dr. Masahiro Morikura	100	voter	NTT Wireless Systems Labs.	+81 468 59 3132	morikura@mhosun.wslab.ntt.co.jp
Mr. Robert W. Mortonson	11	nonvoter	Boeing Information, Space & Defense Systems	+1 281 336 4148	mortonson@boeing.com
Mr. Lawrence Moss	45	nonvoter	Telelogic	+1 609 520 1935	larry.moss@telelogic.com
Dr. Richard van Nee	100	voter	Lucent Technologies Nederland	+31 30 609 7412	vannee@lucent.com
Mr. Erwin R. Noble	100	aspirant	Telxon Corporation	+1 281 719 1955	enobl@telxon.com
Mr. Bob O'Hara	100	voter	Informed Technology Inc.	+1 408 986 9596	bob@informed-technology.com
Dr. Tomoki Ohsawa	100	voter	NEC Corporation	+81 471 85 6732	ohsawa@ptl.abk.nec.co.jp
Mr. Richard H. Paine	100	voter	The Boeing Company	+1 425 865 4921	richard.h.paine@boeing.com
Mr. Roger Pandanda	100	voter	MCS Corporaton	+1 619 558 9300	pandanda@mcsc.com
Mr. James Patella	75	nonvoter	Intellon Corporation	+1 352 237 7416X257	james.patella@intellon.com
Mr. Al Petrick	100	voter	HARRIS Corporation	+1 407 729 4944	apetrick@harris.com
Mr. Bob Pham	100	nonvoter	NEC America Inc.	+1 703 834 4486	phamr@hn.va.nec.com
Ms. Victoria M. Poncini	100	voter	The Boeing Company	+1 425 865 5342	victoria.m.poncini@boeing.com
Dipl. Ing. Peter Rautenberg	50	nonvoter	Alcatel Cabling Systems	+49 2166 27 2778	100064.3464@compuserve.com
Mr. Ivan Reede	100	nonvoter	AmeriSys	+1 514 620 8522	i_reede@amerisys.com
Dr. Stanley A. Reible	100	voter	Micrilor Inc.	+1 781 246 0103 X105	reible@compuserve.com
Mr. Carlos A. Rios	11	nonvoter	3Com Corporation	+1 408 326 2844	carlos_rios@3com.com
Mr. Kent G. Rollins	100	voter	HARRIS Corporation	+1 407 729 5133	krollins@harris.com
Mr. Anil K. Sanwalka	100	voter	Neesus Datacom Consultants	+1 416 754 8007	anil@neesus.com
Mr. Matthew B. Shoemake	100	voter	Alantro Communications	+1 707 521 3067	shoemake@alantro.com
Mr. Donald I. Sloan	75	voter	Aironet Wireless Communications Inc.	+1 330 664 7917	dons@aironet.com
Mr. Gary Spiess	100	voter	Intermec Technologies Corp. (Norand)	+1 319 369 3580	spiess@norand.com
Mr. Hitoshi Takanashi	100	voter	NTT Wireless Systems Labs.	+81 468 59 3471	takanasi@pcs.wslab.ntt.co.jp
Mr. Satoru Toguchi	100	voter	JVC	+81 462 78 1871	toguchi@krhm.jvc-victor.co.jp
Ms. Cherry Tom	100	voter	AT&T	+1 973 236 6946	ctom@att.com
Dr. Karim N. Toussi	99	nonvoter	Algorex Inc.	+1 732 744 1444	ktoussi@nj.algorex.com
Mr. Tom Tsoulogiannis	100	voter	Neesus Datacom Consultants	+1 416 754 8007	tomt@neesus.com
Dr. Gottfried Ungerboeck	11	nonvoter		+41 1 713 2408	g.ungerboeck@bluewin.ch
Mr. Chris I. Vaios	76	nonvoter	Globespan Semiconductor Inc.	+1 732 345 6050	cvai@globespan.net
Mr. Nader Vijeh	11	nonvoter	Cytec	+1 408 733 1508	naderv@msn.com
Mr. Ikuo Wakayama	100	voter	NEC Corporation	+81 42 333 5485	wakayama@ped.land.fc.nec.co.jp
Dr. Robert M. Ward Jr.	100	nonvoter	SciCom	+1 619 513 4326	bmward@home.com
Mr. Leo Wilz	100	voter	Intermec Technologies Corp. (Norand)	+1 319 369 3668	wilzl@norand.com
Mr. Harry Worstell	100	voter	AT&T	+1 973 236 6915	hworstell@att.com
Mr. Takeshi Yamamoto	100	nonvoter	NEC Corporation	+81 471 85 6732	takeshiy@ptl.abk.nec.co.jp
Mr. Albert Young	30	nonvoter	3Com Corporation	+1 408 326 6435	albert-young@3com.com
Mr. Leonard G. Young	40	nonvoter	Corning Incorporated	+1 607 974 8676	younglg@cornioing.com
Dr. Hatim Zaghoul	99	aspirant	WiLAN	+1 403 273 9133	zaghoul@wi-lan.com
Mr. Jingfan Zhang	11	nonvoter	Intel Corporation		
Mr. Jim Zyren	100	voter	HARRIS Corporation	+1 407 729 4177	jzyren@harris.com