
**IEEE P802.11
Wireless LANs**

Tentative Minutes of the IEEE P802.11

**Full Working Group
Interim Meeting
Westford, Massachusetts
14 to 18 September 1998**

Monday, 14 September 1998

- 1 Opening Meeting called to order by:** Vic Hayes at 8:30AM, Agenda of 51st session of 802.11 is in doc.:IEEE P802.11 11-98/287. Al Petrick acting, secretary for George Fishel ¹⁾ is present and ready to take the notes.
- 2 Objectives for this meeting**
 - 2.1 **Continue the consensus process for TGa and TGb**
 - 2.2 Review any outstanding sponsor ballot issues.
 - 2.3 Further work in study group.
 - 2.4 Graphic outline changes; 1) No study group meeting on Tuesday. This is reserved for WPAN.
- 3 Roll Call:** People in the room were invited to introduce themselves by name and company. There were 45 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.
 - 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:

^{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
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

- 4.2.1.1 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 (98)
 - 4.3.2 Aspiring voting members (xx)
 - 4.3.3 Nearly voting members (xx)
- 4.4 Attendance List, Registration
 - 4.4.1 Administration: The attendance list was circulated, Anil Sawalka 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 for plenary. However the fee for this session is \$141 for AV equipment, and banquet food. Payment will be handled at the front desk. Attendees not staying at the hotel will pay by credit card. Failure to pay causes loss of credit for voting rights.
- 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 If you do not disagree to receiving very long files, mark bulk e-mail with YES.
- 7 Logistics:** Paper document distribution is done using pigeon holes. Paper distribution is only for those members not having a PC. You will find your copies and messages in the referenced location in the expanding file folders in the slot *in front of* your name. Electronic distribution is also available.
 - 7.1 Conference fee to be paid through IEEE802 registration office at the hotel.
 - 7.2 Copying and collection of files is managed by Harry Worstel. Al Petrick assists in pigeonhole stuffing. Harry is also in charge of document numbers. Before a submission is presented, a document number must be assigned by Harry and a file copy on diskette in Office 95 submitted using the 802.11 templates for record and distribution. Each submitter must provide four (4) paper copies for pigeon hole distribution.

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- 7.3 Coffee breaks at 10 AM and 3 PM. Noon to 1:00 PM lunch, printing is available in the hotel 802.11 office.
- 7.4 Document distribution: The primary dissemination of documentation is electronic file distribution. However three (3) mediums will be used. They are: a) 802.11 network b) flash memory card, c) diskettes.
- 7.5 Sign in for a slot, remember the letter and number (this is for members not having electronic access. Pigeon holes are file folders with a letter id on each folder and a number on each slot in each folder are numbered slots, each of which is 'owned' by a person. Each person owns slot in front of number.
- 7.6 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 By-Laws 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 that 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 prices are disallowed in 802.11 sessions, because of the threat of price fixing. The price fixing and discussions are governed by Anti-Trust Laws.
- 11 Other announcements**
- 11.1 Volunteers needed for the preparation of the mailing on Friday.
- 11.2 RevCOM text still needs to be completed. It is critical that the draft is completed in order to get final approval of the standard. Bob O'Hara found a volunteer from Eastman Kodak - Allen Habourling to manage and complete the RevCom editorials.
- 11.3 Attacks on spectrum in 5GHz globally. See document 98/313
- 12 Recognition:** No input at this time
- 13 Approval of the minutes of previous meetings**
- 13.1 Minutes of the LaJolla, California meeting approved 11-98/284. Minutes available on the web site and on the flash card. Minutes approval will be postponed until Wednesday plenary, as recommended by Vic Hayes chair. This will give the body time to review the final draft.
- 14 Voting membership count:** There were 26 members in the room, 50% of the voting membership is needed for a quorum. At present 802.11 does NOT have a quorum.
- 15 Reports:**
- 15.1 Report of the sponsor reconfirmation ballot
- 15.2 Report of Mondays Ex-Com meeting
- 15.3 Report of the See VICS NOTES on REVCOM status and CANADA status.
- 16 Review of Contributions:** The list of document submissions were reviewed by Vic Hayes.
- 16.1 98/300 through 98/307
- 16.2 also included are documents from ETSI-BRAN
- 16.3 Bluetooth liaison
- 16.4 Submission by Greg Ennis, Impact of Bluetooth on IEEE802.11.
- 17 Unfinished business**
- 17.1 TGa
- 17.2 TGb
- 17.3 Study group WPAN

- 17.4 Comments to industry Canada
- 18 New Business**
- 18.1 5Ghz band characteristics
- 18.2 UK plans to licence the 2.45Ghz band
- 18.3 RF power for RFID in European 2.45Ghz band
- 18.4 Liason with ETSI-BRAN
- 18.5 Teleconference with ETSI excom - IEEE Exec
- 18.6 Liaison with MMAC

Adoption of Agenda

MOTION #1: to approve the agenda as modified in document 11-98/245-r1, Moved by Anil Sawalka, Seconded by Carl Andren.

No discussion on the motion.

Motion on the floor to vote.

Motion passes: 23/0/0

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

19 Unfinished Business

- 19.1 TGa report given by Naftali Chayat, the task group plans to review the ETSI-BRAN letter and continue working on the draft text. Other issues include review of MMAC liason. Comments: IBM sent a letter listing a 5GHz proposal to Naftali Chayat. Naftali sent a response however Vic Hayes plans review the *motion to reconsider*. New proposals need to 75% approval for reconsideration.
- 19.2 TGb report given by John Fakatselis; plans to review a few technical papers, review schedule and continue work on the draft text.
- 19.3 Study group WPAN update Dick Jai: Continue with work on the MAC issues and draft text for PAR.

20 New Business

- 20.1 The 5Ghz band characteristics: Just a point of information by Vic Hayes. See document 98/313
- 20.2 RF power for RFID in Europe 2.45GHz band: Vic Hayes gave an update on the licensing issues. Vic is requesting support against the licensing, possible of rising monopolies, and the opposing threat to the unlicense world-wide band. Some discussion on this item. Don Johnson, Jim Baker and Al Petrick will draft a template for the 802.11 members to forward to the UK regulatory body.
- 20.3 RF power for RFID in Europe in 2.45GHz. Need volunteers to support this issue.
- 20.4 Liason with ETSI-BRAN. Naftali Chayat identified Jan Boer as the Liason between 802.11 and ETSI-BRAN.
- 20.5 Cooperation between ETSI-BRAN and other standards bodies. Update given by Vic Hayes.
- 20.6 Liason with MMAC. Update given by Marsahiro.
- 21 Adjourn for subgroups.**

22 The plenary continued with the next agenda item.

23 Adjourn for Subgroups

24 Meeting adjourned for the day by Vic Hayes at 11:00AM.

25 This was a verbal vote. Breakout into Task groups TGa and TGb as illustrated in the graphic outline.

Meeting Minutes
Full Working Group Meeting 802.11
Wednesday, September 16,1998
Westford, MA

- 26 Meeting called to order by the chair: Vic Hays at 13:05 Secretary, George Fishel present and ready to take the notes.
- 27 Introduction of members present: 20 members present. Additional members entered later for total of 38.
- 28 Agenda Update: Under new business items added:
 - 28.1 "Impact Of Bluetooth"
 - 28.2 "Multi-Rate is Broken"

MOTION #2: to approve agenda as modified by: Al Petric/ Second: Aniel Sawalka

No discussion on the motion.

Motion on the floor to vote.

Motion carries 20-0-0

- 29 **Distribution of document**, LAN and flash card.
- 30 **Report on the REVCOM meeting conducted Monday**
 - 30.1 802.11 was not approved REVCOM because of missing Appendix C (State Machine).
 - 30.2 Vic is working to add the missing items and send a 10 day ballot as per request Geoff Thompson.
 - 30.3 Vic placed on agenda for later in this meeting.
- 31 Document from WiLAN
- 32 Old Business
 - 32.1 Study Group Report WPAN
 - 32.1.1 Review the results of the call for applications
 - 32.1.2 Bluetooth special Interest Group
 - 32.1.3 Home RF Working Group Pitch
 - 32.1.4 Discussion of the 802.11 MAC Layer
 - 32.1.5 Further the work of the SG and Plan for Albuquerque
 - 32.2 Report by Naftali Chiatt or TGa
 - 32.2.1 Talked about the activity to harmonise with BRAN
 - 32.3 Report on TGb no report at this time.
 - 32.4 Report on TGrev by Bob O'Hara
 - 32.4.1 An objection to the 10 day ballot from RevCom by Bob O'Hara
 - 32.4.2 Bob feels this is a delaying strategy by members of RevCom.

Motion #3: To direct the state machine and IEEE editor to complete the editing of the 802.11 rev. as soon as possible so that a completely integrated version of 802.11 can be made available to EXCom in order to be approved at the next RevCom meeting. Bob O'Hara/Steuart Kerry

Discussion followed on the motion.

Motion on the floor to vote.

Motion carries 27-2-3

- 32.1 Report on regulation by Don Johnson
 - 32.1.1 Report on activity in Europe and a request to write letters to the British Radio Bureau
- 32.2 Report on TGb by John Fakatselis

Motion #4: To accept paper 98-302 as an option to the 802.11b 2.4Ghz high rate PHY draft without any of the mandatory elements described to either the transmit or receive side or any other areas that will impact the proposals in paper 98-314 with the exception of introducing an additional SFD to the short preamble proposal of paper 98-314 to recognise this optional mode. Motion by: John Fakatselis/Kieth Amundsen,

Discussion followed on the motion.

Motion on the floor to vote.

Motion carries 35-0-3

33 New Business

33.1 ITU-R Issues

33.1.1 Report by George Fishel on ITU-R activity on RLAN activity and a call to help writing a paper to be presented to secure bandwidth at 5.2GHz.

33.1.2 Report by Al Petrick on the planning for the January 11th interim meeting in Orlando, Florida

33.1.3 Impact of Bluetooth on 802.11 LANs.

33.1.3.1 The presenter came to the conclusion that a Bluetooth device would have a major impact on 802.11 devices and could not operate in the same space.

33.1.4 Multi-rate Mechanism is Broken! By Anil Sanwalka

33.1.4.1 Anil listed problems but did not propose solutions.

34 Meeting concluded at 16:27

IEEE 802.11

Friday, 18 September 1998

Westford Full Working Group Meeting

Closing Plenary

35 Meeting called to order by the chair: Vic Hays at 13:05 Secretary, George Fishel present and ready to take the notes. 16 members present.

36 Approval of agenda

Motion #5: to approve the amended agenda by John Fakatselis/ Kazuhiro Okanoue

Discussion followed on the motion.

Motion on the floor to vote.

Motion carries 14-0-0

37 Report on the activities of TGa by John Fakatselis.

Motion #6: to submit document 98-314.2 To the plenary with the appropriate editorial changes as instructed by TGb as the draft. by John Fakatselis/ Stuart Kerry

Discussion followed on the motion.

Motion on the floor to vote.

Motion carries 16-0-0

Motion #7: to submit the draft standard for TGb to WG 10 day letter ballot. By Greg Ennis/Anil Sanwalka,.

Discussion followed on the motion. TGb discussed this motion and it failed in the TGb meeting. John Fakatselis asked that this be put in the meeting notes.

Motion on the floor to vote.

Motion carries 13-1-2

38 TGA Report by Naftali Chayat.

38.1 Channel spacing changed the 18MHz from 15 MHz. This will be more in line with BRAN and others.

Motion #8: That the parameters presented in 98-329 be incorporated in the draft and be passed to ETSI BRAN for consideration. Naftali Chayat/Masahiro Morikura

Discussion followed on the motion.

Motion on the floor to vote.

Motion carries 14-0-2

38.2 A small addition to the letter to Industry Canada and was forwarded to ExCom for action

Motion #9: to approve motions numbered 4 (replacing time windowing specs with spectral mask and constellation accuracy), 7 (to approve modulation accuracy text),8 (modulation specification changes), 9 (unbind frequency and clock accuracy), 10 (change to pre-amble accepting partially document 98/308) Naftali Chayat/Hitoshi Takanashi

Discussion followed on the motion.

Motion on the floor to vote.

Motion carries 12-0-3

38.3 Information will be sent around on the reflector on the IBM proposal modulation method.

Motion #10: that 802.11 issues a liaison letter to ETSI BRAN and offering the TGA as a candidate for their draft standard with the purpose of expediting the development of a common physical layer. Naftali Chayat/Masahiro Morikura

Discussion followed on the motion.

Motion on the floor to vote.

Motion carries 16-0-0

39 Report from the WPAM Study Group by Bob O'Hara for Bob Heile.

40 Question on IP from Wi-LAN and their offer for IP did not conform to IEEE regulations. Vic Hayse will check on this matter.

41 Objectives for the November meeting.

41.1 Interim meeting in Japan. Presentation on cost of having meeting in Japan. A straw ballot was taken to see how many people would like to go to Japan on the expensive option 5 and for the cheap option 13

41.2 Naftali also offered Israel as a meeting location for next year

42 New business

42.1 Letter to ARIB on Japan regulation at 2.4 GHz. Vic presented a draft letter and requested a motion.

Motion #11: to send the liaison statement to ARIB with the draft of IEEE 802.11b. John Fakatselis/Kazuhiro Okanoue

Discussion followed on the motion.

Motion on the floor to vote.

Motion carries 15-0-0

43 **Next meeting** will be with IEEE 802 plenary November 9 to 13, 1998 at the Hyatt Regency Albuquerque, 330 Tijeras NW Albuquerque, NM 87102 Reservations: (800) 233-1234

44 Meeting adjourned.

Attendance list for minutes Westford, MA

Full name	att. %	memstatus	company	phone	e_mail
Mr. Keith B. Amundsen	100	voter	Raytheon Company	+1 508 490 1759	keith_b_amundsen@me.raytheon.com
Mr. Carl F. Andren	100	voter	HARRIS Corporation	+1 407 724 7535	candren@harris.com
Mr. James R. Baker	100	voter	Bay Networks Inc.	+1 925 737 1646	jbaker@baynetworks.com
Mr. Thomas Blackadar	20	nonvoter	Personal Electronic Devices Inc.	+1 781 237 6667	tblackadar@pedinc.com
Mr. Timothy J. Blaney	80	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. Ronald Brockmann	40	voter	No Wires Needed B.V.	+31 30 228 1245	ronald.brockmann@nwn.nl
Mr. Wesley Brodsky	100	voter	Raytheon Company	+1 508 490 1616	wesley_g_brodsky@res.raytheon.com
Mr. Naftali Chayat	100	voter	BreezeCom	+972 3 645 6262	naftalic@breezecom.co.il
Mr. Jim R. Chess	30	aspirant	XETRON Corporation	+1 513 881 3332	jimmyc@xetron.com
Mr. Harshal Chhaya	80	nonvoter	Texas Instrument Inc.	+1 972 917 2592	hchhaya@ti.com
Mr. Larry Ciaccia	40	nonvoter	HARRIS Corporation	+1 407 729 5728	lciaccia@harris.com
Mr. Ken Clements	90	aspirant	Innovation on Demand	+1 408 353 5027	Ken@InnovationOnDmnd.com
Mr. Richard Eckard	100	aspirant	GTE Laboratories Inc.	+1 781 466 2780	reckard@gte.com
Mr. Simon C. Ellis	20	nonvoter	Intel Corporation	+1 408 765 4461	simon_c_ellis@ccm.sc.intel.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	90	voter	AMP Inc.	+1 717 810 4645	grfishel@amp.com
Mr. John Fisher	80	voter	Proxim Inc.	+1 650 526 3703	johnf@proxim.com
Mr. Ian Gifford	14	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
Mr. Victor Hayes	100	voter	Lucent Technologies Nederland	+31 30 609 7528	vichayes@lucent.com
Dr. Chris Heegard	80	voter	Alantro Communications	+1 707 521 3062	heegard@alantro.com
Mr. Robert Heile	75	voter	GTE Internetworking Technologies	+1 617 873 4835	bheile@bbn.com
Mr. Chris Henningsen	20	nonvoter	HARRIS Corporation	+1 407 729 4529	chenning@harris.com
Mr. Hans van der Hoek	14	nonvoter	No Wires Needed B.V.		hans@nwm.com
Mr. Donald C. Johnson	90	voter	WLAN Consulting Inc.	+1 937 434 8389	johnsdb@aol.com
Mr. Tal Kaitz	100	nonvoter	BreezeCom	+972 3 6456273/262	talk@breezecom.co.il
Mr. Dean M. Kawaguchi	40	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

Attendance list for minutes Westford, MA

Full name	att. %	memstatus	company	phone	e_mail
Mr. Patrick Kinney	70	voter	Intermec Technologies Corp. (Norand)	+1 319 369 3593	kinneypw@norand.com
Mr. Bruce P. Kraemer	80	voter	HARRIS Corporation	+1 407 729 5683	bkraemer@harris.com
Mr. Stanley Ling	80	nonvoter	Alantro Communications	+1 707 521 3071	sling@alantro.com
Mr. Daniel R. McGlynn	80	nonvoter	Symbol Technologies Inc.	+1 516 738 4627	mcglynn@symbol.com
Mr. Michael D. McInnis	90	voter	The Boeing Company	+1 425 865 2840	michael.d.mcinnis@boeing.com
Dr. Masahiro Morikura	90	voter	NTT Wireless Systems Labs.	+81 468 59 3132	morikura@mhosun.wslab.ntt.co.jp
Dr. Richard van Nee	100	voter	Lucent Technologies Nederland	+31 30 609 7412	vannee@lucent.com
Mr. Jerry O'Brien	90	nonvoter	Silicon Systems Ltd.	+353 1 402 5700	jerry.obrien@ssl.ie
Mr. Bob O'Hara	100	voter	Informed Technology Inc.	+1 408 986 9596	bob@informed-technology.com
Mr. Larry P. Ochs	40	aspirant	XETRON Corporation	+1 513 881 3266	larryo@xetron.com
Mr. Kazuhiro Okanoue	100	voter	NEC Corporation	+81 44 856 2255	okanoue@ccm.cl.nec.co.jp
Mr. Al Petrick	75	voter	HARRIS Corporation	+1 407 729 4944	apetrick@harris.com
Mr. John Priestley	90	nonvoter	Symbionics	+44 1223 421025	jdp@sumbionics.co.uk
Mr. Rüdiger Rabe	50	nonvoter	Teklogix		rrabe@teklogix.com
Mr. Jon Rasmussen	60	aspirant	Intermec Technologies Corp. (Norand)	+1 319 369 3508	rasmussj@norand.com
Dr. Stanley A. Reible	75	voter	Micrilor Inc.	+1 781 246 0103 X105	reible@compuserve.com
Mr. Kent G. Rollins	70	voter	HARRIS Corporation	+1 407 729 5133	krollins@harris.com
Dr. Robert D. Rood	14	nonvoter	GTE Laboratories Inc.	+1 781 466 2025	rrood@gte.com
Mr. Chandos Rypinski	40	voter	Ubiquity Communication	+1 707 792 5390	rypinski@microweb.com
Mr. Anil K. Sanwalka	100	voter	Neesus Datacom Consultants	+1 416 754 8007	anil@neesus.com
Dr. Kamel M. Shaheen	40	nonvoter	Nortel	+1 972 684 5117	marwa@nortel.com
Dr. Tie-Jun Shan	60	voter	Lucent Technologies	+1 732 949 1721	tjs@lucent.com
Mr. Jacob Sharony	40	aspirant	Symbol Technologies Inc.	+1 516 738 5788	sharony@symbol.com
Dr. Stephen J. Shellhammer	50	voter	Symbol Technologies Inc.	+1 516 738 4302	shell@symbol.com
Mr. Matthew B. Shoemake	80	voter	Alantro Communications	+1 707 521 3067	shoemake@alantro.com
Mr. Hitoshi Takanashi	100	voter	NTT Wireless Systems Labs.	+81 468 59 3471	takanasi@pcs.wslab.ntt.co.jp
Mr. Mike Trompower	70	voter	Aironet Wireless Communications Inc.	+1 330 664 7920	mtrom@aironet.com
Mr. Tom Tsoulogiannis	100	voter	Neesus Datacom Consultants	+1 416 754 8007	tomt@neesus.com
Mr. Udo Wachsmann	80	nonvoter	Ericsson Eurolab Deutschland GmbH	+49 911 5217 470	udo.wachsmann@eedn.ericsson.se

Full name	att. %	memstatus	company	phone	e_mail
Mr. Mark Webster	80	voter	HARRIS Corporation	+1 407 724 7537	mwebster@harris.com
Mr. Harry Worstell	90	voter	AT&T Laboratories	+1 973 386 7856	hworstell@att.com
Mr. Lawrence W. Yonge III	80	aspirant	Intellon Corporation	+1 352 237 7416 X358	larry.yonge@intellon.com
Mr. Steven A. Zelubowski	75	voter	AMP-M/A-COM Div.	+1 978 442 4621	zelubows@macom.com
Mr. Jim Zyren	70	voter	HARRIS Corporation	+1 407 729 4177	jzyren@harris.com

Tentative Future meeting schedule 1998

- Jan 11-15 - Lake Buena Vista, FL, Interim (Harris)
- March 8-12 - Hyatt Regency, Town Lake, Austin, TX, Plenary
- May TBD - Japan?, Interim (NTT, Clarion)
- July 5-9 - Queen Elizabeth, Montreal, PQ
- Sept TBD -California, Interim (Alantro)
- November 8-12 - Hyatt Regency Kauai, Koloa, HI

Tentative Future meeting schedule 1999

- January TBD - Israel?, Interim, (Breezecom)