

IEEE 802.5

Plenary Meeting Report

Meeting: CC

Place: Irvine, CA

Dates: March 10 - 14, 1997

Chairman: Robert D. Love

Vice Chair: Mick Hanrahan

These are the unapproved minutes of the Plenary meeting (CC) in Irvine CA, 3/97. Please submit corrections to these minutes to RD Love. These minutes will be reviewed and submitted for approval the next IEEE 802.5 and IEEE 802 Plenary on 7July97.

Table Of Contents

DAILY MEETING MINUTES FOR IEEE 802.5 MEETING CC IRVINE, CA MARCH 10TH - 14TH, 1997	3
ATTENDEES	3
ATTENDEES REPRESENTING FDDI CONCERNS	3
AGENDA	4
Monday, March 10 th	4
Tuesday, March 11 th	4
Wednesday, March 12 th	4
Thursday, March 13 th	4
DETAILED MEETING MINUTES	4
802.5 Opening Plenary	4
MEETING DOCUMENT LIST	6
MEETING ACTION ITEMS	6
NEXT PLENARY IEEE 802 AND 802.5 MEETING 7/7-7/11/97	8
LIAISON ASSIGNMENTS	8
VOTER ELIGIBILITY RULES	8
802.5 PAR ACTIVITY	10
VANCOUVER IEEE 802.5 VOTES AND STRAW POLLS	11
IEEE 802.5 Official Working Group Votes, Meeting BB	11
IEEE 802.5 Straw Polls, Meeting BB	Error! Bookmark not defined.
SLIDES PRESENTED AT CLOSING 802 PLENARY, NOVEMBER 15, 1996	ERROR! BOOKMARK
IEEE 802.5 E-MAIL AND FTP INFORMATION	17
802.5 MEMBERSHIP LIST	18

Daily Meeting Minutes for IEEE 802.5 Meeting CC Irvine, CA March 10th - 14th, 1997

Neil Jarvis, Recording Secretary Proteon International, York R'n'D, UK

Attendees

George Duane
Mike Hanrahan
Mukund Halthore
Neil Jarvis
George Lin
Bob Love
John Messenger
Ivan Oakley
Syou-Chin Peng

Kirk Preiss
Steve Scandalis
Debra Stopp
Carson Stuart
Trevor Warwick
Ben Wilson
Dave Wilson
Ed Wong

Attendees representing FDDI Concerns

Virginia Haydu
Michael Griffin
Tim Plunkett

Agenda

Monday, March 10th

3:30pm 6:00pm 802.5 Opening Plenary

- Approve agenda
- Open Officer Positions (including assignment of Recording Secretary)
- Approval of minutes of Vancouver Meeting (BB)
- Status of Token Ring ballots
- Define resolution process for ballot comments
- Proposal to define Token Ring MII
- Wake on LAN
- New Business

Tuesday, March 11th

9:00am 11:00am MII Discussion

11:00am 12:00am Liaison Reports

1:00pm 5:00pm Joint Token Ring FDDI Meeting

- 802.1Q, RI tunneling. George Duane
- 802.1Q, Frame Formats. Neil Jarvis
- Discussion: Maintenance of the FDDI standard and Protection of its interest
- Discussion: VLAN implications for FDDI and Token Ring
- Other

Wednesday, March 12th

1:00pm 5:00pm Open for Task Force/Study Groups

Thursday, March 13th

8:30am Noon 802.5 Closing Plenary

1:00pm 5:00pm Open for Task Force/Study Groups

Detailed Meeting Minutes

802.5 Opening Plenary

Voting rules were recapped. The modified agenda was approved (Voting: 11/0/0). Neil Jarvis volunteered to be Recording Secretary for this meeting. The minutes of meeting BB were missing the table of action items. These were reviewed on-line, and all 15 items were closed. The table of closed actions will be including in these meeting minutes. The minutes of meeting BB were approved (Voting: 8/0/2).

Bob Love reported on the status of the Token Ring ballots. 802.5rev, 802.5j and 802.5r went out to LMSC and ISO ballot early in 97. The LMSC ballots will close during April. The ISO ballots

will close by the end of June. The LMSC ballot comment resolution will form the US resolution to forward to the SC6 ballot resolution.

After the LMSC ballot closes, Bob Love will generate an Access database of all the comments. This will be made available to the committee. Individual comments will then be assigned to editors to allow them to generate a disposition. These dispositions will be gathered together by Bob Love and re-circulated to the committee. A ballot resolution group of 802.5 voting members will then be formed, who will review the comment dispositions. This will generate a database of approved dispositions, which will be used by Bob Love to generate an addition to the US position for ISO ballot resolution.

At any time during this process, a decision may be made that an interim meeting is required to resolve some of the ballot comments. Bob Love has volunteered to host this interim meeting in Raleigh at the end of April or the beginning of May.

This process will be voted on during the Thursday plenary meeting. A pre-authorisation of this process might be required. A decision on this will also be made on Thursday.

John Messenger gave a presentation on "The case for an MII for Token Ring" [*Paper 03-05*].

Mick Hanrahan gave a presentation on Texas Instruments' Trophy device.

Bob Love gave Ken Wilson's presentation on "Wake on LAN" [*Paper 03-04*]. Unfortunately the proposal does not express Ken's concerns clearly. An interpretation of the paper, is that the IBM Wake-on-LAN implementation has been re-engineered by another manufacturer in a sufficiently different manner to maybe require the committee to standardise this process.

This discussion was further confused by the mention of the Microsoft "On-Now" specification. There may be a need for the committee to standardised how Token Ring support this specification.

An attempt will be made to include Ken Wilson in a teleconference at the beginning of Tuesday.

Trevor Warwick gave a liaison report for IETF.

IEEE 802 Treasurer position is now open for nominations.

Closing 802.5 Plenary
See voting on Official Motions

Meeting Document List

Note: Documents marked with *r1*, *r2*, *etc.* indicate that they were updated during the meeting, and re-issued to the committee. The number indicates the revision.

<i>Number</i>	<i>Title</i>	<i>Author</i>
03-00	Document List: 802.5 March 97 Plenary	RD Love
03-01r1	802.5 Preliminary Agenda for March 97 Plenary	RD Love
03-02	Plenary Meeting Minutes, Meeting BB	RD Love
03-03	Business Cards	-
03-04	Wake on LAN	KT Wilson
03-05	The case for an MII for Token Ring	JL Messenger
03-07	Low Power Modes for Token Rings	D Wilson
03-08	Frame Format for VLAN encoding of Token Ring and FDDI Frames	N Jarvis

Meeting Action Items

<i>Number</i>	<i>Owner</i>	<i>Description</i>	<i>Status</i>
11-01	B Love	Present vote BB1 to the executive	Complete
11-02	M Siegel	Update 802.5 VLAN Tagging Proposal	Complete
11-03	T Warwick	Communicate 802.5s changes to Dave Wilson.	Complete
11-04	B Love	Ask Exec about deleting PICS tables from 802.5s	Complete
11-05	N Jarvis	Create a mock up of Annex A changes required by NAJ10/NAJ11.	Complete
11-06	N Jarvis	Create new wording for Annex P	Complete
11-07	J Messenger	Conduct poll on adopting four byte VLAN tagging proposal via e-mail	Complete
11-08	D Wilson	Create 802.5s Draft 3 as per committee's instructions.	Complete
11-09	B Love	Forward 802.5s Draft 3 for LMSC ballot	Complete
11-10	B Love	Forward 802.5s Draft 3 for ISO DAM ballot	Complete
11-11	802.5r Editors	Create 802.5r Draft 7 as per committee's instructions.	Complete
11-12	B Love	Forward 802.5r Draft 7 for LMSC ballot	Complete
11-13	B Love	Forward 802.5r Draft 7 for ISO DIS ballot	Complete
11-14	B Love	802.5 chair is to express concern to exec about spending IEEE 802 money on overhead LCD panels.	Complete

11-15	N Jarvis	Produce 802.5 status slides.	Complete
03-01	RD Love	Create a timeline to check if the ballot comment resolution process proposed above, will generate a US position for SC6 in time.	Open
03-02	Closing Plenary	Approve the LMSC ballot comment resolution process	Open
03-03	M Hanrahan	Generate a pre-authorisation motion for the comment resolution process	Open
03-04	RD Love	Generate modified agenda 03-01r1	Open
03-05	RD Love	Contact Ken Wilson for teleconference for Wake-on-LAN clarifications	Open
03-06	S Scandalis	Get teleconference equipment	Open

NEXT PLENARY IEEE 802 and 802.5 MEETING 7/7-7/11/97

The next meeting of IEEE 802 and 802.5 will be held July 7 - 11, 1997 at the Hyatt Regency in Maui, Hawaii. The registration fee will be \$250.

The preliminary agenda for this meeting is as follows:

Mon	13:00 - 15:00	802 Plenary
Mon	15:30 - 17:30	802.5 Plenary
Tue	8:00 - 17:00	802.5 Working Group and Task Force
Wed	8:00 - 12:00	802.1 Open Plenary, with issues germane to 802.5
Wed	13:00 - 17:00	802.5 Working Group and Task Force
Thurs	8:00 - 12:00	802.5 Closing Plenary
Thurs	19:00 - 24:00	802 Executive Meeting
Fri	8:00 to 10:00	802 Closing Plenary

LIAISON ASSIGNMENTS

802.1	, Warwick, Wong, Messenger, Ross
JTC1/SC25/WG3	Love
JTC1/SC6	Carlo
IETF	Warwick

VOTER ELIGIBILITY RULES

Voting eligibility is established and maintained by participating in at least two out of the last four plenary 802.5 meetings (one interim meeting may be substituted for one plenary). Participation is defined as at least 75% presence at the meeting. Eligibility to vote commences at the start of the plenary meeting in which the member becomes eligible.

Meeting Number and Date	Location
Z - Mar 11-15, 1996	Hyatt Regency, LaJolla, CA
z - May 29-31, 1996	San Jose, CA
AA - Jul 8-12, 1996	Encshede, NL
aa - Oct 7-10, 1996	Andover, MA
BB - Nov 11-15, 1996	Vancouver, BC
CC - Mar 10-14, 1997	Irvine, CA
DD - July 7-11, 1997	Maui, HI

802.5 PAR Activity

ANSI/IEEE STANDARD	ISO/IEC STANDARD	COMMENTS/STATUS
802.5q-1995	ISO/IEC 8802-5:1995	Revised Base Standard
802.5b-1991	ISO/IEC TR 10738:1992 Withdrawn	Recommended Practice for UTP Included in 8802-5:1995
802.5c-1991	IEEE Recommended Practice	Reconfiguration Dual Ring
802.5e		Management Entity Spec Included in 8802-5:1995
802.5f		16Mbps operation Included in 8802-5:1995
802.5h		LLC III Operation Withdrawn from 8802-5:1995
802.5i		Early Token Release. Included in 8802-5:1995
802.5j-1994	ISO/IEC TR 11802-4: 1994	Fiber Trial Use Standard Approved as Standard (1)
802.5k		Media Specification Included in 8802-5:1995
802.5l		Maintenance Included in 8802-5:1995
802.5m-1993	ISO/IEC 10038:1993	MAC Bridging Standard
802.5n		UTP at 16Mbps Included in 8802-5:1995
802.5p-D4	ISO/IEC 8802-2:1994	Route Determination Entity (2)
802.5r		Dedicated Token Ring Approved as Standard(1)
802.5s		Maintenance for 8802-5:1995 Approved as Standard(1)

Note 1: Items above in **Bold** are still active (Not yet issued).

Note 2: Table below shows status of 802.5p.

ITEM IN 802.5p-D4	RESULTING LOCATION
Changes to 8802-2	ISO/IEC 8802-2: 1994
clause 10 - RDE Protocol	clause 9 - 8802-2:1994
annex A - Subnet Support	annex D - 8802-2:1994
RDE LAN Managed Objects for LLC	M.O. Definition for LLC (8802-2/DAM6) SC6:9523 Ballot Ongoing

Irvine IEEE 802.5 Votes and Straw Polls

IEEE 802.5 Official Working Group Votes, Meeting CC

March 1997 IEEE 802.5 Plenary Meeting CC- Irvine, CA

Date: 3/12/97 Official Vote number: 1

Moved BY: Neil Jarvis

Seconded By: Steve Scandalis

Motion:

Pre-Approval of Decisions of Ballot Resolution Groups for forwarding to JTC 1 US TAG Administrator.

Decisions to be made by the ballot resolution groups for resolving comments on LMSC ballots, for 802.5j, 802.5r, and 802.5rev are to be forwarded as positions against the corresponding ISO/IEC documents now out for international ballot. Formation of the Ballot Resolution groups, and procedures to be followed are specified in accompanying 802.5 Plenary motions approved at this meeting.

The Chair is requested to forward these positions appropriately to serve as IEEE 802.5 positions against the international ballots.

Voting Criteria 3/4YES: 9NO: 0ABSTAIN: 0

Status: PASS

Date: 3/12/97 Official Vote number: 2

Moved BY: Ivan Oakley

Seconded By: Chin Peng

Motion:

Request SEC to approve the forwarding of the recommendations from the 802.5 chair, from the ballot resolution group against LMSC drafts 802.5r, 802.5j, and 802.5rev. These recommendations are to be forwarded to the JTC 1 US TAG administrator, and considered for US input against the corresponding ISO/IEC drafts now out for international ballot.

Voting Criteria 3/4YES: 9NO: 0ABSTAIN: 0

Status: PASS

Date: 3/12/97 Official Vote number: 3

Moved BY: Mick Hanrahan

Seconded By: Ivan Oakley

Motion:

To create Ballot Resolution Groups for 802.5j, 802.5r and 802.5REV.

The three Ballot Resolution groups shall be formed as follows: 802.5 reflector E-Mail and 802.5 WEB notification of the formation of the groups shall be provided no later than Wednesday, March 19th, with voting members of 802.5 allowed to participate in the groups. Participation is

limited to all eligible members that respond requesting to participate, via E-Mail (to the 802.5 reflector), or if E-Mail is down, via phone call to the chair (who will issue an E-Mail to the reflector), no later than March 31st.

Voting Criteria **3/4YES:** **9NO:** **0ABSTAIN:** **0**
Status: PASS

Date: **3/12/97****Official Vote number:** **4**

Moved BY: Sharam Hakimi **Seconded By: John Messenger**

Motion:

Operation of the Ballot Resolution Groups.

Within 3 working days of the ballot comments being available to the Chair, the comment data base shall be uploaded onto the IEEE 802.5 Web Site with 802.5 E-Mail reflector notification that comments are available. For all LMSC comments, the document editor or chair will develop a recommended response to be posted on the reflector and in a revised data base to be uploaded to the IEEE 802.5 Web Site. Approval of each proposal shall be based on 75% or more approval of all members of the ballot resolution group voting YES or NO, and with at least 75% of the ballot resolution group responding. The ballot comment resolution period will remain open for a period of 1 week from posting of the proposed resolution, or, if the proposed resolution is modified based on comments received, for a period 1 week from the final modification, or until the outcome of the poll is mathematically determined.

The ballot resolution process will be "open for all to observe" allowing all on the 802.5 reflector to provide comments during all stages of the process.

Target resolution for closure of all ballot comments and final recommendation shall be on or before April 30th, 1997.

Voting Criteria **3/4YES:** **9NO:** **0ABSTAIN:** **0**
Status: PASS

Date: **3/12/97****Official Vote number:** **5**

Moved BY: Ivan Oakley **Seconded By: Mick Hanrahan**

Motion:

Token Ring MII Study Group

A study group be formed with the aim of generating an LMSC Project Authorisation Request no later than November 1997 for the development of a standard for a Medium Independent Interface (MII) for token ring. This study group to be initially led by John Messenger.

The token ring MII would strive to use the same electrical interface as that used by other 802 MIIs. Due

to the nature of the token ring MAC, the architectural position of the interface is likely to be further from

the wire than that used in other groups.

Among the expected benefits of standardising an MII are:

- Ease of interchange of token ring components in the design process
- mix and match: for example switch technology which can interface to different MAC types, or reuse of front-end token ring chips in both NICs and switches;
- cost reduction

Provision of a clear migration path to leverage existing and future higher speed PHYs with support for the token ring frame format, source routing and other traditional token ring features.

Use of the MII as a switching bus, for example connecting to multiple lower-speed interfaces or a single higher speed interface

Rationalisation of software interface

- quicker to market
- reusability and testability

802.5 requests that the executive committee approve the formation of this study group.

Voting Criteria	3/4YES:	5NO:	0ABSTAIN:	4
Status: PASS				

Date: 3/13/97 **Official Vote number:** 6

Moved BY: Mick Hanrahan **Seconded By:** Steve Scandalis

Motion:

The following words be adopted as the 802.5 position on power management issues.

Warning to Implementers of token ring NICs, deployed in systems with power management, such as OnNow(TM) and Wake on LAN(TM).

The 802.5 committee would like to draw the following information to the attention of implementers of power management modes.

Please be aware that for token ring, the requirements on the NIC differ from Ethernet NICs. Systems in a power management mode, with a token ring NIC inserted into an active network, must continue to participate in the MAC protocols. In other words, they must continue to operate in accordance with the 802.5 standards. This is essential for the maintenance of the integrity of the LAN. Failure to observe this requirement would result in such error conditions as ring-poll failure and an inability to correctly diagnose ring problems.

Other LANs may have similar requirements.

Voting Criteria **3/4YES:** **5NO:** **0ABSTAIN:** **2**

Status: PASS

Date: **3/13/97** **Official Vote number:** **7**

Moved BY: Neil Jarvis **Seconded By: Steve Scandalis**

Motion:

The executive is asked to approve the distribution, by 802.5 members, of 802.5's position on power management issues to implementers of token ring NICs.

In addition the wording of this position (attached) should be reviewed and approved by the executive.

Distribution would be electronically to the following:

- * 802.5 e-mail reflector
- * 802.5 WWW site
- * 802 WWW site
- * Appropriate Usenet newsgroups

Voting Criteria **3/4YES:** **4NO:** **0ABSTAIN:** **3**

Status: PASS

Official Votes, Details

Date: **3/13/97** **Official Vote number:** **8**

Moved BY: Mick Hanrahan **Seconded By: Steve Scandalis**

Motion:

Procedures for carrying out 802.5 business electronically

For issues to be decided electronically, the following procedure will be followed:

Reflector e-mail invitation will be issued by the Chair or Chair's designate requesting participation in the decision pool with a description of the business to be conducted. All eligible 802.5 voters will be invited to participate with a period of at least 2 weeks from the posting of the notification before initiating any electronic ballots. At least 25% of eligible voters must reply positively to the invitation to conduct business electronically. All voting members may join the decision pool at any time. Electronic ballots will remain open for a period of not less than two weeks after establishing of the final wording of any motion, with all participating in the decision pool eligible to vote. Positive action will be taken only if at least 75% of those voting YES or NO vote YES, and only if at least 75% of the decision pool casts a ballot (YES, NO or ABSTAIN), All electronic business will be conducted in an open fashion, with all comments and votes sent to the designated 802.5 e-mail reflector.

Voting Criteria **3/4YES:** **8NO:** **0ABSTAIN:** **0**

Status: PASS

A Total of 11 IEEE 802.5 Working Group Votes were taken during the Irvine Plenary Meeting

Straw Poll Database Report

Date: 3/12/97 Straw Poll Number: BB 1

Moved BY: S. Scandalis

Seconded BY: G. Lin

Moved that:

The 802.5 task force accepts the "Source Routing Encapsulation of Ring Media Frames" presentation, as presented by George Duane and discussed Wed. 3/12/97, for purposes of presentation to 802.1Q for consideration.

VOTE: Criteria >1/2 YES: 11 no: 0 abstain: 1

Status: PASS

Date: 3/12/97 Straw Poll Number: BB 2

Moved BY: S. Scandalis

Seconded BY: J. Messenger

Moved that:

The 802.5 task force accepts the "Ring Media VLAN Tagged Formats" Source Routing Encapsulation presentation, as presented by Neil Jarvis and discussed Wed. 3/12/97, for purposes of presentation to 802.1Q for consideration.

VOTE: Criteria >1/2 YES: 11 no: 0 abstain: 1

Status: PASS

A Total of 2 IEEE 802.5 Working Group Straw Polls were taken during the Irvine Meeting

IEEE 802.5 E-Mail and FTP Information

IEEE-802.5 EMAIL Reflector stds-802-5@mail.ieee.org

SUBSCRIBE NOTE:

To: majordomo@mail.ieee.org	From: Your_EMAIL_Add
Subject: subscribe stds-802-5 Your_EMAIL_Add	

UNSUBSCRIBE NOTE:

To: majordomo@mail.ieee.org	From: Your_EMAIL_Add
Subject: unsubscribe stds-802-5 Your_EMAIL_Add	

IEEE-802.5 FTP Site stdsbbs.ieee.org

FTP LOG INTO PUBLIC ACCESS AREA:

Log In Name: anonymous	Log In Password: Your_EMAIL_Address
Directory: /pub/802-main/802.5	
Set binary mode	

LOG INTO PRIVATE ACCESS AREA:

Log In Name: anonymous	Log In Password: Your_EMAIL_Add
Directory: /private	
quote site group p802.5	quote site gpass xxxxx
set binary mode	

TO SUBMIT FILES:

Log In Name: anonymous	Log In Password: Your_EMAIL_Add
Directory: /uploads	
set binary mode	
FTP_Send FILE_NAME	
Then, send a note to Bob Love at rdlove@vnet.ibm.com , with the FILE_NAME and description. for authorization to move the file to the public or private directory.	

Proteon FTP Site

(Courtesy of Proteon, John Messenger and Neal Jarvis)
Drafts, Ballots, Databases can be found at:
ftp://ftp.proteon.com/pub/802.5/ in appropriate subdirectory
For uploading files go to:
ftp://ftp.proteon.com/pub/misc-dropoff
In addition, an IEEE 802.5 E-Mail archive is retained at
http://ftp.proteon.com/~jlm/802.5/README.html
or
http://ftp.proteon.com/%7Ejlm/802.5/README.html

802.5 Membership List

Jim Carlo
Texas Instruments
9208 Heatherdale Drive Dallas, TX
75243 USA
TEL: 972 480-2524 FAX 972 480-2611
661012
EMAIL: jcarlo@ti.com

Jeremy Curtis Att:Aa
Madge Networks
Sefton Park, Stoke Poges Slough
SL24JS England
TEL: +44 1753 661225 FAX+44 1753

EMAIL: jcurtis@madge.com

Duane DeCapite
Cisco Systems
Kit Creek Road Raleigh, NC
USA
TEL: 919 472-2934 FAX 919 472-2940
EMAIL: ddecapit@cisco.com

Bob Donnan Att: Y
Consultant
120 Ann Street Beaufort, NC
28516 USA
TEL: 919-728-6177 FAX
EMAIL: donnan@coastalnet.com

William Douglass Att: ZAA
Bay Networks
4401 Great America Parkway Santa Clara, CA
95054 USA
TEL: 408 764-1010 FAX 408 764-1298
EMAIL: bdouglass@baynetworks.com

Paul Gessert Att: YyZzAaB
Bay Networks
4401 Great American Pkwy Santa Clara, CA
95052-8185
TEL: (408)495-1429 FAX (408)495-1940
EMAIL: pgessert@baynetworks.com

Martin Guthrie
SILCOM
5620 Timberlea Blvd Mississauga, Ontario
L4W 4M6 CANADA
TEL: (905)238-8822 FAX (905)238-4976
EMAIL: mguthrie@fronteir.canrem.com

Sharam Hakimi Att: YAa
Unggermann-Bass
5 Corporate Drive Andover, MA
01810 USA
TEL: (508)691-6306 FAX 508-687-4442
EMAIL: shakimi@ub.com

Michael Hanrahan Att: yZzAaB
TI
PO Box 1443, MS 706 Houston, TX
77251 USA
TEL: 281 274-2806 FAX 281 274-2558
EMAIL: mhanrahan@tj.com

Marty Haslam Att: Z
Racore Computer Products
2355 S. 1070 W Salt Lake City, Utah
84119 USA
TEL: 801 973-9779 FAX 801 973-2005
EMAIL: marty+adrapt%racore@mcimail.com

Neil Jarvis
Proteon International Ltd.
2 Pioneer Park, Amy Johnson Way, YORK
Y03 4TN UK
TEL: 44-1904-693409 FAX 44-1904-693067
EMAIL: neil.jarvis@proteon.com

Ivar Jeppesen Att: YyZzA
Olicom
Nybrovej 114 Lyngby
DK-2800 Denmark
TEL: 45-45-27-0141 FAX 45-45-27-01-

EMAIL: imj@olicom.dk

Allen Kasey
SMC
6 Hughes Irvine, CA
92718 USA
TEL: (714)707-2373 FAX (714)707-2460
EMAIL: allen_kasey@west.smc.com

Mr. Ken Kutzler Att: z
Bay Networks
P.O.Box 58185 Santa Clara, CA
95052 USA
TEL: (408)764-1256 FAX (408)764-1299
EMAIL: kutzler@baynetworks.com

Showi-min Shen Att: yZ
TI
PO Box 1443, MS 706 Houston, TX
77251 USA
TEL: 713 274-2166 FAX 713 274-2558

EMAIL: min7@msq.ti.com

Kevin G. Smith Att: YyZzAa
Bay Networks
4401 Great America Pkwy Santa Clara, CA
95052-8185
TEL: (408)764-1469 FAX (408)764-1940
EMAIL: kevins@baynetworks.com

Scott Valcourt Att: a
UNH-IOL
Morse Hall, Room 332 Durham, NH
03824 USA
TEL: 603 862-4489 FAX 603 862-4181
EMAIL: sav@unh.edu

Dave Wilson Att: YyZzA
Madge Networks, Sefton Park
Bells Hill, Stoke Poges Slough, Berkshire
SL2 4JS England
TEL: 44-1753-661000 FAX 44-1753-661012
EMAIL: dwilson@dev.madge.com

Ed Wong Att: YyZAB
Cabletron Systems
P.O.Box 5005 Rochester, NH
03866 USA
TEL: (603)332-9400 FAX (603)337-5550
EMAIL: wong@cptron.com