APPROVED

Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**IEEE 802.16 Working Group Session #22 Meeting Minutes**
Date Submitted	**2002-11-15**
Source(s)	Dean S.K. Chang Voice: (408) 719-9977 Aperto Networks Fax: (408) 719-9970 1637 S. Main Street [mailto:dchang@apertonet.com] Milpitas CA 95035
Re:	IEEE 802.16 Session #22 Minutes (Kauai, Hawaii, USA)
Abstract	
Purpose	To record meeting minutes.
Notice	This document has been prepared to assist IEEE 802.16. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.
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Minutes of IEEE 802.16 Session #22

IEEE 802.16 Working Group
Kauai, Hawaii, US
11-15 November, 2002

Opening Plenary

Call to Order

Chair Roger Marks called the meeting to order at 1:17pm on 11-11-2002.

Attendance

This week there are a total of 8 sessions. The minimum number of session intervals to receive attendance credit is 6 of 8 sessions.

Agenda (http:/ieee802.org/16/meetings/mtg22/opening.html)

Motion 1 Jim Mollenauer, To approve Opening Plenary agenda as presented with the modification of moving 802.18 to the end of the session, 2nd Phil Whitehead.
Motion 1 carries by unanimous voice vote

Motion 2 Brian Kiernan, To approve Minutes of Session #21 (*802.16-02/53)* and decisions therein, 2nd Zion Hadad
Motion 2 carries by unanimous voice vote.

Chair's Status Report <802.16-02/66>

Legal Announcements

802 Executive Committee

- Treasurer proposes to increase registration fees by $50
- Standard will be replaced by new revision if/when a third amendment is approved

802 Rules Change Status

- TAG rules: resolved
- change for quicker deletion of inactive members: dropped; may come back again
- SEC balloting: failed, but Mat Sherman plans a revival

802 PARs Under Consideration <http://ieee802.org/secmail/msg02918.html>

A response to a 802.15 PAR was developed by Nico van Waes. The working group made edits to this email and has decided to forward the following text to the 802.15 working group.

Regarding the 802.15.3a PAR, 802.16 has the following comments:
Please clarify in the PAR:
-the targeted frequency band
-the intended channel bandwidth
-the peak EIRP
-the power spectral density

802.11 has 2 new PARs. No concerns were raised.

802.16 PARs Under Consideration
- three PARs, all OKed at Session #21, submitted to SEC; pre-submitted to IEEE-SA NesCom
- all require WG re-approval on at Closing Plenary; then to Friday SEC meeting
- revisions allowed until 5 pm Wednesday

PAR 802.16d (802.16-02/47), for 2-11 System Profiles, and correction of errors
- The working group delegated to the TGa Chair, Brian Kiernan, the right to submit revised PAR to SEC by 5 pm Wed

PAR 1802.16.2 (802.16-02/45), for 10-66 GHz Test Suite Structure and Test Purposes
- The working group delegated to TGC the right to submit revised PAR to SEC by 5 pm Wed

PAR 802.16e (802.16-02/48r1 & 802.16-02/49), for Mobile Wireless MAN
- The working group delegated to Mobile Wireless MAN SG the right to submit revised PAR to SEC by noon Thursday
- Tuesday 6-7 pm: discussion (Handoff Call for Interest delayed til 7-7:45 pm)
- PAR comments delayed until noon Wednesday by SEC action
- PAR responses delayed until noon Thursday by SEC action
- quasi-joint meeting 8:30-10 am Tuesday (presenting 802.16e PAR to MBWA SG)

Much discussion regarding 802.16e Study Group on Mobile Wireless MAN and the Executive Committee Study Group concerned the lack of distinct identity between the two PARs.

Schedule for the Week

TG2 – Garden Isle
Mobile Wireless MAN 8-6 Tue-Thur
802.16a project is near completion, no TGa meetings are scheduled (this was changed to add a TGa session – see details under TGa section below)

Brian Kiernan and Roger Marks organized the following: 802 Tutorials, inc. Handoff Mechanisms and their Role in IEEE 802 Wireless Standards <T802.16-02/04>

Tutorial will review various handoff mechanisms and consider applicability to a common 802 handoff approach.. The tutorial is tonight from 6:30-9:30pm. Then there is a followup Call for Interest session: Tuesday 7-7:45pm to discuss handoff mechanisms.

There is interest in forming an Executive level study group on Link Layer encryption (http://www.ieee802.org/3/efm/public/nov02/sec/), possibly to develop something common across all 802 groups.

Liaison Reports

ETSI BRAN

The working group received a letter from ETSI BRAN (L802.16-02/22r1) and needs to develop a response letter.

Task Groups

TG2

Phil Whitehead, Chair

The first Working Group recirculation ballot will close during this meeting.
Objectives for this session are to resolve any comments and also complete some editing.

WG Recirc Ballot #8a in progress. Comments to date collected in 802.16-02/63r0
 - comment submission requested by 2 pm Tuesday

TGC

Ken Stanwood, Chair

Status provided by Roger Marks in Ken's absence.
Call for Comments complete on C1802.16.1-02/01; 126 comments to process in 1802.16.1-02/04

TGa

Status of P802.16a/D6:
 - completion of First Recirculation (in Sponsor Ballot) and resolution by Ballot Resolution Committee
 - RevCom submittal (802.16-02/60)
 - Second Recirculation complete (comments in IEEE 802.16-02/62)
 - Possible routes and timetable for completion of P802.16a

Problematic binding comments occured in the 2nd recirculation.

Motion 3 Marianna Goldhammer, To hold a TGa meeting in lieu of the Wireless MAN Study Group on Thursday from 1-4pm, 2nd Tal Kaitz.
Shawn Taylor – friendly amendment to limit meeting to one hour, not accepted.
Motion 3 carries 17-9.

There were 3 additional late comments that will be considered as non-binding during the TGa session.

Mobile Wireless MAN Study Group

There were 26 comments to the PAR and 5 criteria.

Concerns:
- Backward compatibility to 802.16a
- Similarity to 3GPP work
- Similarity between the two mobile PARs: 802.16 and the 802 Mobile BWA Study Group

The working group delegated the Mobile Wireless MAN Study Group to resolve the comments regarding its PAR.

802 Study Group on Mobile Broadband Wireless Access

Chair Mark Klerer made a presentation regarding the PAR for the 802 Executive Committee Study Group on Mobile Broadband Wireless Access.

PAR Scope
Develop a specification for the PHY and MAC layers of an air interface for interoperable packet-data mobile broadband wireless access systems.

Closing

Motion 4 Gene Robinson, To adjourn the meeting 2nd Remi Chayer
Motion 4 carries by unanimous voice vote.

The meeting was adjourned at 5:45pm on 11-11-2002.

Closing Plenary

Opening
Chair Roger Marks called the meeting to order at 7:10pm 14-11-2002.

Agenda
Motion1 Bob Nelson, to approve the agenda as presented, 2nd Stanwood.
Motion1 carries by unanimous voice vote

Task Group C
Chair Ken Stanwood

Motion2 To issue P1802.16.1/D1 (based on C1802.16.1-02/01 as updated by 1802.16.1-02/04r1), and initiate a Working Group Letter Ballot regarding forwarding the draft.
Motion2 carries by unanimous voice vote.

Motion3 To forward PAR 1802.16.2 (*IEEE 802.16-02/45*) to the SEC
Motion3 carries by unanimous voice vote.

Motion4 Ken Stanwood, To approve the RevCom submission of P802.16c/D4, 2nd Carl Eklund
Motion4 carries 20-0-0.

Task Group a
Chair Brian Kiernan

Brian Kiernan presented the closing report (802.16a-02/17)

Motion5 Brian Kiernan, To initiate a recirculation ballot of P802.16a/D7, as updated from P802.16a/D6 by IEEE 802.16-62r1, 2nd Carl Eklund.
Motion5 carries 26-0-0.

Motion6 Brian Kiernan, To request the SEC to grant conditional approval to forward the Draft Standard P802.16a-02 D7 to RevCom 2nd Itzik Kitroser
Motion6 carries 29-0-0.

Motion7 Brian Kiernan, To forward PAR 802.16d (IEEE 802.16-02/47) to the SEC, 2nd Ken Stanwood
Motion7 carries by unanimous voice vote.

Regulatory TAG
Chair Carl Stevenson

Carl Stevenson reviewed the closing plenary report (802.18-02/040r0).

Motion8 Brian Kiernan To endorse this proposed LMSC SEC motion: "To approve the filing with the FCC of Reply Comments in ET Docket 02-312 (Biennial Review of Part 15), contained in document 18-02-038r0, authorizing the Chair of 802.18 to do necessary editorial and formatting changes," 2nd Heinz Lycklama.

Motion8 carries by unanimous voice vote.

TG2

Chair Phil Whitehead

Phil Whitehead presented the closing plenary report (802.16.2a-02/18).

Motion9 To approve the resolutions contained in database 802.16-02/63r3, issue 802.16.2a/D3, and initiate a 15 day confirmation ballot with resolution to be considered by conference call
Motion9 carries 25-0-0.

Motion 10 To request conditional approval to forward 802.16.2a/D3 draft for Sponsor Ballot, subject to the requirements in Procedure 10 of the 802 rules (see doc 802.16.2a-02/65)
Motion 10 carries 26-0-0.

Mobile Wireless MAN Study Group

Chair Brian Kiernan

Brian Kiernan presented the closing report (802.16sgm-02/15r1).

Motion11 Brian Kiernan, To Approve the revised 802.16e PAR (802.16sgm-02/48r3) and the "Five Criteria" (802.16sgm-02/49r2) forward them to the Executive Committee, 2nd Marianna Goldhammer.
Motion11 carries 27-2-0.

Motion12 Brian Kiernan, To request the renewal of the 802.16 Mobile Wireless MAN Study Group in case the 802.16e PAR is not approved by the SEC, 2nd Shawn Taylor.
Motion12 carries 26-0-2.

Response of MBWA Study Group to Comments of 802.16 Mobile Wireless MAN Study Group

Is there a directly position from 802.16 working group regarding the MBWA Study Group PAR?

Motion13 Nico van Waes. To direct the chair to vote against the MBWA study group PAR at the SEC, 2nd Yossi Segal.
Motion13 fails 3-13-15.

802 SEC Voting Issues

Response to 802.16 comments to 802.15 regarding PAR 802.15.3a

Motion14 Nico van Waes, To direct the 802.16 chair to vote against the 802.15.3a PAR and convey the following opinion to the SEC, 2nd Marianna Goldhammer
Motion 14 carries 17-1-12.

The 802.15.3a study group has produced a PAR (doc00134.doc of the SEC server, as the (local) 802.15 website does not seem to provide a version anywhere), which manages to convey almost no tangible information apart from a targeted data-rate of 110 Mbps. The response to our questions reveals that it's going to be a license-exempt system, but even this is not mentioned anywhere in the PAR. In principle, a single PAR should not be so overly broad that it might cover such a wide range of frequency allocations that in principle it could end up with a distinct PHY for each of the allocations, as there is no single technology that covers all of bands indicated in the response

to our questions. There is no feasible way to compare proposals which address for example the 5 GHz, UWB and 60 GHz bands, because they have nothing in common apart from the targeted data-rate. It is hence to be expected that this PAR will lead to at least one PHY for each of the bands mentioned in the response to our questions, resulting in an undesirable mushrooming of PHYs within the 802.15 WG.

When searching through the documents of the 802.15.3a study group, it is not credible to maintain that the study group cannot establish a decision on narrowing down the PAR to one single band (or provide multiple PARs for the individual bands it is really considering). We do therefore believe that the 802.15.3a study group is attempting to obfuscate which band it intends to pursue, in order to circumvent any reasonable concerns other WGs might have. We hence find that insufficient information has been provided in this PAR to allow reasonable consideration by other WGs.

Further, the 802.15 WG cannot possibly claim multiple vendors in its 5 criteria for this PAR, as each of the vendors present may well have had an entirely different system/band in mind.

In addition, approving PARs which are this fuzzy on intent sets an extremely bad precedent for any future PARs, since it would allow WGs to develop systems without the merest oversight by 802 members and co-ordination by the SEC.

We therefore recommend that the 802.15 be instructed to amend its PAR to be narrower in scope and resubmit it for consideration at the following 802 plenary to allow reasonable review by other WGs.

Discussion of other PARs

Motion15 Reza Arefi To direct the chair to move at the SEC meeting for the approval of both PARs MBWA Study Group PAR and the 802.16e PAR, 2nd Mark Klerer.
Call the Question – Randall Schwartz
Call the Question fails by voice vote.
Motion15 fails 8-15-12.

Motion16 Marianna Goldhammer, To direct the chair to, if the 802.16e PAR is not approved, vote against the MBWA PAR but recommend the extension of both study groups, 2nd Tal Kaitz.
Call the Question John Fan, 2nd Randall Schwartz
Call the Question carries by unanimous voice vote.
Motion16 fails 5-11.

Motion17 Mark Klerer, The sense of the working group is that the two mobility PARs have distinct identity, 2nd Brian Kiernan.
Call the Question Randall Schwartz 2nd Aditya Agrawal
Call the Question Carries by unanimous voice vote
Motion17 fails 11-13.

Straw Polls
Provided that the 802.16e PAR is not approved, the Chair would like a sense of the group on voting to approve the MBWA PAR
Approve 10   Disapprove 13

Provided that the 802.16e PAR is approved, the chair would like a sense of the group on voting to approve the MBWA PAR
Approve 11   Disapprove 6

Case1 SEC approves 802.16e PAR now
Case2 pursue some kind of unification of the two proposed mobility projects through a study group process

Case1 15   Case2   5

Would it make sense to place the MBWA PAR in the 802.16 WG for development?
Yes 12   No 5

Future Sessions

Session #23 January 2003
Motion18: Brian Kiernan To authorize the 802.16 Working Group to carry out business at its Plenary Meetings during Session #23, even in the absence of formal quorum, 2nd Lei Wang.
Motion 18 carries 15-0.

Straw Poll
Presuming that MBWA project exists, would the group invite the MBWA Working Group to join the meeting?
Approve 20   Disapprove 0

Session #24 March 2003
Session #25 May 2003

A member reported that Stuart Kerry, Chair of 802.11, invites 802.16 to co-locate our session in May in Singapore with the other wireless groups.

Motion 19 Randall Schwartz to change the date and location of the May meeting to Singapore to accept the invitation from 802.11 2nd Aditya Agrawal
Motion 19 carries 12-7-9.

Election of Vice Chair

No declared candidates before this meeting.

Tal Kaitz nominates Naftali Chayat pending company acceptance, 2nd Marianna Goldhammer.

Motion 20 Randall Schwartz – To table the election of vice chair until the next meeting in January, Session #23 2nd Yossi Segal.
Motion 20 carries 16-5.

Publicity

Session #22 Report. Roger Marks asks the indulgence of the group to allow him to develop the Session #22 Report. There were no objections.

New Business

Liaison letter to ETSI BRAN letter L802.16-02/23r1 was accepted by the group, pending editorial revision. Any issue in having the chair issue a letter to TM4 informing them about the draft in consultation with the TG2 chair? No objections.

Motion 21 Remi Chayer To adjourn the meeting, 2nd Bob Nelson
Motion 21 carries by unanimous voice vote.

The meeting was adjourned at 10:55pm on 14-11-2002.

Attendance List: 802.16 Session #22
11-14 November 2002

This list, including 81 names, shows the individuals in attendance:

"Participation" Credit	Name\Given	Name\Family	Company	City	State\Province	Country
Yes	Aditya	Agrawal	Fujitsu Microelectronics Inc.	San Jose	CA	USA
Yes	Jaemin	Ahn	CNU			Korea
Yes	Gordon	Antonello	Wi-LAN Inc.	Calgary	AB	Canada
Yes	Reza	Arefi	ArrayComm, Inc.	Washington	DC	USA
Yes	Malik	Audeh	Trapeze Networks	Pleasanton	CA	USA
Yes	Eli	Avivi	WaveIP Ltd.	Yokneam		Israel
No	Rashmi	Bajaj	France Telecom R&D			USA
No	Krishna	Balachandran	Lucent Technologies			USA
Yes	Brian	Banister	Comtech AHA Corp.	Pullman	WA	USA
No	Rajesh	Bhalla	ZTE San Diego			USA
Yes	Baruch	Buskila	Rafael	Haifa		Israel
Yes	Dean	Chang	Aperto Networks	Milpitas	CA	USA
Yes	Naftali	Chayat	Alvarion Ltd.	Tel Aviv		Israel
Yes	Rémi	Chayer	Harris Corporation	Dollard-Des-Ormeaux	PQ	Canada
No	Alan	Chickinsky	Northrup Grumman Corp.	Chantilly	VA	USA
No	Mooi Choo	Chuah	Lucent Technologies			USA
No	Bipin	Dama	PMC-Sierra, Inc.			USA
Yes	Steve	Dick	InterDigital Communications Corp.	Melville	NY	USA
Yes	Brian	Edmonston	iCODING Technology Inc.	San Diego	CA	USA

Yes	Brian	Eidson	Conexant Systems, Inc.	San Diego	CA	USA
No	John	Fan	Flarion Technology	Bedminster	NJ	USA
Yes	Avraham	Freedman	Hexagon System Engineering	Tel-Aviv		Israel
Yes	G. Jack	Garrison	Harris Corporation	New Westminster	BC	Canada
No	Motohiro	Gochi	Speednet	Tokyo		Japan
Yes	Marianna	Goldhammer	Alvarion Ltd.	Tel Aviv		Israel
Yes	Zion	Hadad	Runcom Technologies Ltd.	Rishon Le Zion		Israel
No	Richard	Hee	ZTE San Diego			USA
Yes	Seung-Eun	Hong	ETRI	Daejeon		Korea
No	George	Iritz	Flarion Technologies	Bedminster	NJ	USA
Yes	Panyuh	Joo	Samsung Electronics Co., Ltd.	Sungnam	KYUNGGI	Korea
Yes	Tal	Kaitz	Alvarion Ltd.			Israel
No	Samir	Kapoor	Flarion Technologies	Bedminster	NJ	USA
Yes	Brian	Kiernan	InterDigital Communications Corp.	King of Prussia	PA	USA
Yes	Itzik	Kitroser	Runcom Technologies Ltd.	Rishon Lezion		Israel
No	Mark	Klerer	Flarion Technology	Bedminster	NJ	USA
Yes	Chun-Ming	Kuo	CCL/ITRI	Hsinchu		TAIWAN
Yes	Margaret	LaBrecque	Intel Corp.			USA
Yes	Jonathan	Labs	Wavesat Telecom Inc	Ville St-Laurent (Montreal)	PQ	Canada
No	Jaeyong	Lee	CNU			Korea
Yes	Seung-Hwan	Lee	ETRI	Daejeon		Korea
Yes	Lingjie	Li	Redline Communications	Markham	ON	Canada
Yes	Xiaodong (Alex)	Li	Broadstorm Telecommunications	Bellevue	WA	USA
Yes	John	Liebetreu	Intel Corp.	Scottsdale	AZ	USA

Yes	Hui-Ling	Lou	Marvell Semiconductor	Sunnyvale	CA	USA
Yes	Heinz	Lycklama	Vectrad Networks	Bothell	WA	USA
Yes	Roger	Marks	NIST	Boulder	CO	USA
No	Paul	Marzec	VOCAL Technologies, Ltd.	Buffalo	NY	USA
Yes	Russell	McKown	Raze Technologies (former)	Plano	TX	USA
Yes	Andrew	Middleton	Airspan Communications Ltd.	Uxbridge	Middlesex	UK
No	Scott F.	Migaldi	Motorola, Inc.	Schaumburg	IL	USA
No	James	Mollenauer	Technical Strategy Associates			USA
No	Ruben	Montoya	Cisco Systems, Inc.	Richardson	TX	USA
Yes	Ronald	Murias	Wi-LAN Inc.	Airdrie	AB	Canada
Yes	Slobodan	Nedic	Nedics Associates			USA
Yes	Robert	Nelson	asMos Technology	Dallas	TX	USA
No	Hiroshi	Nomura	Speednet Inc.	Tokyo		Japan
No	Hiroya	Ogawa	CRL	Yokosuka		Japan
Yes	Ajit	Patel	Intel Corp.			USA
No	Rajesh	Patel	Vayunet Systems, Inc.			USA
No	Stanley	Reible	Global Communications Devices, Inc.	Westford	MA	USA
Yes	Ron	Resnick	Intel Corp.			USA
No	Maximilian	Riegel	Siemens	Munich		GERMANY
Yes	Gene	Robinson	E. A. Robinson Consulting, Inc.	McKinney	TX	USA
Yes	Randall	Schwartz	BeamReach Networks, Inc.	Mountain View	CA	USA
Yes	Yossi	Segal	Runcom Technologies Ltd.	Rishon Lezion		Israel
Yes	Radu	Selea	Redline Communications Inc.	Markham	ON	Canada

No	Kumar	Shailendra	Vayunet Systems, Inc.			USA
Yes	James	Simkins	Xilinx	Salt Lake City	UT	USA
Yes	Jung Je	Son	Samsung Electronics	Seoul	KYUNGKI-DO	Korea
Yes	Shawn	Taylor	Wi-LAN Inc.	Calgary	AB	Canada
Yes	Bill	Thomson	Comtech AHA Corp.	Pullman	WA	US
Yes	Rainer	Ullmann	Wavesat Wireless, Inc.	Quebec		Canada
Yes	Nico	van Waes	Nokia Networks	Mountain View	CA	USA
Yes	Eyal	Verbin	Airspan Networks (Israel) Ltd.	Lod		Israel
Yes	Arthur	Wang	Proxim Corporation	Long Beach	CA	USA
Yes	Lei	Wang	Wi-LAN Inc.	Calgary	AB	Canada
Yes	Stanley	Wang	BroMax Communications, Inc.	Hsinchu		TAIWAN
Yes	Robert	Ward	SciCom, Inc.	Poway	CA	USA
Yes	Philip	Whitehead	Radiant Networks PLC	Great Chesterford	ESSEX	UK
No	Joanne	Wilson	ArrayComm, Inc.	Washington	DC	USA
Yes	Hidekuni	Yomo	Matsushita Electric Industrial Co., Ltd.	Kawasaki CIty		Japan

The IEEE 802.16 Working Group on Broadband Wireless Access Standards

IEEE 802.16 Members

Update: 13 December 2002

Number of members: 82
Next scheduled update: following Session #24 (or following WG Letter Ballot #9)

See also:

- Rights of Membership
- Acquiring and Retaining 802.16 Membership
- Potential Members
- those recently losing membership
- Members in Peril
- Observers
- Update your contact information

"+" = New Member as of Session #22

Name\Given	Name\Family	Company	City	State\Province	Country
Aditya	Agrawal	Fujitsu Microelectronics Inc.	San Jose	CA	USA
Gordon	Antonello	Wi-LAN Inc.	Calgary	AB	Canada
Reza	Arefi	ArrayComm, Inc.	Washington	DC	USA
Jori	Arrakoski	Nokia Networks	Espoo		Finland
Malik	Audeh	Trapeze Networks	Pleasanton	CA	USA
Eli	Avivi	WaveIP Ltd.	Yokneam		Israel
+Brian	Banister	Comtech AHA Corp.	Pullman	WA	USA
Anader	Benyamin-Seeyar	Advantech AMT Inc.	Dorval	PQ	Canada
Baruch	Buskila	Rafael	Haifa		Israel
Dean	Chang	Aperto Networks	Milpitas	CA	USA

Naftali	Chayat	Alvarion Ltd.	Tel Aviv		Israel
Rémi	Chayer	Harris Corporation	Dollard-Des-Ormeaux	PQ	Canada
Brian	Edmonston	iCODING Technology Inc.	San Diego	CA	USA
Brian	Eidson	Conexant Systems, Inc.	San Diego	CA	USA
Henry	Eilts	Texas Instruments, Inc.	Dallas	TX	USA
Carl	Eklund	Nokia Research Center	Helsinki		Finland
+John	Fan	Flarion Technology	Bedminster	NJ	USA
Avraham	Freedman	Hexagon System Engineering	Tel-Aviv		Israel
Andrew	Garrett	Akelia Wireless	Southampton		UK
G. Jack	Garrison	Harris Corporation	New Westminster	BC	Canada
Marianna	Goldhammer	Alvarion Ltd.	Tel Aviv		Israel
Zion	Hadad	Runcom Technologies Ltd.	Rishon Le Zion		Israel
Randy	Howell	Unique Broadband Systems	Concord	ON	Canada
Grant	Hulse	RF Magic, Inc.	San Diego	CA	USA
David	Husson	Widax Corporation	Hyannis	MA	USA
+Panyuh	Joo	Samsung Electronics Co., Ltd.	Sungnam	KYUNGGI	Korea
Tal	Kaitz	Alvarion Ltd.			Israel
Phil	Kelly	BeamReach Networks, Inc.	Sunnyvale	CA	USA
Ofer	Kelman	Marconi	LOD		Israel
Brian	Kiernan	InterDigital Communications Corp.	King of Prussia	PA	USA
Itzik	Kitroser	Runcom Technologies Ltd.	Rishon Lezion		Israel
Mark	Klerer	Flarion Technology	Bedminster	NJ	USA
Thomas	Kolze	Broadcom Corp.	Phoenix	AZ	USA

Jerome	Krinock	Radia Communications, Inc.	Sunnyvale	CA	USA
+Chun-Ming	Kuo	CCL/ITRI	Hsinchu		TAIWAN
Jonathan	Labs	Wavesat Telecom Inc	Ville St-Laurent (Montreal)	PQ	Canada
+Seung-Hwan	Lee	ETRI	Daejeon		Korea
Yigal	Leiba	Runcom Technologies Ltd.	Rishon Lezion		Israel
Moshe	Levinson	Runcom Technologies Ltd.	Rishon Le Zion		Israel
+Lingjie	Li	Redline Communications	Markham	ON	Canada
Xiaodong (Alex)	Li	Broadstorm Telecommunications	Bellevue	WA	USA
John	Liebetreu	Intel Corp.	Scottsdale	AZ	USA
Lars	Lindh	Nokia Research Center	Helsinki		Finland
Hui-Ling	Lou	Marvell Semiconductor	Sunnyvale	CA	USA
Heinz	Lycklama	Vectrad Networks	Bothell	WA	USA
Roger	Marks	NIST	Boulder	CO	USA
Russell	McKown	Raze Technologies (former)	Plano	TX	USA
Andrew	Middleton	Airspan Communications Ltd.	Uxbridge	Middlesex	UK
Apurva	Mody	Georgia Institute of Technology	Atlanta	GA	USA
+James	Mollenauer	Technical Strategy Associates	Newton	MA	USA
Ronald	Murias	Wi-LAN Inc.	Airdrie	AB	Canada
Robert	Nelson	asMos Technology	Dallas	TX	USA
Kim	Olszewski	DENSO International America, Inc.	Carlsbad	CA	USA
Manish	Patel	Navini Networks	Richardson	TX	USA
Kenneth	Peirce	Malibu Networks	El Dorado Hills	CA	USA

Subbu	Ponnuswamy	SP Wireless	Folsom	CA	USA
+Stanley	Reible	Global Communications Devices, Inc.	Westford	MA	USA
Gene	Robinson	E. A. Robinson Consulting, Inc.	McKinney	TX	USA
Shane	Rogers	Wi-LAN Inc.	Calgary	AB	Canada
Vincentzio	Roman	Runcom Technologies Ltd.			USA
Amir	Sarajedini	BeamReach Networks, Inc.			USA
Octavian	Sarca	Redline Communications Inc.	Markham	ON	Canada
Randall	Schwartz	BeamReach Networks, Inc.	Mountain View	CA	USA
Yossi	Segal	Runcom Technologies Ltd.	Rishon Lezion		Israel
Radu	Selea	Redline Communications Inc.	Markham	ON	Canada
James	Simkins	Xilinx	Salt Lake City	UT	USA
Manoneet	Singh	Radia Communications, Inc.	Sunnyvale	CA	USA
+Jung Je	Son	Samsung Electronics	Seoul	KYUNGKI-DO	Korea
Kenneth	Stanwood	Ensemble Communications	San Diego	CA	USA
Paul	Struhsaker	Texas Instruments, Inc.	Plano	TX	USA
Shawn	Taylor	Wi-LAN Inc.	Calgary	AB	Canada
+Bill	Thomson	Comtech AHA Corp.	Pullman	WA	US
David	Trinkwon	Medley Systems Ltd	Maidenhead	Berks	UK
+Rainer	Ullmann	Wavesat Wireless, Inc.	Quebec		Canada
Nico	van Waes	Nokia Networks	Mountain View	CA	USA
Arthur	Wang	Proxim Corporation	Long Beach	CA	USA
Lei	Wang	Wi-LAN Inc.	Calgary	AB	Canada

Stanley	Wang	BroMax Communications, Inc.	Hsinchu		TAIWAN
Robert	Ward	SciCom, Inc.	Poway	CA	USA
Philip	Whitehead	Radiant Networks PLC	Great Chesterford	ESSEX	UK
+Joanne	Wilson	ArrayComm, Inc.	Washington	DC	USA
Vladimir	Yanover	Alvarion Ltd.	Herzlya		Israel