**APPROVED**

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|---|---|
| Project | **IEEE 802.16 Broadband Wireless Access Working Group** <br> **<http://ieee802.org/16>** |
| Title | **Minutes of 802.16 Session #10** |
| Date Submitted | **2000-12-04** |
| Source(s) | Scott Marin      Voice: 972-424-2386 <br>                     Fax:     972-516-2202 <br> 802.16 Secretary   E-mail: smarin@ix.netcom.com |
| Re: | **802.16 Session #10 (Tampa, Florida, USA, 6-9 November, 2000)** |
| Abstract | This document records the minutes of 802.16 meetings held at 802.16 Session #10. <br><br> For further information and links to documents mentioned herein, see the IEEE 802.16 Session #10 Report <http://ieee802.**org**/16/meetings/mtg10/report.html> |
| Purpose | To record progress and decisions of the Working Group. |
| 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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| Patent Policy and Procedures | The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures (Version 1.0) <http://ieee802.org/16/ipr/patents/policy.html>, including the statement "IEEE standards may include the known use of patent(s), including patent applications, if there is technical justification in the opinion of the standards-developing committee and provided the IEEE receives assurance from the patent holder that it will license applicants under reasonable terms and conditions for the purpose of implementing the standard." <br><br> Early disclosure to the Working Group of patent information that might be relevant to the standard is essential to reduce the possibility for delays in the development process and increase the likelihood that the draft publication will be approved for publication. Please notify the Chair <mailto:r.b.marks@ieee.org> as early as possible, in written or electronic form, of any patents (granted or under application) that may cover technology that is under consideration by or has been approved by IEEE 802.16. The Chair will disclose this notification via the IEEE 802.16 web site <http://ieee802.org/16/ipr/patents/notices> . |

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**Minutes of 802.16 Session #10**
**A Plenary Session of the IEEE 802.16**
**Working Group on Broadband Wireless Access**
**Hyatt Regency Tampa, Florida, USA**
**6 to 9 November, 2000**

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 **Note: For further information and links to documents mentioned herein, see the
IEEE 802.16 Session #10 Report <http://ieee802.org/16/meetings/mtg10/report.html>**

# 1. Monday, 6 November, 2000, Opening Plenary

At 13:05, Roger Marks, 802.16 Chairman, called Session #10 to order.

Marks presented the Opening Plenary agenda (Appendix A).

> Motion#1, Brian Kiernan, 2nd Paul Struhsaker, motion to approve the agenda as presented by Roger Marks.

By voice vote, all for, Motion#1 passes.

Marks presented the schedule for the week (Appendix A)

Marks presented information about the "dot16server". Each room has a wireless hub as well as a hub for a wired (RJ45) cable connection. The IP address for the server is 10.1.1.9.

Marks reviewed the 802.16 process including the rights of all attendees and rights of members (See presentation in Appendix A).

Marks commented on the IEEE-SA sponsor ballot pool and noted that the web site contains a form that must be submitted to register for the pool. Participants need to join IEEE-SA or pay a balloting fee to join the balloting group. You must take action to register because registration is not automatic.

Scott Marin, 802.16 Secretary, introduced the attendance and membership-token books. Four attendance books (one for each task and study group) will be used. Marin announced that that the 75% attendance requirement for Session #10 is 5 of 7 intervals. Voting tokens for members and new members are in a membership token book that is circulating among the meeting rooms, and members should place the tokens on their name badge.

Marks announced that potential members indicate acceptance of membership by removing their token from the membership token book.

Marks introduced the Session #9 minutes (IEEE 802.16-00/20r1). Marin indicated that no request for changes had been received.

> Motion#2, Carl Eklund, 2nd Paul Struhsaker, to approve the minutes from Session #9.

By voice vote, all for, Motion#2 passes.

Jim Mollenauer presented Roger Marks a T-shirt with the IEEE 802.16 logo printed on the front. Marks received a round of applause for his leadership of 802.16.

Marks asked if anyone has had a problem with registration. No one responded. Marks noted that an attendance list will be turned in to 802 for cross-checking registration.

Marks showed the 802 agenda and encouraged members to attend the evening sessions and tutorials.

Marks announced that a CD-ROM of 802 standards will be distributed on Wednesday to members of working groups for personal use.

Marks announced the 802 social reception from 6:30 to 9:00 on Wednesday.

Marks read the IEEE 802.16 Patent Policy.

Marks indicated that 802.11b access points and Ethernet hubs are provided in most of the meeting rooms. Internet service in available on the network. Marks asked for volunteers to work network issues. No one volunteered.

Marks announced that he has a flash card and asked if anyone else had a card that could be used to circulate documents. Marin agreed to put files, upon request, on the 32 Mbyte flash card. George Fishel volunteered to create a CD with all server files.

Marks read announcements about membership rules, trademarks, patent and other announcements required by the IEEE.

Marks continued with 802-level topics and reported that IEEE-SA is still working on how to make 802 standards available for little or no cost.

Marks asked if anyone objected to getting rid of paper copies of tutorials provided a soft copy is available on the web. No one objected, provided the soft copy is really available.

Marks announced that Vic Hayes is leading an 802 regulatory committee and encouraged interested people to attend the meeting on Tuesday morning. Marks asked if anyone wanted to attend the meeting and noted that Gene Robinson is the 802.16 regulatory committee chairman and will be attending the meeting.

Marks reminded people of the "802all" reflector for keeping up with 802-level meeting announcements.

Marks reported that there is a proposal for 802 to organized interim meetings as well as plenary meetings, which they currently organize.

Marks commented that for the last couple 802 meetings, $75 per person has been placed in escrow for making standards available, but because the details of the standards distribution policy haven't been completed, the money will stay in escrow.

Marks announced that the 802 executive committee will potentially decide on four PARs during the week. One PAR, on the resilient packet ring, might become 802.17. 802.11 has a PAR for spectrum managed 802.11a. Marks plans no action on the PARs unless prompted to by anyone from 802.16.

Marks welcomed everyone to 802.16 and reminded people that they represent themselves and not companies in the IEEE standards process.

Marks announced that the 802.16 Vice Chair position is open but that an election will be today per the agenda. Marks announced that the 802.16 secretary is Scott Marin.

Marks announced that the 802.16 working group is guided by its PARs and that 802 is the sponsor of 802.16. Marks announced that the working group produces draft documents which are then confirmed by sponsor ballot at the 802 level.

Marks reported that the last 802.16 session (Session #9) was held in Denver, Co., USA.

Marks made some points about the web site and pages served. Marks announced that all official announcement are posted on the 802.16 reflector. Instructions for registering for the reflector are on the 802.16 web page (http://ieee802.org/16).

Marks reported that the 802.16 editorial process isn't fully documented and noted that at the closing plenary the chair will accept motions to approve a list of changes to a draft but will not accept a revised document because of the risk of confusion about what is being approved. Marks mentioned the possibility of using surplus funds from registration fees to retain professional editing help. Marks asked for comments on the editorial process. Several concerns were raised, such as the difficulty in understanding change suggestions due to the ASCII input method and late availability of a file or database containing all comments. Marks acknowledged the issues but, when asked, no one volunteered to help improve the process.

Marks introduced the topic of PAR revision (document 802.16-00/21) and summarized the history and issues with the current PAR structure. Marks conducted a Q&A session about the PAR revision, and then concluded by stating plans to request approval of the PAR changes at the Midweek Plenary. Marks also indicated plans to submit a version of the PAR changes to the 802 SEC in order to secure a place of the SEC agenda.

Marks, as chair of TG1, reported that the plan is to resolve all comments and to initiate a working group letter ballot by the end of the week. Marks mentioned that Brian Petry has taken a new job and is unable to continue involvement in 802.16. Brian Petry has been a key volunteer (editor of TG1 and TG3 Functional Requirements, Vice Chair nominee, comment database guru, and server guru) in 802.16 and his absence will be felt greatly. Jim Mollenauer, co-editor of TG1, explained the editing process as an outgrowth of the prior process used on the functional requirement document.

Andy McGregor, co-chair of TG2, presented a summary of TG2 activities and plans (see Appendix A). McGregor noted plans to complete comment resolution and release a version for letter ballot during December 2000. McGregor announced that, due to a change in job assignment, he must resign as co-chair of TG2 at the end of Session #10. Demos Kostas asked for a round of applause for Andy McGregor.

Brian Kiernan, chair of TG3, presented a draft TG3 agenda (802.16.3-00/17r1) and indicated that the functional requirements document has been completed and posted (IEEE 802.16.3-00/02r4). Brian noted that an ad hoc group was formed to discuss PHY evaluation criteria and another ad hoc group was for formed to discuss MAC issues. Both topics would be discussed later today in the TG3 meeting. Kiernan indicated that four contributions on channel models and one on traffic models had been received and will be presented. Kiernan also indicated that 20 PHY proposals were received and each will be allotted 25 minutes each for presentation. Kiernan indicated that the intention is to evaluate the proposals to determine who will be invited to submit detailed proposals.

Roger Marks, speaking in the absence of a WirelessHUMAN spokesman, indicated that the draft PAR prompted several comments, which must be addressed before submitting the PAR to the SEC for approval.

Roger Marks, in a charge to task groups, reminded attendees that you must be a working group member to vote (within a task group) and voting token is required. Marks mentioned that working group membership and tokens are not required to vote on motions within study groups.

Roger Marks introduced the topic of the empty 802.16 Vice Chair position and indicated the one declared candidate, Brian Kiernan, had volunteered for the position.

> Motion#3, Walt Roehr,  2nd Anader Benyamin-Seeyar, to elect Brian Kiernan as 802.16 Vice-chair.

Brian Kiernan declared his intention to serve as vice-chair while retaining chairmanship of TG3.

By voice vote, all for, no objections, Motion#3 passes.

Gene Robinson, 802.16 regulatory affairs committee chairman, announced an ad hoc meeting to be held Tuesday morning by the 802 regulatory affairs ombudsman, Vic Hayes. Robinson mentioned that a memorandum of understanding was being developed between IEEE-SA and ITU-R. Regarding the liaison letter that 802.16 sent following Session #9 to various regulatory agencies, responses had been received from Industry Canada, the Radio Advisory Board of Canada, and the Radiocommunications Agency of the UK.

Roger Marks indicated that three people still owed registration fee for Session #9. In addition, Marks indicated that a net surplus of about $4400 had accumulated from registration fees at that Session.

Marks summarized future meeting information as follows:

#12 March 12-15, 2001, Hilton Head SC, USA. The hotel owner may be changing. The meeting is co-located with an IEEE-SA Standards Board meeting.

#13 May 14-18, 2001, Orlando, FL, USA. 802.15 and 802.11 co-locate their interim meetings.

#14 July 9-13, 2001, Portland, OR USA.

#15 September 2001. 802.15 and 802.11 have asked 802.16 to join them and are considering Australia, Finland, and Japan.

#11 22-26 January 2001. Due to perceived security concerns, Naftali Chayat had agreed to reconsideration of the decision for him to host this meeting in Tel Aviv. One other proposal has been received to hold the meeting in Ottawa, Canada.

José Costa, on behave of Nortel, invited 802.16 to the Ottawa Crowne Plaza hotel. Costa indicated an estimated registration fee 140-150 USD and a guest room daily prices of about 79 USD. Nortel will host a dinner on Wednesday night.

> Motion#4, José Costa, 2nd Demos Kostas, to accept Nortel's proposal to host Session #11 in Ottawa.

By voice vote, all for, no objections. Motion#4 passes.

No new business was noted.

> Motion#5, Rémi Chayer, 2<sup>nd</sup> Anader Benyamin-Seeyar, to adjourn.

Without objection, Motion#5 passes.

The opening plenary was adjourned at 15:40.

## 2. Wednesday, 8 November 2000, Midweek Plenary

At 16:38, Roger Marks, Chairman of 802.16, called the Midweek Plenary to order.

Marks presented the agenda (Appendix B)

> Motion#6, Carl Eklund, 2<sup>nd</sup> ?, to approve the agenda.

All for, Motion#6 passes.

Marks asked if anyone has had registration problems. No one reported a problem.

Marks reported that the server and document distribution has had lots of problems. To solve the document distribution problem, the 802.16 files have been put on the 802.11 server (VENUS). Marks thanked Erol Yurtkuran, who has volunteered to work on the server.

Marks noted that TG1 may choose to not recommend that the draft air interface spec move to a letter ballot at the closing plenary and instead is likely to propose a structural revision of the document in order to satisfy the requirements of the TG3 Ad Hoc MAC committee that met with the TG1 editorial group for two hours Tuesday night. Carl Eklund, TG1 MAC Chair, reported resolution of all editorial comments and all but a few technical comments. Jay Klein, TG1 PHY Chair, reported completion of most of the comments and that the group is working on minimum performance requirements.

Marks announced that, due to some availability issues, a different professional editor is now being sought.

Marks concluded that TG1 is going extremely well and thanked the TG3 MAC Ad Hoc for their contributions.

Andy McGregor, TG2 co-chair, reported resolution of all comments on the draft coexistence practice. Only one issue was decided by vote rather than by full consensus; the vote on that issue was 9-0. McGregor noted plans to release revision "9d" later today and stated that the goal remains to move the document to a working group ballot at tomorrow's closing plenary. McGregor reported that a joint meeting was held with TG1 PHY. McGregor also reported that TG2 had discussed the proposed PAR changes and that TG2 supports Roger Marks's proposal. When Marks asked about the availability of a document for use in the letter ballot, McGregor indicated that Rev10 would be released tomorrow for use in the letter ballot.

Brian Kiernan, TG3 Chair, reported that all task group documents are on the server. (See presentation in Appendix B, 802163-00_18(TG3_Midweek Report.PPT)), that TG3 established transmission and channel model ad hoc committees, that TG3 decided to establish a MAC sub-committee, and that a PHY proposal scoring methodology was decided that requires score submissions via e-mail by Noon PST next Wednesday. Kiernan indicated plans for calls for

contributions on additional PHY contributions based on the scores and call for MAC evaluation criteria. Kiernan indicated that people with minimum score of 6 in any cateogry will be invited to submit PHY proposals to Session #11.

Marks introduced the topic of PAR revision and maintenance.

> Motion#7, Brian Kiernan, 2nd Andy McGregor, that the working group adopt the proposed PAR changes as stated in document 802.16-00/21.

> Motion#8, David Trinkwon, 2nd Demos Kostas, to defer consideration of the motion (Motion#7) to adopt the PAR changes until tomorrow's closing plenary.

> Motion#9, Naftali Chayat, 2nd Walt Roehr, to call the question.

By voice vote, most for, a few nays, Motion#9 passes.

Regarding Motion#8 and by token vote, 15 for, 47 against, Motion#8 fails.

Discussion continues on the motion (Motion#7) to adopt the PAR changes:

Marks temporarily turned meeting chairmanship over to Brian Kiernan to allow Marks time to find and display the PAR revision documents.

Because of confusion of the baseline and change process of IEEE standards, Marianna Goldhammer was recognized to show a chart that explains the process. Roger Marks provided some corrections to Marianna Goldhammer's chart.

Marks resumed as chair.

> Motion#10 Brian Kiernan, 2nd Demos Kostas, to reconsider the motion to defer (Motion#8) the PAR change discussion (Motion#7) until the closing plenary

> Motion#11, Carl Eklund, 2nd Eric Jacobson, to call the questions.

Without objection, Motion#11 passes.

By token vote, 36 for, 23 against, Motion#10 passes.

Durga Satapathy, WirelessHUMAN™ Chair, discussed the WirelessHUMAN™ PAR status. (See Appendix B (MidPlenary human.ppt))

> Motion#12, Durga Satapathy, 2nd Mike Stewart, that the revised WirelessHUMAN™ PAR and Six Criteria be accepted by the 802.16 WG and forwarded to the IEEE 802 SEC.

By token, 51 for, 1 against, 8 abstain, Motion#12 passes.

> Motion#13, Walt Roehr, 2nd Bakri Aboukarr, to adjourn.

By voice vote, all for, Motion#13 passes.

Marks adjourned the midweek plenary at 18:30.

## 3. Thursday, 9 November, 2000, Closing Plenary

At 15.20, Roger Marks called the meeting to order.

Marks presented a draft agenda. The agenda (See Appendix C) was approved without objection.

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Motion#14, George Fishel, 2nd José Costa, to approve the proposed agenda.

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Motion#15 Carl Eklund, 2nd David Trinkwon, to move old business to before liaison reports

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By voice vote, all for, Motion#15 passes.

By voice vote, all for, Motion#14 passes.

Regarding TG1, Carl Eklund, chairman of TG1 MAC, explained that the re-write of the air interface spec planned for a December 12-14 meeting is intended to be strictly editorial. The purpose is to restructure the document, mainly to address the TG3 concerns.

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Motion#16, Carl Eklund, 2nd Walt Roehr, to accept comment database (TG1_PHY_comments.mdb and TG1_MAC_comments.mdb).

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By voice vote, all for, Motion#16 passes.

Andy McGregor, chairman of TG2, presented a summary of TG2 activities (see Appendix°C (802.16 closing TG2.ppt)). McGregor reported that TG2 recommends that Phil Whitehead become the new Chairman of TG2.

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Motion#17, Andy McGregor, that IEEE 802.16 initiate a Working Group ballot of document IEEE 802.16.2-00/01r10 "Recommended Practice for Coexistence of Broadband Wireless Access Systems" with opening date Nov 15th 2000, closing date Dec 24th 2000 and, if needed, a re-circulation ballot with opening date Jan 9, 2001 closing date Jan 19, 2001.

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By token, 52 for, 0 against, 1 abstain, Motion#17 passes.

Marks noted that, with the passing of the previous motion, the draft coexistence practice is the first document within 802.16 to reach the ballot stage and he asked for a round of applause for the work of TG2.

Roger Marks accepted the chairmanship recommendation of TG2 and appointed Phil Whitehead as chairman of TG2.

Brian Kiernan, TG3 chairman, reported the status of TG3 (see Appendix C, 802163-00_21(802.16.3 Closing Plenary Rpt.ppt))

Roger Marks resumed PAR discussion (Motion#7) which was postponed by Motion#10.

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Motion#18, Carl Eklund, 2nd David Trinkwon, to postpone discussion on the PAR revision until the closing plenary of the January meeting (Session #11).

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By voice vote, most for, 1 against, Motion #18 passes.

Marks opened discussion on liaison.

Jay Klein gave a report on the status of ETSI BRAN.

Roger Marks explained the potential of file sharing with ETSI BRAN HIPERACCESS on a password protected web site. Marks asked for any objection to him writing a letter accepting ETSI's proposal to share documents. No one objected.

Marks noted that no reply had been received to his letter to ETSI that suggested a joint meeting in January 2001.

José Costa presented an update of the ITU-R activities (see document IEEE 802.16l-00/40).

Vic Hayes, 802 Regulatory Ombudsman, explained that there are many regulatory and sharing issues in the 5 GHz band. The purpose of his position in 802 is to streamline position papers and to establish relationship between the IEEE and regulatory bodies like the ITU-R. (RR-00-007-Draft-2-report-of-Nov-2000.ppt). Hayes also reported that the FCC has asked for a relationship to LMSC and assistance on a Part 15 revision. Hayes introduced a position paper (RR-00-006-draft-2-Proposed position paper.doc).

> Motion#19, Naftali, Chayat, 2nd Nico Van Waes, to approve doc RR00/006 draft 2 as a position paper bearing 802.16 support (in additon to unanimous 802.11 and 802.16 support) and to empower the regulatory ombudsman to format and edit the document according to style and support of 802 for the goal of obtaining the widest support possible.

By token, 35 for, 0 against, 2 abstain, Motion#19 passes.

Hayes introduced the topic of a periodic conference call with the FCC. The 802 regulatory ad hoc group concluded that a conference call with the FCC following each Plenary meeting, starting March 2001, would be a good idea. The FCC would formulate questions before the meeting. The conference call would be held on Fridays at 10 AM, Eastern time following the 802 meetings. The LMSC Regulatory Ombudsman would lead the discussion and the WG Chairs would assign respondents. Roger Marks and Durga Satapathy expressed support for Mr. Hayes's proposal.

Roger Marks announced that the preliminary 802.16 attendance count was 215 and that, through Thursday morning, 165 peopled had met the attendance criterion of 5 or more intervals. The final attendance records are contained in Appendix D. Changes to 802.16 membership, which resulted from Session #10 attendance, are contained in Appendix E.

Andy McGregor, chairman of TG2, introduced a draft letter to ETSI TM4 (Dear Dr Macchi.doc).

> Motion#20, Andy McGregor, to approve the draft letter to Dr. Macchi with corrections to include Dr. Macchi's title, latitude for editorial corrections, and clarification that the frequency range should state 10 to 66 GHz.

Without objection, Motion#20 passes (see IEEE 802.16l-00/38).

Andy McGregor introduced a draft letter to Industry Canada (Thank-you letter to Ind#103.doc).

> Motion#21, Andy McGregor, to approve the letter to Industry Canada subject to editorial revisions and to forward the letter to the 802 SEC for release approval.

Without objection, Motion#21 passes (see IEEE 802.16l-00/37).

Andy McGregor introduced a draft letter to the Radio Advisory Board of Canada (RABC) (Thank-you letter to Rad#29F.doc)

Motion#22, Andy McGregor, to approve the RABC letter subject to editorial revisions and to forward to the letter to the 802 SEC for release approval.

Without objection, Motion#22 passes (see IEEE 802.16l-00/35).

Andy McGregor, introduced a draft liaison letter to the Wireless Communications Association International (WCAI) (Thank-you letter to Wir#50E.doc)

Motion#23, Andy McGregor, to approve the WCAI letter subject to editorial revisions and to forward the letter to the 802 SEC for release approval.

Roger Marks requested the addition of a sentence that thanked WCAI for sending representatives to the 802.16 meeting and spending time resolving the comments. Andy McGregor accepted the change.

Without objection, Motion#23 was approved as modified (see IEEE 802.16l-00/36).

Roger Marks thanked TG2 for taking the time to prepare very constructive reply letters.

Brian Kiernan, TG3 chairman, introduced the topic of a liaison to ETSI BRAN specifically for subjects below 11˚GHz.

Motion#24, Brian Kiernan, that the 802.16 working group appoint a liaison to ETSI BRAN on the subject of FWA below 11 GHz. Liaison: Marianna Goldhammer, Alternate Demos Kostas.

Motion#25, David Trinkwon, 2$^{nd}$ Uzi, Padan, to amend the ETSI BRAN liaison motion (Motion#24) by changing "liaison" to "contact person."

By token, 4 for, 22 against, Motion#25 fails.

By token, 28 for, 0 against, Motion#24 passes.

Dean Chang, chairmen of the 802.16 publicity committee, introduced a draft press release (IEEE 802.16.3 standards release draft 5 11.09.00.doc). This release was edited by the Working Group.

Motion#26, Dean Chang, 2$^{nd}$ Brian Kiernan, to approve the press release subject to editorial revisions and forward the proposed press release to the 802 SEC for approval.

By voice, all for, no objections, Motion#26 passes as edited (see 802.16-00/26r0; the released version is <http://standards.ieee.org/announcements/80216key.html>).

Roger Marks introduced new business.

Marks noted that the Ottawa meeting (Session #11) would start Monday morning with task group meetings. Marks also indicated that session would end by Noon of Friday.

No one requested the floor for other new business.

Motion#27, Arun Arunachalam 2$^{nd}$ Andy McGregor, to adjourn Session #10.

Without objection, Motion#27 passes.

At 17.50, Marks declared Session #10 adjourned.

## 4. Acknowledgements

The 802.16 secretary would like to thank the sub-group chairs (Carl Eklund, Jay Klein, Andy McGregor, Brian Kiernan, and Durga Satapathy) and the people who took care of the attendance books (Ron Myers, Paul Thompson, Carl Bushue, and Ken Peirce) for the good work to keep up with the books and to summarize the attendance at the end of the session.

Respectfully,

Scott Marin

802.16 Secretary

# Appendix A, Opening Plenary Presentations

## Opening Plenary Agenda

| | | |
|---|---|---|
| **Opening** | | **13:00** |
| Call to Order | Marks | I |
| 802.16 Server: http://10.1.1.9 (DHCP) | Marks | I,V |
| Presentation and Approval of 802.16 Opening Plenary Agenda | Marks | I,V |
| Schedule of meetings for the week | Marks | I,V |
| | | |
| **Membership and Voting** | | **13:10** |
| Rights of members, observers, and others | Marks | I |
| Obtaining and Retaining Membership and Observer Status | Marks | I |
| Membership list | Marks | I |
| Potential Members offered opportunity to declare membership | Marks | I |
| Members in Peril: lose membership without Session #10 Participation | Marks | I |
| Observer list | Marks | I |
| Potential Observers | Marks | I |
| Balloting Pool/Balloting Group (65 currently enrolled) | Marks | I |
| Attendance list procedure | Marin | I |
| Voting token procedure | Marin | I |
| Quorum not required at this meeting | Marks | I |
| | | |
| **Approvals** | | **13:18** |
| Motion: To Approve Minutes of Session #9 (IEEE 802.16-00/20r1) | Marks | V |
| | | |
| **Announcements** | | **13:20** |
| Registration | Marks | I |
| 802 Agenda | Marks | I |
| 802 Evening Sessions | Marks | I |
| Low Rate WPAN Tutorial (802.15): Monday 6:30-8 pm | Marks | I |
| WirelessHUMAN Discussion (802.16): Monday 8-9:30 pm (discuss later) | Marks | I |
| Call for Interest on Ethernet in the Last Mile (802.3): Tuesday 6:30-9:30 pm | Marks | I |
| Space is at a premium this week | Marks | I |
| 2001 802 CD-ROM's for WG (Voting) Members (Wednesday 1 pm) | Marks | I |
| Wednesday Social Reception | Marks | I |
| Document distribution | Marks | I |
| Individual and Anti-Trust | Marks | I |
| IEEE 802.16 Patent Policies and Procedures | Marks | I |
| | | |
| **IEEE 802** | | **13:25** |
| 802 Standards Distribution Status: may need a new plan | Marks | I |
| Paperless Tutorials will be up for a vote | Marks | I |
| 802 Wireless Regulations: Tues 8-10 am (Esplanade 3) | Marks | I |
| emailto **majordomo@majordomoieee.org** with the message **subscribe 802all** | Marks | I |
| 802 Interim Meeting Proposal | Marks | I |
| PARs under consideration this week (comments due 5 pm Tuesday) | Marks | I |
| Resilient Packet Ring | Marks | I |

| | | |
|---|---|---|
| 802.11 Spectrum Managed 802.11a | Marks | I |
| 802.15 Low Rate | Marks | I |
| 802.16 WirelessHUMAN (discuss later) | Marks | I |
| | | |
| **802.16 Report** | | **13:30** |
| 802.16 Chair's Report | Marks | I,D |
| 802.16 Editorial Process | Marks | I,D |
| Professional Editorial Assitance | Marks | I,D |
| 802.16 PAR Revision and Maintenance | Marks | I,D |
| | | |
| **Task Group 1** | | **13:50** |
| Status | Marks | I |
| Editing | Marks, Mollenauer | |
| TG1 MAC | Eklund | |
| TG1 PHY | Klein | |
| | | |
| **Task Group 2** | | **14:00** |
| Report | McGregor | I |
| | | |
| **Task Group 3** | | **14:10** |
| Report | Kiernan | I |
| | | |
| **WirelessHUMAN** | | **14:20** |
| Report | Satapathy | I |
| | | |
| **Charge to Task Groups** | Marks | **14:30** |
| Voting in Task Groups and Study Groups | Marks | I |
| | | |
| **Election of 802.16 Vice Chair** | | **14:32** |
| 802 Rules: election subject to 802 ExCom confirmation | | |
| Declared Candidates | | |
| Brian Kiernan | | |
| Other Candidates | | |
| Election | Marks | V |
| | | |
| **Regulatory Affairs Committee** | | **14:40** |
| Report | Robinson | I |
| | | |
| **Past Sessions** | | **14:45** |
| Session #9 Report | Marks | I |
| | | |
| **Future Sessions** | | **14:50** |
| Session #12, #13, and #14 | | I |
| Session #15: September, 2001 | | I |
| Joint with 802.11 & 802.15? | | D |
| Australia, Finland, and Japan are candidate sites. | | D |
| | | |
| **Session #11 Site Selection** | | **14:42** |

| | | |
|---|---|---|
| January 22-26, 2001 | | I |
| Withdrawal of Tel Aviv decision volunteered by Naftali Chayat | Chayat | I |
| Proposals | | |
|   Ottawa, Ontario, Canada | Costa | I |
|   Boulder, Colorado, USA | Marks | I |
| Decision | Marks | V |
| | | |
| **New Business** | | **14:58** |
| | | |
| **Closing** | | **15:00** |
| Adjournment of Opening Plenary | Marks | V |

## Agenda for the Week

| | Morning | Afternoon | Evening |
|---|---|---|---|
| **Sun** | 802 Registration Desk<br>Sun 5-8p, Mon-Thu: 8a-5p<br><br>802 Registration Office<br>Sun 5-8p, Mon-Fri: 8a-5p<br>Ybor Room | | 802 Wireless<br>5:30-6:30 pm<br><br>802 Rules<br>7-8 pm |
| **Mon** | 802 ExCom Meeting<br>8-10:30 am<br>Buccaneer A-B (230) | 802 Opening Plenary 11 - 12 am Regency 1-3    802.16.3 Evaluation Criteria 12-1 pm Buccaneer A (230)    802.16 Opening Plenary 1-3 pm Buccaneer A (230)    802.16.1 PHY 3:30-5:30 pm Buccaneer D (30)    802.16 MAC 3:30-5:30 pm Buccaneer C (35)    802.16.2 3:30-5:30 pm Buccaneer A (35)    802.16.3 3:30-5:30 pm Buccaneer B (80)    WirelessHUMAN 3:30-5:30 pm Garrison 1+2 (24) | **802 Tutorial #1**<br>6:30-8 pm<br>Regency 1-3<br>Low Rate WPANs<br><br>**802 Tutorial #2**<br>8-9:30 pm<br>Regency 1-3<br>Implications of the proposed WirelessHUMAN PAR on the 802 wireless program |
| **Tue** | 802.16.1 PHY<br>8 am-6 pm<br>Buccaneer D (30)<br><br>802.16 MAC<br>8 am-6 pm<br>Buccaneer C (35)<br><br>802.16.2<br>8 am-6 pm<br>Buccaneer A (35)<br><br>802.16.3<br>8 am-6 pm<br>Buccaneer B (80)<br><br>WirelessHUMAN<br>8 am-6 pm<br>Garrison 1+2 (24) | | 802.16 MAC<br>7:30-9:30 pm<br>Buccaneer C (35)<br><br>**802.3 Call For Interest:**<br>**Ethernet in the Last Mile**<br>6:30-9:30 pm<br>Regency 1 |

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|  | 802 Wireless Regulations Esplanade 3 8:00-10 am | 802 Wireless Marketing 10:30-12 am |  |
|---|---|---|---|
| **Wed** | 802.16.1 PHY 8 am-4 pm Buccaneer D (30) / 802.16 MAC 8 am-4 pm Buccaneer C (35) / 802.16.2 8 am-4 pm Buccaneer A (35) / 802.16.3 8 am-4 pm Buccaneer B (80) / WirelessHUMAN 8 am-4 pm Garrison 1+2 (24) | 802.16 Midwe Plenary 4:30-6 pm Buccaneer A- (230) | 802 Social 6:30-9 pm Gaspariallas |
| **Thur** | 802.16.1 PHY 8 am-3 pm Buccaneer D (30) / 802.16 MAC 8 am-3 pm Buccaneer C (35) / 802.16.2 8 am-3 pm Buccaneer A (35) / 802.16.3 8 am-3 pm Buccaneer B (80) / WirelessHUMAN 8 am-3 pm Garrison 1+2 (24) | 802.16 Closin Plenary 3-5 pm Regency 2 (17 | 802 ExCom Meeting 7 pm-12 midnight Regency 2 |
| **Fri** | 802.16 Editorial Meeting 8-11:00 am Regency 6 | - | |

# Chairman's Opening Plenary Presentation





802.16 Web Server

http://10.1.1.9

IEEE 802.16
Working Group on
Broadband Wireless Access
(BWA)

**Session #10**

**Opening Plenary**

6 November 2000

1:00-3:00 pm

---

IEEE 802.16
Working Group on
Broadband Wireless Access
(BWA)

**Session #10**

**Chair's Report**

802.16 Opening Plenary

6 November 2000

---

### Welcome

- **802.16 Culture (ala IEEE 802 culture)**
  - **Engineering Membership**
  - **Seeking Technical Consensus**
  - **Open (even by 802 standards)**
  - **Procedural and Fair**
  - **Contribution-Driven**
- **802 is extremely successful**
  - **802 is following the model**
  - **excellent record of progress**

---

### 802.16 Officers

- **Chair: Roger Marks**

- **Vice Chair: [open]**

- **Secretary: Scott Marin**

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### Basic Process

- **PAR: Project Authorization Request**
  - **Guiding document for IEEE standards development project**
  - **First 802.16 PAR written in Jan. 1999**
- **IEEE 802 Oversees Our Work**
- **Working Group produces Draft in accordance with PAR**
  - **Working Group Letter Ballot**
- **Sponsor Letter Ballot**
  - **Reviews draft**
  - **Open to interested individuals**

---

### 802.16 Session #9

- **11-15 September 2000**
- **Denver, CO**
  - **With RAWCON2000**
    - **IEEE Radio & Wireless Conference**
- **147 people**
- **Full report on web**

---

### Resources

- **http://ieee802.org/16**
- **http://wirelessman.org**
  - > 430,000 web files served in September

- **THIS WEEK: http://10.1.1.9**

- **Reflector**
  - **Sign up on web**
  - **Read archives on web**

---

### 802.16 Editorial Process

- **Chair tasked to define**

- **Not yet complete**

- **Key element**
  - **At Closing Plenary, WG will consider motions to approve Change List, not revised document**

---

### Professional Editorial Help

- **Working on Plan:**
  - **Editorial assistance from freelance professional editors**
  - **Freelancer are contracted with through IEEE-SA**
  - **802.16 funds contracts through its reserves**
  - **Selected a key freelancers**
  - **Awaiting IEEE-SA final approval**

---

### Task Group 1

- **Air Interface for Fixed Broadband Wireless Access Systems**
  - **10-66 GHz**
- **Task Group Review**
  - **>20,000 downloads**
  - **315 comments resolved at Sess. #9**
- **Working Group Review**
  - **~600 comments to resolve**
- **Goal: initiate WG Letter Ballot**

## Resources

- **http://ieee802.org/16**
- **http://wirelessman.org**
  > 430,000 web files served in September

- **THIS WEEK: http://10.1.1.9**

- **Reflector**
  - **Sign up on web**
  - **Read archives on web**

## Charge to Task Groups

- Complete the task on your agenda
  - Update agenda on bulletin board
- Prepare for next meeting
  - Call for Contributions, etc.
- Prepare for Closing Plenary
  - All motions to be in writing
- Document everything
  - submit documents before you leave
  - provide document index on bulletin board
- Presentations to Librarian 2 hours in advance

## Voting in Task Groups

- Only 802.16 Voting Members may vote in task Group meetings
  - Show Voting Token

- All those present are eligible to vote at Study Group meetings

# TG2  Status  Report

---

**802.16 Task Group 2**

Andy McGregor

co-chair

Leland Langston, co-chair
Remi Chayer, vice-chair
Vito Scaringi, editor

6 Nov 2000, A.McGregor        IEEE 802.16 Opening Plenary        TG2 -1

---

**802.16.2 Status**

- ¥ IEEE 802.16.2-00/01r9  Recommended Practice for Coexistence of Broadband Wireless Access Systems

- ¥ Call for Comments opened 8th October, closed 1st November (3rd Nov for WCA)

- ¥ Interim meeting held 25/26th October in Ottawa, resolved 115 comments (see minutes IEEE 802.16.2-00/08r1)

6 Nov 2000, A.McGregor        IEEE 802.16 Opening Plenary        TG2 -2

---

**802.16.2 Interim #9.5, Ottawa**

- ¥ 9 participants
- ¥ Most Comments were editorial — all resolved
- ¥ Agenda
  - Comment Resolution (115)
    - ¥ Rebecca Chan (4)
    - ¥ Phil Whitehead (1)
    - ¥ Andy McGregor (57)
    - ¥ RABC (4)
    - ¥ Barry Lewis (24)
    - ¥ TG2 discussion (25)
  - Draft Comments to TG1/PHY on Coexistence
  - Review Timeline

6 Nov 2000, A.McGregor        IEEE 802.16 Opening Plenary        TG2 -3

---

**TG2 Agenda for Tampa**

- ¥ Comment Resolution
  - Andy McGregor / IEEE Project editor (4+6)
  - Jack Garrison (1)
  - Barry Lewis (1)
  - Scott Marin (30)
  - WCA
  - TG2 Discussion
- ¥ PAR Maintenance
- ¥ Joint TG1/TG2(PHY) meeting on  TG2 comments to TG1
- ¥ WG Ballot
  - Review Timeline & Procedure for WG Ballot (Nov 15-Dec 24)
    - ¥ Teleconference / Interim meeting early January? (Recirc Jan 8-19)
  - Review Draft Motion for WG Ballot
  - Review updated pre-Rev10 doc (goal: on Server by Noon Thursday)
- ¥ Discuss Sub-11 Coexistence Practice
- ¥ Any other Business

6 Nov 2000, A.McGregor        IEEE 802.16 Opening Plenary        TG2 -4

TG2 Comments to TG1 (PHY)

¥ Four comments on Coexistence Issues sent to TG1 reflector
— Add section 3.6.6 Antenna Performance (from TG2 section 6.2, but TG1 may be tighter than TG2)
— Text for sections 3.6.3.2/3.6.4.4 Unwanted Conducted Emissions (from TG2 section 6.1.4)
— ATPC 15dB dynamic range
— EIRP limits (from TG2 section 6.1.1)

6 Nov 2000, A.McGregor        IEEE 802.16 Opening Plenary        TG2 -5



Draft TG2 Motion

¥ At closing Plenary, TG2 hopes to request the WG to start a Working Group Letter ballot

¥ Draft Motion:

That IEEE 802.16 initiate a Working Group ballot of document IEEE 802.16.2-00/01r10 Recommended Practice for Coexistence of Broadband Wireless Access Systems with opening date Nov 15th 2000, closing date Dec 24th 2000 [40 days]

(possibility of re-circulation ballot in early Jan, if needed)

6 Nov 2000, A.McGregor        IEEE 802.16 Opening Plenary        TG2 -6



TG2 Documents

¥ New r9 Comments
— Reflector: A.McGregor, S.Marin, WCA
— Contributions: 802162c-00/21 (JG), 802162c-00/22 (BL)
¥ Draft r9.5 working doc (with change marks from Interim) (goal: on server at opening plenary)
¥ Spreadsheet of Comments: resolved & outstanding
¥ Historical - Interim meeting
— Reflector: R.Chan, A.McGregor, RABC
— Contributions: 802162c-00/20 (PW), 802162c-00/23 (BL)
¥ Relevant Liaisons
— 80216l-00_33 (IC), 80216l-00_34 (RABC)

6 Nov 2000, A.McGregor        IEEE 802.16 Opening Plenary        TG2 -7



Chair of TG2

¥ Due to change in job function, Andy McGregor must resign as co-chair following Tampa meeting

¥ Have fun in 2001 (the real new millennium)

6 Nov 2000, A.McGregor        IEEE 802.16 Opening Plenary        TG2 -8

# Appendix B, Midweek Plenary Presentations

## Midweek Plenary Agenda

| Opening of Midweek Plenary Meeting | | 16:30 |
|---|---|---|
| Call to Order | Marks | I |
| Presentation and Approval of 802.16 Midweek Plenary Agenda | Marks | V |
| Schedule Update | Marks | V |

| | | |
|---|---|---|
| | | |
| **Announcements** | | **16:35** |
| Registration | Marks | I |
| Document distribution | Marks | I |
| Attendance books, badges, etc. | Marin | I |
| | | |
| **Task Group Reports** | | **16:40** |
| Task Group 1 | Marks | I |
| Task Group 2 | McGregor | I |
| Task Group 3 | Kiernan | I |
| | | |
| **802.16 PAR Revision and Maintenance** | | **16:50** |
| Proposal (see also Contribution 802.16-00/21 of Marks, Kiernan, McGregor) | Marks | I,D,V |
| | | |
| **WirelessHUMAN PAR Approval** | | **17:10** |
| Motion to Forward Revised WirelessHUMAN PAR to 802 ExCom | Satapathy | I,D,V |
| | | |
| **Charge to Task Groups** | Marks | **17:40** |
| | | |
| **Liaison** | | **17:42** |
| ITU | Costa | |
| ETSI BRAN | Klein | |
| | | |
| **Closing** | | **17:55** |
| New Business | Marks | V |
| Adjournment of Opening Plenary | Marks | V |

## Midweek WirelessHUMAN Report

**Midweek Plenary WirelessHUMAN PAR Presentation**

IEEE 802.16 Presentation Submission Template (Rev. 8)
Document Number:
  [The appropriate coordinator, normally the Task Group Chair, will fill in this number after obtaining it from the 802.16 Chair. The document number will match that of the base contribution, with "p" replacing "c". For example: 802.16.1p-00/   nn].
Date Submitted:
  [2000-11-08.]
Source:
  [Durga Satapathy]                    [Voice:(913) 534-6338]
  [Sprint]                             [Fax:   (913) 534-6522]
  [7101 College Blvd, Suite 1436 B]    [mailto: dsatap01a@sprintspectrum.com]
  [Overland Park, KS 66210]
Venue:
  [IEEE 802.16 Session #10]
Base Document:
  [If this presentation illustrates an 802.16 document, cite the document number and URL <http://ieee802.org/16/...>.]
Purpose:
  [WirelessHUMAN Study Group presentation at midweek plenary]
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.
Release:
  The contributor grants a free, irrevocable license to the IEEE to incorporate text contained in this contribution, and any modifications thereof, in the creation of an IEEE Standards publication; to copyright in the IEEE's name any IEEE Standards publication even though it may include portions of this contribution; and at the IEEE's sole discretion to permit others to reproduce in whole or in part the resulting IEEE Standards publication. The contributor also acknowledges and accepts that this contribution may be made public by IEEE 802.16.
IEEE 802.16 Patent Policy:
  The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures (Version 1.0) < http://ieee802.org/16/ipr/patents/policy.html>, including the statement "IEEE standards may include the known use of patent(s), including patent applications, if there is technical justification in the opinion of the standards-developing committee and provided the IEEE receives assurance from the patent holder that it will license applicants under reasonable terms and conditions for the purpose of implementing the standard."
  Early disclosure to the Working Group of patent information that might be relevant to the standard is essential to reduce the possibility for delays in the development process and increase the likelihood that the draft publication will be approved for publication. Please notify the Chair < mailto:r.b.marks@ieee.org> as early as possible, in written or electronic form, of any patents (granted or under application) that may cover technology that is under consideration by or has been approved by IEEE 802.16. The Chair will disclose this notification via the IEEE 802.16 web site < http://ieee802.org/16/ipr/patents/notices>.

## WirelessHUMAN™ Update

¥ Addressed concerns of 802.11 and 802.15 in Monday's Tutorial Session
  —Participated in 802.11 5G Harmonization Meeting
¥ Evaluated formal comments from WGs
¥ Revised PAR and Criteria
¥ Initiated work on Call for Contributions

## Key Concerns from 802.11 as Understood by WirelessHUMAN Study Group

¥ Should the WirelessHUMAN standard exist at all?
  —Do regulations limit potential? Is there broad market potential?
¥ Where does WirelessHUMAN belong? 802.16 or 802.11?
¥ Will WirelessHUMAN systems cause significant interference to 802.11 devices?
¥ Can the interference be mitigated? Co-existence between MAN and LAN? Need Spectral Etiquette. Channel spacing should be correlated to minimize interference
¥ Spectrum partitioning consistent with globalization
¥ Part of 5 GHz Globalization effort

## Response of Study Group

¥ Regulations do not forbid service deployment
  —e.g. Metricom, startup ISPs
  —AT&T Project Angel uses PCS and ISM bands
¥ WirelessHUMAN belongs in IEEE 802.16
¥ Interference is possible
  —Develop an etiquette for co-existence
    ¥ Dynamic Channel Allocation; Adaptive power control
    ¥ Different Frequency bands
    ¥ Other solutions developed jointly

## Some Suggestions from 802.16

¥ Work with 802.11/802.15 to develop strategies to mitigate mutual interference and facilitate co-existence, as well as the 5 Ghz Globalization efforts
¥ Cooperate to develop mutually beneficial scenarios (or new standards)
  —Use 802.16 systems to interconnect/trunk 802.11 systems
  —Use LANs to extend MAN services cost-effectively

## 5 GHz Globalization Effort

¥ Participation in 802.11 Meeting on 5 GHz Global Harmonization Effort
¥ Key issues
  —ITU requests elimination of 5.25-5.35 GHz band for outdoor use and requests reduced EIRP for indoor applications
  —FCC is revisiting Part 15 rules
  —Potential impact on WirelessHUMAN systems
¥ Group intends to actively participate

## IEEE 802.15 Response to PAR

¥ MOTION: Moved that to secure the official support of 802.15, the working group wants to see language in the WirelessHUMAN PAR, as part of the scope, that requires co-existence with other applications in the unlicensed bands and also that the issue of coexistence be explicitly addressed as the sixth criteria in the five criteria document.

¥ Suggestion for Sixth Criteria: We have identified WirelessHuman co-existence with WLANs and WPANs as a critical success factor.

## Message to IEEE 802.11

¥ The 5GSG believes that IEEE 802 should develop a set of co-existence and/or spectrum sharing guidelines to guarantee non-interference amongst its own wireless standards, currently 802.11/15 and 16. This should be done as soon as possible.
¥ We fully endorse the work of IEEE 802 regulatory Ad Hoc Group in their efforts to achieve global spectrum harmonization, and will offer our help as required. We would also like to invite the members of that group to attend our joint 5GSG WLAN Globalization group meetings.

## IEEE 802.11 5GSG response to WirelessHUMAN PAR

¥ This group believes that the approval of new standards in the 5GHz unlicensed bands should be consistent with the guidelines
  —Specifically, we have concerns about compatibility and distinct identity of WirelessHUMAN (802.16.1b), WPAN Low Rate (802.15.4) and WPAN High Rate (802.15.3) to the extent that they will operate in the 5 GHz unlicensed bands.
  —Without co-existence guidelines, the broad market acceptance of all of these standards is threatened.

## Revised PAR Scope

This standard specifies the medium access control layer and physical layers of the air interface of interoperable fixed point-to-multipoint broadband wireless access systems. The specification enables transport of data, video, and voice services. Physical layers are specified for both licensed and license-exempt bands.

This Amendment expands the scope of the original project by extending it to license-exempt bands (thereby defining the Wireless High-Speed Unlicensed Metropolitan Area Network [**WirelessHUMAN™** ] Standard). It specifies the physical layer and medium access control layer of the air interface of interoperable fixed broadband wireless metropolitan area network systems, including point-to-multipoint.

### Revised PAR Scope

**PAR:** The standard enables access to data, video, and voice services with quality of service in unlicensed bands designated for public network access. It will focus on the 5-6 GHz range and may be applied to unlicensed bands between 2 and 11 GHz. It will address strategies for coexistence with other unlicensed applications. The project will utilize or modify applicable elements from the following:

MAC: IEEE 802.16

PHY: IEEE 802.11a; ETSI BRAN HIPERLAN/2

### Revisions: Criteria

**Sixth Criteria added to Five Criteria List**

We have identified mutual coexistence of WirelessHUMAN (High-Speed Unlicensed Metropolitan Area Networks), WLANs and WPANs as a critical success factor.

### Revision: Purpose

To enable rapid worldwide deployment of innovative, cost-effective, and interoperable multivendor broadband wireless access products. To facilitate competition in broadband access by providing alternatives to wireline broadband access. To facilitate coexistence studies, encourage consistent worldwide allocation, and accelerate the commercialization of broadband wireless access spectrum.

This Amendment enhances the original project by extending it to license-exempt bands. It will identify techniques to tolerate interference in the unlicensed bands, facilitate strategies for coexistence with other unlicensed band systems such as 802.11a, and maximize the carrying capacity in the unlicensed bands. and facilitate strategies for coexistence with other unlicensed band systems such as 802.11 and 802.15. It will encourage consistent worldwide spectrum allocation and accelerate the commercialization of unlicensed broadband wireless access spectrum. Utilization of unlicensed frequencies will address a market that includes residences, small office-home office (SOHO), telecommuters, and small and medium enterprises (SME).

### MOTION

The revised WirelessHUMAN™ PAR and Six Criteria be accepted by 802.16 WG to forward to the IEEE 802 SEC.

## TG3 Report at Midweek Plenary

### 802.16.3 Mid Week Plenary Report

¥ Completed Initial PHY Evaluation Criteria and Scoring Matrix

¥ Formed a Channel Model AdHoc (Vinko Erceg) to consolidate inputs and create a single model for TG3 review and use

¥ Formed a Traffic Model Ad Hoc (Rick Baugh) to collect more inputs and create a consolidated model for TG3 review and use

¥ Formed a TG3 MAC subcommittee (Subir Varma) to address development of TG3 MAC requirements and evaluation criteria and coordinate with TG1 MAC group

¥ Completed 20 PHY proposal presentations —***kudos to authors!!***

¥ PHY proposal scoring methodology explained and in process (votes due NLT noon next Wednesday)

¥ PAR revisions discussed

¥ Currently expect two Calls for Contributions — PHY proposals and MAC Evaluation Criteria

## Appendix C, Closing Plenary Presentations

## 802.16 Session #10: Closing Plenary Meeting Agenda

| Opening | | 15:00 |
|---|---|---|
| Call to Order | Marks | I |
| Agenda | Marks | V |
|  |  |  |
| Announcements | | 15:03 |
| Document distribution | Marks | I |

| | | |
|---|---|---|
| **Task Group 1** | | **15:05** |
| Report | Marks | I |
| Motion: To accept the TG1 comment resolutions (MAC and PHY) | Marks | V |
| | | |
| **Task Group 2** | | **15:15** |
| Report | McGregor | I |
| New Chair | McGregor | I |
| Motion to foward draft to WG letter ballot | McGregor | V |
| Liaison Letters | McGregor | V |
| | | |
| **Task Group 3** | | **15:30** |
| Report | Kiernan | I |
| Motions | Kiernan | V |
| | | |
| **Liaison** | | **15:45** |
| ETSI BRAN | Klein | I,D |
| ETSI BRAN Password | Marks | I |
| ITU | Costa | I |
| 802 Regulatory Affairs | Hayes | V |
| | | |
| **Old Business** | | **16:15** |
| 802.16 PAR Revisions | Marks | V |
| | | |
| **Publicity** | | **16:30** |
| Press Release | Chang | V |
| | | |
| **802 Motions** | | **16:45** |
| Confirmation of Vice Chair | Marks | I |
| Approval of PAR Revisions | Marks | I |
| Approval of WirelessHUMAN PAR | Marks | I |
| Approval of Press Release | Marks | I |
| Approval of Liaison Letters | Marks | I |
| | | |
| **New Business** | | **16:50** |
| | | |
| **Closing** | | **17:00** |
| Adjournment of Opening Plenary | Marks | V |

**I=Information D=Discussion V=Vote**

# TG2 Closing Presentation

802.16 Task Group 2

Andy McGregor

co-chair

**Leland Langston, co-chair**
**Remi Chayer, vice-chair**
**Vito Scaringi, editor**

9 Nov 2000, A.McGregor        IEEE 802.16 Opening Plenary        TG2 -1

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802.16.2 Progress

¥ Working Document: IEEE 802.16.2-00/01r9 Recommended Practice for Coexistence of Broadband Wireless Access Systems

¥ Call for Comments opened 8th October, closed 1st November (3rd Nov for WCA)

¥ Interim meeting held 25/26th October in Ottawa, resolved 115 comments (see minutes IEEE 802.16.2-00/08r1)

¥ Tampa meeting, resolved 177 comments by consensus and one by vote (9:0 for retaining original text)

¥ Presented four comments to TG1 with acceptable resolution

¥ Reviewed and supported the Par Revision document

9 Nov 2000, A.McGregor        IEEE 802.16 Opening Plenary        TG2 -2

---

TG2 Agenda for Tampa

¥ Update to Ottawa resolutions
¥ Comment Resolution (174)
— Andy McGregor / IEEE Project editor (4+6)
— Jack Garrison (1)
— Barry Lewis (1)
— Scott Marin (30)
— WCA (13+22)
— Leland Langston (97)
¥ PAR Maintenance
¥ Joint TG1/TG2(PHY) meeting on TG2 comments to TG1
¥ WG Ballot
— Review Timeline & Procedure for WG Ballot (Nov 15-Dec 24)
¥ Teleconference / Interim meeting early January? (Recirc Jan 8-19)
— Review Draft Motion for WG Ballot
— Review updated pre-Rev10 doc (goal: on Server by Noon Thursday)
¥ New chairman

9 Nov 2000, A.McGregor        IEEE 802.16 Opening Plenary        TG2 -3

---

TG2 Comments to TG1 (PHY)

¥ Four comments on Coexistence Issues sent to TG1 reflector
— Add section 3.6.6 Antenna Performance (from TG2 section 6.2, but TG1 may be tighter than TG2)
¥ TG1 decided not to include
— Text for sections 3.6.3.2/3.6.4.4 Unwanted Conducted Emissions
¥ Accept cross-reference from TG2 section 6.1.4
— ATPC 15dB dynamic range
¥ TG1 current text is tighter
— EIRP limits
¥ Accept cross-reference from TG2 section 6.1.1

9 Nov 2000, A.McGregor        IEEE 802.16 Opening Plenary        TG2 -4

---

TG2 Motions for Ballot

That IEEE 802.16 initiate a Working Group ballot of document IEEE 802.16.2-00/01r10 Recommended Practice for Coexistence of Broadband Wireless Access Systems with opening date Nov 15th 2000, closing date Dec 24th 2000 and if needed, a re-circulation ballot with opening date Jan 9th, closing date Jan 19th

IEEE 802.16.2-00/01r10 will be a clean text version of document IEEE 802.16.2-00/01r9d which is on the server and visibly includes all additions and deletions from the Task Group balloted version. There are still a few purely editorial changes outstanding
- minor spelling correction
- re-drawing of a few diagrams

9 Nov 2000, A.McGregor        IEEE 802.16 Opening Plenary        TG2 -5

---

Chair of TG2

¥ Due to change in job function, Andy McGregor must resign as co-chair following Tampa meeting

¥ The task group recommends that Phil Whitehead be appointed co-chairman with Leland Langston

9 Nov 2000, A.McGregor        IEEE 802.16 Opening Plenary        TG2 -6

---

Letters

¥ Thank-you letters to external comment responders
— Industry Canada
— RABC
— WCA

¥ Liaison to ETSI requesting authorization to include approx 1 page of an ETSI document in the Coexistence Practice

9 Nov 2000, A.McGregor        IEEE 802.16 Opening Plenary        TG2 -7

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# TG3 Closing Presentation

802.16.3 Closing Plenary Report

¥ Completed Initial PHY Evaluation Criteria and Scoring Matrix

¥ Formed a Channel Model Ad Hoc (Vinko Erceg) to consolidate inputs and create a single model for TG3 review and use

¥ Formed a Traffic Model Ad Hoc (Rick Baugh) to collect more inputs and create a consolidated model for TG3 review and use

¥ Formed a TG3 MAC subcommittee (Subir Varma) to address development of TG3 MAC requirements and evaluation criteria and coordinate with TG1 MAC group

---

802.16.3 Closing Plenary Report

¥ Completed 20 PHY proposal presentations — *kudos to authors and presenters!!*

¥ PHY proposal scoring methodology explained and in process-votes due NLT noon PST Nov 15 2000

¥ 802.16 PAR revisions discussed

¥ Currently plan three Calls for Contributions — PHY proposals, MAC Evaluation Criteria and initial MAC proposals

Motion to WG Plenary

Move:

That the 802.16 Working Group appoint a liaison to ETSI BRAN on the subject of FWA below 11 GHz.

Liaison: Marianna Goldhammer

Alternate: Demos Kostas

## Appendix D, Attendance at Session #10

Session #10 was a plenary meeting of 802. The attendance criterion for Session #10 was 5 or more intervals. Please contact the 802.16 Secretary (smarin@ix.netcom.com) if you feel your attendance has been recorded incorrectly.

**The following 174 people registered attendance at 5 or more intervals and met the attendance criterion.**

Aboukarr, Bakri
An, Song
Arat, Vacit
Arefi, Reza
Arrakoski, Jori
Arunachalam, Arun
Ashtjou, Mohammed
Audeh, Malik
Avera, Drayt
Avivi, Eli
Baragar, Ian
Barman, Kaushik
Baseghi, Behshad
Baugh, C.R. (Rick)
Belfiore, Carlos
Benyamin-Seeyar, Anader
Blechman, Kobi
Boucher, Luc
Bourlas, Yair
Boyer, Adrian
Bushue, Carl
Buskila, Baruch
Cant, Chris
Chang, Dean
Chauncey, David
Chayat, Naftali
Chayer, Rémi
Coles, Ron
Condie, Mary
Cornelius, James
Costa, José
Currivan, Bruce
Derand, Thierry
Donahue, Michael

Dotan, Amos
Durand, Roger
Eidson, Brian
Eklund, Carl
El Gamal, Hesham
El-Damhougy, Hesham
Erceg, Vinko
Farlow, Charles
Finklea, John
Fishel, George
Florea, Adrian
Foley, Mark
Foster, Robert
Freedman, Avi
Garrison, G. Jack
Goldhammer, Marianna
Gupta, Rakesh
Hadad, Zion
Hakim, Joseph
Halachmi, Baruch
Hall, Eric
Hamilton, Michael
Hammons, A. Roger
Hancock, Dale
Harteneck, Moritz
Hatim, Baya
Hebron, Yoav
Heise, Bob
Hinton, Brandon
Hosur, Srinath
Hunter, Wayne
Husson, David
Jacobsen, Eric
Jamali, Hamadi
Jorgensen, Jacob
Kaitz, Tal
Kang, Inchul
Kiernan, Brian
Kim, Eung-Bae
Kim, John
Kim, Namil

Kitroser, Itzik
Klein, Jay
Kolze, Thomas
Kostas, Demos
Krasnow, Jason
Kwak, Byung-Jae
Langley, John B.
Leiba, Yigal
Leng, Minfei
Lewis, Barry
Licardie, Sergio
Liebetreu, John
Lindh, Lars
Lingam, Srinivas
Lo, Titus
Lopez, Guy
Lu, Willie
Lycklama, Heinz
Malkemes, Bob
Manor, Yonatan
Marin, J. Scott
Marks, Roger
McCallister, Ron
McGregor, Andy
McKown, Russell
McMullin, Roderick
Meyer, Ronald
Middleton, Andrew
Mitlin, Vlad
Mody, Apurva
Mollenauer, James
Monk, Anton
Myers, William
Nadiv, Ron
Orlik, Philip
Padan, Uzi
Patullo, Mike
Peirce, Ken
Poonacha, P.G.
Quilez, Vicente
Ramasastry, Jay

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Ran, Moshe
Reible, Stanley
Resheff, Guy
Rhodes, Valentine
Robinson, Gene
Roehr, Walt
Rude, Mike
Sari, Hikmet
Satapathy, Durga
Sater, Glen
Scaringi, Vito
Scarpa, Carl
Schwartz, Randall
Sdralia, Vaia
Segal, Yossi
Selea, Radu
Sellars, Malcolm
Seller, Oliver
Shahar, Menashe
Shan, Tie-Jun
Shen, Jun
Shenhav, Chaim
Shields, Jon
Shirali, Chet
Shtrom, Victor
Simkins, Jim
Singleton, Ken
Smith, Steve
Sonander, Sean
Stamatelos, George
Stambaugh, Karl
Stanwood, Ken
Steagall, Bill
Stewart, Michael
Struhsaker, Paul
Sydor, John
Tappenden, Chris
Taylor, Todd
Tellado, Jose
Thomas, Raymond
Thompson, Paul
Trinkwon, David
Tse, Clement
Van Waes, Nico
Varma, Subir
Vogel, Mark
Wachira, Muya
Wang, Lei

Wang, Xiaofeng
Ward, Robert
Whitehead, Philip
Whiting, Robert
Williams, David G.
Yanover, Vladimir
Ye, Huanchun
Yurtkuran, Erol
Zeng, Chaoming
Zuniga, Juan Carlos

**The following 37 people registered attendance at less than 5 intervals and did not meet the attendance criterion.**

Andren, Carl
Bernath, Brett
Biba, Ken
Brennan, James
Chen, Kwang-Cheng
Chibane, Cherif
Crilly, Jr., William J.
Devieux, Jean-Pierre
Doherty, Edward
Foerster, Jeffrey
Gee, Phillip
Hari, K.V.S
Hayes, Vic
Hum, Coleman
Jan, Jeff
Kawai, Toshibiko
Kindler, Matthias
Langston, J. Leland
Masood, Burhan
McCann, Shawn
Moghe, Sanjay
Mwikalo, Rama
Nikolich, Paul
Oh, Stephen
Ralston, William
Roy, Robert
Sato, Takuro
Schiltz, Andy
Simmou, Arnult
Sodha, Piyush
Sugimoto, Hiroki

Tolia, Anish
Vishwakarama, Ritesh
Wang, Arthur
Widdowson, Simon
Wiss, John
Zilberfarb, Yossi

## Appendix E, Membership Update resulting from Session #10

As a result of the Session #10 attendance records, 802.16 membership changed from 108 to 134. The following 35 people gained membership:

Aboukarr, Bakri
An, Song
Avivi, Eli
Baugh, C.R. (Rick)
Belfiore, Carlos
Buskila, Baruch
Chang, Dean
Doherty, Edward
Eidson, Brian
Florea, Adrian
Freedman, Avraham
Gupta, Rakesh
Hamilton, Michael
Hosur, Srinath
Hum, Coleman
Kim, John
Kitroser, Itzik
Kwak, Byung-Jae
Licardie, Sergio

McCann, Shawn
Meyer, Ronald
Middleton, Andrew
Mody, Apurva
Nadiv, Ron
Padan, Uzi
Resheff, Guy
Roehr, Walt
Scaringi, Vito
Schwartz, Randall
Stewart, Michael
Thomas, Raymond
Thompson, Paul
Williams, David
Ye, Huanchun
Zeng, Chaoming

The following 9 people lost membership:

Arnstein, Donald
Child, Skyler
Duhamel, Robert
Lee, Allan
Levin, Gregg
Maghera, Mohan
Mertsching, Marcus
Tzerefos, Polychronis
Zhang, Genzao

The revised membership list is at http://ieee802.org/16/members.html and is recorded here for archival purposes.

# The IEEE 802.16 Working Group on Broadband Wireless Access Standards

# The following 134 individuals are the Members of 802.16 (with rights including voting rights)

## Update: 19 November 2000, fully accounting for Session #10
## Next scheduled update: following Session #12

| Given (First) Name | Family (Last) Name | Affiliation | City | State | Country |
|---|---|---|---|---|---|
| Bakri | Aboukarr | Alcatel | Kanata | ON | CANAD |
| Adnan | Abu-Dayya | AT&T Wireless Services | Redmond | WA | USA |
| Mohammad | Akhter | SpaceBridge Networks Corporation | Hull | Quebec | CANAD |
| Song | An | CommAccess Technologies, Inc. | San Diego | CA | USA |
| Reza | Arefi | Wireless Facilities, Inc. | Reston | VA | USA |
| Jori | Arrakoski | Nokia Research Center | Helsinki | | FINLAN |
| Arun | Arunachalam | Conexant Systems, Inc. | Newport Beach | CA | USA |
| Eli | Avivi | WaveIP Ltd. | Yokneam | | ISRAEL |
| Paolo | Baldo | Siemens Information and Communication Networks S.p. | Milano | | ITALY |
| Ian | Baragar | Nortel Networks | Winnipeg | MB | CANAD |
| Behshad | Baseghi | Malibu Networks | Calabasas | CA | USA |
| C.R. (Rick) | Baugh | Harris Communications, Inc. | Bellevue | WA | USA |
| Carlos | Belfiore | DMC Stratex Networks, Inc. | San Jose | CA | USA |
| Anader | Benyamin-Seeyar | Harris Corporation | Montreal | PQ | CANAD |
| Thomas | Bilotta | Rainbow Network Systems | Escondido | CA | USA |
| Luc | Boucher | Industry Canada | Ottawa | ON | CANAD |
| Carl | Bushue | Sprint | Westwood | KS | USA |
| Baruch | Buskila | WaveIP Ltd. | Yokneam | | ISRAEL |
| Dean | Chang | Aperto Networks | Milpitas | CA | USA |
| Naftali | Chayat | BreezeCOM Ltd. | Tel Aviv | | ISRAEL |
| Rémi | Chayer | Harris Corporation | Dollard-Des-Ormea | PQ | CANAD |
| Mary | Condie | Alcatel | Kanata | ON | CANAD |
| James | Cornelius | MSI | Virginia Beach | VA | USA |
| José | Costa | Nortel Networks | Ottawa | ON | CANAD |
| Bruce | Currivan | Broadcom Corp. | Irvine | CA | USA |
| Edward | Doherty | Coreon Inc. | Staten Island | NY | USA |
| Amos | Dotan | WaveIP Ltd. | Yokneam | | ISRAEL |
| Keith | Doucet | Vyyo Inc. | Cupertino | CA | USA |
| Roger | Durand | Cabletron Systems | Rochester | NH | USA |
| Brian | Eidson | Conexant Systems, Inc. | San Diego | CA | USA |
| Carl | Eklund | Nokia Research Center | Helsinki | | FINLAN |
| Allan | Evans | Netro Corporation | San Jose | CA | USA |
| David | Falconer | Carleton University | Ottawa | ON | CANAD |
| George | Fishel | Communications Consulting Services | Shermans Dale | PA | USA |
| Adrian | Florea | Alcatel | Kanata | ON | CANAD |
| Jeffrey | Foerster | Intel Corp. | Beaverton | OR | USA |
| Robert | Foster | Wavtrace, Inc. | Bellevue | WA | USA |
| Avraham | Freedman | Hexagon System Engineering | Tel Aviv | | ISRAEL |
| G. Jack | Garrison | Harris Corporation | Bellevue | WA | USA |
| Richard | Germon | Nottingham Trent University | Nottingham | | UK |
| Marianna | Goldhammer | BreezeCOM Ltd. | Tel Aviv | | ISRAEL |
| Conrad | Grell | TurboNet Communications | San Diego | CA | USA |

| Given (First) Name | Family (Last) Name | Affiliation | City | State | Country |
|---|---|---|---|---|---|
| Phil | Guillemette | SpaceBridge Networks Corp. | Hull | PQ | CANAD |
| Rakesh | Gupta | Alcatel | Kanata | ON | CANAD |
| Zion | Hadad | Runcom Technologies Ltd. | Rishon Lezion | | ISRAEL |
| Baruch | Halachmi | RADWIN Ltd. | | | ISRAEL |
| Michael | Hamilton | WinNet MCS/Innowave | Sunnyvale | CA | USA |
| A. Roger | Hammons, Jr. | Hughes Network Systems | Germantown | MD | USA |
| Baya | Hatim | Wireless Facilities, Inc. | San Diego | CA | USA |
| Srinath | Hosur | Texas Instruments, Inc. | Dallas | TX | USA |
| Coleman | Hum | Alcatel | Kanata | ON | CANAD |
| Wayne | Hunter | Crosspan Network Access Technologies | Dallas | TX | USA |
| Eric | Jacobsen | Intel Corp. | Chandler | AZ | USA |
| Hamadi | Jamali | Canon R&D Center Americas, Inc. | San Jose | CA | USA |
| Vladan | Jevremovic | U S WEST Advanced Technologies (former) | Boulder | CO | USA |
| Jacob | Jorgensen | Malibu Networks | El Dorado Hills | CA | USA |
| Inchul | Kang | Malibu Networks | Campbell | CA | USA |
| Mika | Kasslin | Nokia Research Center | Helsinki | | FINLAN |
| Amarpal | Khanna | Agilent Technologies | Santa Clara | CA | USA |
| Brian | Kiernan | InterDigital Communications Corp. | King of Prussia | PA | USA |
| John | Kim | Georgia Institute of Technology | Atlanta | GA | U.S.A. |
| Itzik | Kitroser | Runcom Technologies Ltd. | Rishon Lezion | | ISRAEL |
| Allan | Klein | SR Telecom Inc. | St. Laurent | PQ | CANAD |
| Jay | Klein | Ensemble Communications Inc. | San Diego | CA | USA |
| Thomas | Kolze | Broadcom Corp. | Phoenix | AZ | USA |
| Demosthenes | Kostas | Adaptive Broadband Inc. | Dallas | TX | USA |
| Byung-Jae | Kwak | Samsung Electronics Co., Ltd. | Sungnam-Si | KYUNGKI-DO | KOREA |
| J. Leland | Langston | Crosspan Network Access Technologies | Colorado Springs | CO | USA |
| Ken | Lazaris-Brunner | Gennum Corporation | Burlington | ON | CANAD |
| Yigal | Leiba | BreezeCOM Ltd. | Tel Aviv | | ISRAEL |
| Barry | Lewis | Radiocommunications Agency | London | | UK |
| Sergio | Licardie | DMC Stratex Networks, Inc. | San Jose | CA | USA |
| John | Liebetreu | Intersil Corporation | Scottsdale | AZ | USA |
| Lars | Lindh | Nokia Research Center | Helsinki | | FINLAN |
| Willie | Lu | Infineon Technologies Corp. | San Jose | CA | USA |
| Fred | Lucas | 3Com Corp. | Columbia | MD | USA |
| J. Scott | Marin | Motorola, Inc. | Plano | TX | USA |
| Roger | Marks | NIST | Boulder | CO | USA |
| Shawn | McCann | Agilent Technologies | Orlando | FL | USA |
| Andy | McGregor | Nortel Networks | Ottawa | ON | CANAD |
| Ronald | Meyer | Crosspan Network Access Technologies | Dallas | TX | USA |
| Andrew | Middleton | Airspan Communications Ltd. | Uxbridge | Middlesex | UK |
| Apurva | Mody | Georgia Institute of Technology | Atlanta | GA | USA |
| Sanjay | Moghe | RF Solutions | Atlanta | GA | USA |
| James | Mollenauer | Technical Strategy Associates | Newton | MA | USA |
| Anton | Monk | Tioga Technologies | San Diego | CA | USA |
| William | Myers | Signal Technology Corp. | Plano | TX | US |
| Ron | Nadiv | Ceragon Networks | Tel Aviv | | ISRAEL |
| Ryutaro | Ohmoto | NTT | Chiba-Shi, Chiba | | JAPAN |
| Louis | Olsen | Teligent, Inc. | Vienna | VA | USA |
| Uzi | Padan | InnoWave ECI Wireless Systems Ltd. | Petach Tikva | | ISRAEL |
| Yunsang | Park | Hughes Network Systems | Germantown | MD | USA |
| Brian | Petry | Astute Networks | San Diego | CA | USA |
| Wayne | Pleasant | Telaxis Communications Corporation | So. Deerfield | MA | USA |
| Patrick | Quinn | World Access Inc. | San Francisco | CA | USA |
| Moshe | Ran | TelesciCOM Ltd. | Holon | | ISRAEL |
| Stanley | Reible | Oak Wireless | Westford | MA | USA |
| Guy | Resheff | Turbotech Inc. | Herzeliya | | ISRAEL |
| Valentine | Rhodes | Intel Corporation | Chandler | AZ | USA |
| David | Ribner | Analog Devices, Inc. | Wilmington | MA | USA |
| Gene | Robinson | E. A. Robinson Consulting, Inc. | McKinney | TX | USA |
| Walt | Roehr | InterDigital/TNC | Reston | VA | USA |
| Ray | Sanders | CircuitPath Network Systems | Los Angeles | CA | USA |
| Durga | Satapathy | Sprint | Overland Park | KS | USA |
| Glen | Sater | Motorola Inc. | Scottsdale | AZ | USA |
| Vito | Scaringi | Alcatel | Kanata | ON | CANAD |
| David | Schafer | Wavtrace, Inc. | Bellevue | WA | USA |

| Given (First) Name | Family (Last) Name | Affiliation | City | State | Country |
|---|---|---|---|---|---|
| Randall | Schwartz | Radix Wireless, Inc. | Mountain View | CA | USA |
| Menashe | Shahar | Vyyo Ltd. | Jerusalem | | ISRAEL |
| Chet | Shirali | Vyyo Inc. | Cupertino | CA | USA |
| George | Stamatelos | Nortel Networks | Ottawa | ON | CANAD |
| Karl | Stambaugh | Motorola Inc. | Scottsdale | AZ | USA |
| Ken | Stanwood | Ensemble Communications Inc. | San Diego | CA | USA |
| Michael | Stewart | Escape Communications | Hermosa Beach | CA | USA |
| Paul | Struhsaker | Raze Technologies | | TX | USA |
| Kimiya | Tateishi | NEC America, Inc. | Herndon | VA | USA |
| Raymond | Thomas | Lucent Technologies | Atlanta | GA | USA |
| Paul | Thompson | Paul Thompson Associates | San Anselmo | CA | USA |
| David | Trinkwon | Transcomm Inc | Fairfax | VA | USA |
| Jack | Van der Star | Belstar Systems Corp. | San Diego | CA | USA |
| Nico | Van Waes | Nokia Networks | Mountain View | CA | USA |
| Subir | Varma | Aperto Networks | Milpitas | CA | USA |
| Muya | Wachira | Nortel Networks | Ottawa | ON | CANAD |
| Chao-Chun | Wang | Malibu Networks | El Dorado Hills | CA | USA |
| Robert | Ward | SciCom | Poway | CA | USA |
| Philip | Whitehead | Radiant Networks PLC | Great Chesterford | ESSEX | UK |
| David | Williams | Advanced Hardware Architectures | Pullman | WA | USA |
| Steve | Winslow | Alcatel USA | Richardson | TX | USA |
| Huanchun | Ye | Radix Wireless, Inc. | Mountain View | CA | USA |
| Jung | Yee | Philsar Semiconductor Inc. | Nepean | ON | CANAD |
| Erol | Yurtkuran | Spike Broadband Systems | Richmond | VA | USA |
| Chaoming | Zeng | DMC Stratex Networks, Inc. | San Jose | CA | USA |
| Wei | Zhang | NIST | Gaithersburg | MD | USA |
| Juan Carlos | Zuniga | Harris Corporation | Quebec | | CANAD |