

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Minutes of 802.16 Session #11	
Date Submitted	2000-03-11	
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Re:	802.16 Session #11 (Ottawa, Ontario, CANADA, 11-15 January, 2001)	
Abstract	This document records the minutes of 802.16 meetings held at 802.16 Session #11	
Purpose	To record progress and decisions of the Working Group.	
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Minutes of 802.16 Session #11
An Interim Session of the IEEE 802.16
Working Group on Broadband Wireless Access
Holiday Inn Crown Plaza, Ottawa, Ontario, CANADA
January 22-26, 2001

1.0 Monday, January 22, 2001, IEEE 802.16 Opening Plenary

1.1 OPENING

- 1.1.1 The chairman of IEEE 802.16, Roger Marks, called the Opening Plenary for Session 11 to order at 1:15 PM on Monday, January 22, 2001. Brian Kiernan attended as Vice Chair. Ian Baragar acted as Secretary and recorded the minutes. Over 100 people were in attendance as the Plenary Opened.
- 1.1.2 Mr. Marks advised of initial issues with the server. Demos Kostas suggested people work to overcome lack of availability. Mr. Marks accordingly recommended attendees work to overcome any lack of availability of the server.
- 1.1.3 Mr. Marks welcomed all attendees and reviewed both 802.16 and 802 culture.
- 1.1.4 Mr. Marks presented the agenda for the week. The agenda included a presentation evening by David Falconer. Mr. Marks reminded that the presentation is a tutorial slot, which, like the morning meetings, do not count as part of the official Session periods.

1.2 PREVIOUS MINUTES APPROVAL

- 1.2.1 Mr. Marks reminded that the minutes of the previous meeting (Session 10) was posted on the IEEE web site (<http://iee802.org/16/meetings/mtg10/report.html> document 2000-12-04 IEEE 802.16-00/27)
- 1.2.2 Durga Satapathy moved to accept the minutes of the previous meeting. George Fishel seconded the motion. There was no opposition; the motion carried unanimously.

1.3 REGISTRATION, LOGISTICS, HOSTED DINNER

- 1.3.1 Mr. Marks thanked Jose Costa for putting together this session at the last minute following the cancellation of the planned site for this session (Tel Aviv).
- 1.3.2 Mr. Costa reviewed the logistics and registration. He confirmed the reservation of the ballroom all week and that the breakout rooms were as per the agenda.
- 1.3.3 Mr. Costa reported that registration was presently (at the time of the Open Plenary) approximately 110 people. The figure includes 20 people who had not pre-registered. He advised that the registration desk was open Monday and that registration through him would be accepted through to Thursday.
- 1.3.4 Mr. Costa reviewing the details of the hosted dinner and polled the attendees in the room for the number of people planning to attend the dinner. (Nine indicated they would not be attending the dinner.) Dinner was set for 6:30 PM Wednesday with food served at 7 PM.
- 1.3.5 Mr. Costa stated he would be available throughout the conference to assist with logistics and can be contacted if anyone has difficulties or questions.

- 1.4.1 Mr. Marks commented that there is a resource issues dealing with documentation. All session files will be posted on the web site. Phil Guillemette volunteered to assist with the server (take a look at it).
- 1.4.2 The server (192.168.1.1) runs windows file sharing.

1.5 802.16 RULES, PROCESSES, AND ATTENDEES

- 1.5.1 Mr. Marks reviewed the IEEE Rules. He urged attendees to take note of the Operation of the Working Group. He highlighted that it is the Working Groups Chair's responsibility to produce a standard in a reasonable amount of time. He emphasized that it suggests that this balance should be done in conjunction with the Robert's Rules of Order.
- 1.5.2 Mr. Marks highlighted that each person has the right to speak twice.
- 1.5.3 Mr. Marks reminded that it is the Chair who decides procedural issues. The Working Group makes the Technical decisions.
- 1.5.4 Mr. Marks reminded participation is by the individual.
- 1.5.5 Mr. Marks advised people to see the Web Site for Legal and Antitrust / Patent Policy information. He then briefly reviewed that IEEE may include patent application if there is technical justification in the opinion of the standards development and provided the IEEE receives assurance that it will have reasonable use. He noted the "opinion" is the responsibility of the members, not the Working Group as a whole. Patent is to be made available as soon as possible, but discussion is not permitted of the validity or applicability of the patent. Regarding any patents, one is to notify the Chair in written or electrical form.
- 1.5.6 Mr. Kostas commented on a consideration between participants in the Working Group and actions made by the Working Group to have greater productivity. He suggested a clarification of the participants of the Chair versus the Members. Mr. Marks requested the suggestion be made in writing and given to the Chair's for consideration.

1.6 EXECUTIVE; LOST AND NEW MEMBERSHIP

- 1.6.1 Mr. Marks introduced Brian Kiernan, new Vice Chairman.
- 1.6.2 Mr. Marks highlighted Scott Narin had resigned as Secretary.
- 1.6.3 Mr. Marks introduced Ian Baragar as acting Secretary to Session 11.
- 1.6.4 Mr. Marks reported there were 25 new Members.
- 1.6.5 Mr. Marks reported that 10 Individuals lost membership.
- 1.6.6 Mr. Marks reminded that membership shall be lost if two consecutive or two other than consecutive working group letter ballots are not returned or are returned with an abstention other than for lack of technical expertise. Mr. Marks emphasized the importance of paying attention to this and said that people can re-qualify if they are able to attend (i.e. immediately become members again.)
- 1.6.7 Mr. Marks stated there is a clause to allow someone to become member for extraordinary contributions. He reported that Vladimir Yanover participated in Session 9, 10 and 10.5 (TG1) with two contributions, editorial work, and now 7 Contributions to Session 11. In recognition of this effort and that he will become a member after this meeting, Mr. Marks announced he has awarded Mr. Yanover, at Chair's discretion, Member Status as of this meeting.
- 1.6.8 Mr. Marks reviewed the rights of all members to subscribe, to post, to examine, to contribute, to attend, and to join the Sponsor Ballot pool. Additionally, Mr. Marks reminded that membership rules require participation in at least 2 consecutive sessions and a third session.
- 1.6.9 Mr. Marks urged people interested to read the rules.
- 1.6.10 Mr. Marks reviewed that for 802.16 registrants, they need only participate in any single session to become an Observer and can have password to the site and participate in 802.16. He stated 75% attendance of the Session's applicable periods is required in order have the Session count.
- 1.6.11 Mr. Marks reviewed the rights to lodge complaints.

1.7 TASK GROUP SUMMARIES AND DEVELOPMENTS

- 1.7.1 Mr. Marks briefly reviewed the status of the four 802.16 Task Groups.
 - 802.16 TG1: 10-66 GHz – draft revision.
 - 802.16 TG2: Coexistence -- recommended practice; passed working group Letter Ballot Finalized Draft, Invitation to Sponsor Ballot: closes Feb. 18.
 - 802.16 TG3: Sub 10Ghz – proposal process
 - 802.16 TG4. License-exempt, 5-6GHz -- First Meeting at Session 11.
- 1.7.2 Mr. Marks commented on how Muya Wachina stepped in and has done and excellent job setting up and helping with the comment resolution process.
- 1.7.3 Mr. Marks raised the issue of Professional Editorial Help. He stated IEEE provides a project editor but the Working Group is supposed to do the technical editorials.
- 1.7.4 Mr. Marks stated that IEEE-SA has given a proposal for editorial assistance. Funds through reserves could be used to accommodate this proposal. The proposal was for \$9,000 for the Task Group 1 draft. Mr. Marks suggested attendees think about whether to use the surplus revenue for this editorial assistance.
- 1.7.5 Mr. Marks outlined the Working Group goals:
 - complete of action of IEEE802.16.1
 - 01/03 Plan to Update 802.16 PARs. (This was differed to Session 11 Closing Plenary by action at Session 10.) Mr. Marks suggested the Task Groups bring this up.

1.8 SECRETARY / ATTENDANCE BOOKS

- 1.8.1 Mr. Marks reminded attendees to contact Mr. Baragar for membership assistance.
- 1.8.2 Mr. Marks stated Mr. Baragar would administer the sign in books. Of the 10 session 75% attendance is required by IEEE802.
- 1.8.3 Mr. Marks stated the position of leniency and that the 75% figure would be rounded down. Accordingly, Mr. Marks confirmed that for Session 11 only 7 intervals must be attended for the session to count towards membership.
- 1.8.4 Mr. Trinkwon raised that there was much voting in the morning session and questioned whether the morning session could be considered. Mr. Marks stated that if someone was short an interval, and appealed, he would consider allowing the session to count for that individual.
- 1.8.5 Mr. Marks reviewed the voting procedures for members. For formal (member) votes, members raise their voting token, which is their Registration Name Card with the 802.16 Logo printed on it. Members, and only Members, have the 802.16 Logo printed on their Session 11 Registration Name Card.

1.9 TASK GROUP 1 OPENING PLENARY STATUS AND ACTIVITY PLANS

- 1.9.1 Mr. Marks, as chair for Task Group 1, reported on Task Group 1 activities. He stated Task Group 1 has drafted the Air interface, Broadband Wireless Access System (IEEE 802.16.1/D1-2000). He explained that we put the draft out for comment and have 33 comments resolved; 20 comments left over to resolve. (IEEE 802.16.1-01/04)
- 1.9.2 Mr. Marks stated the goal for this session: initiate the Working Group Letter Ballot Friday.
- 1.9.3 At the December meeting incorporated one change but did not have time to complete it (i.e. moving other Phy material out).
- 1.9.4 Based of the letter ballot, the document will be Draft One subject to it being out for comment.
- 1.9.5 Mr. Marks commented that a lot of work was done in Mac and Phy subgroups. He solicited comments from the head of those groups. Phy: Jay Klein (no comments). MAC, Karl Eklund (no comments other than Task Group 1 MAC are planning to look at the convergence sublayers).
- 1.9.6 Task Group 1 have some joint session with Task Group 3 and Task Group 4.
- 1.9.7 Mr. Marks raised the issue of how to implement a single MAC based on a single document (rather than a single algorithm.). He pointed out that the Task Group 1 MAC is to support Task Group 1 needs and support extendibility of all other needs of other task groups. He concluded that it is therefore important issue this week to ensure the correct hooks are in the standard to accommodate the needs of other task groups.

1.10 TASK GROUP 2 OPENING PLENARY STATUS AND ACTIVITY PLANS

- 1.10.1 Mr. Marks reported that Andy McGregor resigned at the last task group meeting and that Phil Whitehead has taken over.
- 1.10.2 Mr. Whitehead reported that since last meeting, the Task Group 2 concern was with the Letter Ballot which closed 27th of December. He confirmed the Letter Ballot received a positive overall vote with 4 disapprovals. He said Task Group 2 considered 148 comments and has completed their review. They proposed resolutions for all 147 comments. Comment closed the 20 of January with one new disapproval and two others remaining for 3 disapprovals. Mr. Whitehead stated Task Group 2 wishes to try to resolve all disapprovals despite there being a small number. Task Group 2 will produce another draft to complete Friday.
- 1.10.3 Mr. Whitehead relayed that Task Group 2 also received comment from ETSI TM4.
- 1.10.4 Mr. Whitehead stated they expected to be ready for Sponsor Ballet at the end of this session.
- 1.10.5 Mr. Whitehead announced Task Group 2 plan to look at new issues such as at Task Group 3 work to look at issues of coexistence below 11 GHz.
- 1.10.6 Mr. Marks commented that one important issue is for people to first have the electronic process for invitation to ballot. Mr. Marks informed that he has put the invitation up on the web site.
- 1.10.7 As a final comment, Mr. Whitehead asked that those in attendance, who voted "Disapproved", please make themselves available to meet with him and work to resolve the comments.
- 1.10.8 Mr. Marks pointed out that many comments are not binding, but should be considered. He clarified that second ballot can proceed to final letter ballot even if negative, but it needs a rebuttal statement, and for final circulation, the final document.
- 1.10.9 Mr. Marks expects comments, resolution, and the document to be available by the end of the week.

1.11 TASK GROUP 3 OPENING PLENARY STATUS AND ACTIVITY PLANS

- 1.11.1 Task Group 3 chair Brian Kiernan presented the Task Group 3 session 11 agenda.
- 1.11.2 Mr. Kiernan reported Task Group 3 started in the morning; had a total of 31 contributions; want common traffic models, evaluation criteria, propagation models etc.
- 1.11.3 Mr. Kiernan stated the goal is to have the approved model for an evaluation. He outlined that the plan is to work through Task Group 1 for a common MAC that works for both and to arrive at this via the Task Group 3 MAC groups. The schedule outlined Tuesday for traffic models and channel models; Wednesday for PHY proposals, Thursday for discussions.
- 1.11.4 For Wednesday, Mr. Kiernan informed that there were 14 PHY proposals: 11 invited, 3 uninvited, and other non-proposals.
- 1.11.5 Mr. Kiernan also outlined plans for Thursday and Friday. Friday includes a joint coexistence session with Task Group 2, Session 12 plans, call for contributions, and Closing Plenary review. Plan is to have all comments by Noon on Thursday. Thursday afternoon will return back to MAC – the Task Group 3 specific MAC.
- 1.11.6 Mr. Kiernan expressed hope that Task Group 3 would actually start drafting text and make sure the structure of document works before it goes out to ballot.
- 1.11.7 Mr. Whitehead commented that Friday morning was not good for Task Group 2 and would prefer Thursday.
- 1.11.8 Mr. Kostas commented that the Task Group 3 MAC proposal made does not have a way for evaluation criteria and Task Group 4 criteria. Mr. Kostas suggested Task Group 4 be informed and invited to join.
- 1.11.9 Jay Klein commented that there are proposals being done in Task Group 3 that were presented already. Mr. Klein questioned when material presented becomes property of 802.16. Mr. Marks responded that until the material is adopted, it is property of the contributor. Mr. Marks suggested the proper way to handle this situation would be to reference other document. He clarified that the Copyright does not say that IEEE owns it and that the IEEE license is only to use the material. He summarized that the point here is that contributions should not use the material from other contributions due to copyright concerns.

1.12 TASK GROUP 4 OPENING PLENARY STATUS AND ACTIVITY PLANS

- 1.12.1 Durgas Satapathy introduced the plan to review 17 proposals: 6 PHY and 11 MAC. He expects to have consensus from the group on all documents at the next meeting.

- 1.12.2 Mr. Satapathy reported the Task Group 4 Interim meeting is set for 15-16 February 2001 in San Jose Hyatt. He requested people convey their intention to attend if not already done, as there is presently only room for 30 people.
- 1.12.3 The agenda for Session 11 was reviewed. Most of Phy contributions are on Wednesday. Similarly Thursday, discussion will include how to merge all proposals. Vladimir Yanover commented that Friday was reserved for the proposed merging activity.
- 1.12.4 Mr. Kiernan commented that people should check that there is not conflict with Task Group 3 and take a look at the Task Group 4 agenda.
- 1.12.5 Mr. Marks commented that 802.15 is considering to look at a coexistence. Mr. Satapathy responded he sees themselves (802.16) as a lead on coexistence.
- 1.12.6 A question was raised regarding Vic Hayes chairing the regulatory meetings. Mr. Marks clarified he is the regulatory ombudsman.
- 1.12.7 It was commented that 802.11 and 802.15 would like to start a new Working Group that would include all the people from the different Working Groups. Mr. Marks suggested that there is a different overarching group/body that could do this without becoming a new Task Group / Working Group.
- 1.12.8 Marianna Goldhammer commented that in BRAN they talked about wireless LANs in the 5GHz band and said that Europe has no standards for HUMAN 5GHz in Europe – presently only in the USA. Mr. Marks replied this is a good area to task this group to deal with.

1.13 SCHEDULE AND CONTRIBUTIONS PLAN FOR THE WEEK

- 1.13.1 Mr. Marks reminded the task groups to complete the task on the agenda prepare for the next meeting (call for contributions, prepare for Plenary).
- 1.13.2 Mr. Marks requested that any closing plenary motions should be in by Thursday night. He reminded that all contributions would need to be done in advance -- and in writing. He emphasized material for a motion definitely has to be in advance.
- 1.13.3 If call for contributions are made, Mr. Marks further urged people to be very focussed on what the specific issues are and that it will be these issues that will be focussed on in the next meeting.

1.14 SERVER STATUS UPDATE

- 1.14.1 Mr. Eklund provided an update on the server status stating that he can get the Server but that there is very little content. (192.168.1.1.) Mr. Marks responded he has it now with the wireless LAN connections.
- 1.14.2 Instruction re-iterated for accessing server (Go to <http://192.168.1.1>. Then if you take an FTP service and type in the number you should go to an anonymous FTP file.)
- 1.14.3 Mr. Marks advised that for anything people want posted, to put them on the server in the file. He suggests trying to give it a name to make it easy for people to know what it is. He further commented the Server should be set up such that people can not delete files and that all documents for the meeting should be available.

1.15 OPENING PLENARY REVIEW OF UPCOMING MEETINGS

- 1.15.1 Mr. Marks reviewed the next meeting: Session 12 in the Hyatt Regency. He suggested people read the information since there are items to review like logistics.
- 1.15.2 Mr. Marks suggested revisiting the long-term plan, meaning more than just the next meeting.
- 1.15.3 For Session 13, Mr. Marks reported there is the opportunity for wireless groups to meet together. 802.11 and 802.15 are keen to have those meetings together with us. He noted that the joint meeting is good but makes for a big meeting that may cramp our abilities.
- 1.15.4 Mr. Marks reported 802.11/15 have brought up to hold a Sept. meeting in Sydney, Australia. He advised that we let them know that we do not have any members in Australia and not much participation from that region. Mr. Marks relayed that 802.11/15 suggested that prices are low and the weather is good.
- 1.15.5 Mr. Chayat suggested holding the Session in Israel instead. Mr. Marks said he also had a tentative proposal to hold this in the Bay area.

- 1.15.6 A straw pole vote of the attendees was taken to gauge interest in the various locations. Results were Sydney: 50(?); Tel Aviv: 38; San Jose: 44. Mr. Marks suggested a more concrete proposal be made. We agreed to look at this further on Friday.

1.16 OPENING PLENARY LIAISON REPORTS

- 1.16.1 ITU: Suggested liaison report by Mr. Costa on Friday. Reported Plenary held in Nice, 8-12 January 2001. Issues that are of common interest covered Point-to-Point (Working Party 1); Point-to-Multipoint (Working Party 2) – review of standards/finalization, and Working Party 3 (Antenna).
- 1.16.2 ETSI TM4 liaison Marianne Goldhammer reported on the progress in TM4. (Highlights include M-431 Technical Report starting to be drafted; 3-11 GHz has been opened for use in accordance with ERC p-mp recommendation EN 301 021); Revision of all 1-3 GHz and 3-11 GHz standards (EN/TM4130) in an effort to review and make into a single common standard).
- 1.16.3 Further comments made on TM4 progress in above 11 GHz, WP4 (Antenna Group) and reports on circular and steerable antennas under 11 GHz. A directive from European parliament (Article 3.2 – R&TTE) dealt with the efficient use of the spectrum for terrestrial/space radio and orbital resources so as to avoid harmful interference.
- 1.16.4 IEEE 802.16 TM4 Reflector – Mr. Marks commented on an update on the reflector on whether TM4 would have access to 802.16. An answer is expected for the next Plenary, which is in June.
- 1.16.5 Ms. Goldhammer commented on the BWIF invitation to the inaugural European Opening meeting in London (asking for liaison with ETSI TM4). She stated it presented itself as IEEE ISTO. She reported the group was not sure how to deal with the liaison and the action was not positive.
- 1.16.6 For the IEEE ISTO, Mr. Marks suggested Ms. Goldhammer draft a letter to clarify what it is and the confusion. Mr. Marks offered to assist.
- 1.16.7 Ms. Goldhammer reported the ETSI next meeting is February 17 to 2 March 2001 in Vienna and that the 25th Plenary is scheduled for 18-22 June 2001.
- 1.16.8 Mr. Marks commented regarding document exchange that he does not want to use the openness of documents as a crutch and that it does not eliminate the need for a liaison to directly keep people aware of what is happening. Ms. Goldhammer responded that letting TM4 be aware is to let them know what is happening – especially since half of the attendees are regulatory. (Otherwise BRAN is seen to be in competition with 802.16.).

1.17 OPENING PLENARY NEW BUSINESS

- 1.17.1 Mr. Kiernan had comments on the format of the cover sheet for contributors. The concern was if one forced the cover sheet template so that it goes beyond one page to allow for more names. He stated the question was whether this is a problem. Mr. Kiernan stated his personal feeling was to let it go to two pages. Mr. Marks noted one should attempt to put it on one page but that if it was not possible some consideration can be made. Mr. Marks stated he will take this into advisement so if more than one page is required, it will be OK.

1.18 OPENING PLENARY ADJOURNMENT

- 1.18.1 Motion to adjourn was made by Michael Stewart, seconded by Paul Thompson. Voice vote all in favor. Opposed: None. Motion passed unanimously.
- 1.18.2 The Opening Plenary was adjourned at 3: 15 PM, Monday, January 22, 2001.
- 1.18.3 Attendance books recorded 138 people having attended the Opening Plenary.

2.0 Tuesday, January 23, 2001, IEEE802.16 Joint Task Group 1 & Task Group 3 Mac Meeting

2.1 JOINT MAC MEETING -- OPENING

- 2.1.1 Roger Marks opened the cross group discussion period on the MAC at 7:35 PM on Tuesday. He acted as chair in addition to chair for Task Group1. Brian Kiernan acted as co-chair representing Task Group 3. Ian Baragar, Acting Secretary for Session 11, recorded minutes.
- 2.1.2 There were over 100 present at the start of the meeting with 120 people in signed by the close of the session.
- 2.1.3 Attendees included not only Task Group 1 and Task Group 3, but also people who are part of Task Group 2 and Task Group 4.

2.2 JOINT MAC -- BACKGROUND AND STATUS REVIEW

- 2.2.1 Mr. Marks recapped that the standard would be layered where the lower layer would have the physical layer and start with the Task Group 1 draft.
- 2.2.2 Mr. Marks stated it was not essential that all the requirements of Task Group 3 are ready yet. He emphasized that the importance is that Task Group 1 draft is easily upgraded to the specifics that Task Group 3 needs to add on.
- 2.2.3 Mr. Marks outlined that when amendment comes, one can add a whole new section, a new Phy, etc. Example is 10BaseT, 100BaseT, (actually Base x where x is medium). He re-iterated the importance to get this clarified so we see what we have to do now and what we have to do later.

2.3 TASK GROUP 1 MAC REPORT

- 2.3.1 Carl Eklund, Chair of the Task Group 1 MAC group, provided a synopsis of where Task Group 1 is at for the week.
- 2.3.2 Mr. Eklund reviewed the San Diego meeting in December 2000. He summarized that 15 people grouped to restructure the document followed by Glen Slater undertaking editorial work, but that not all was finished. (As an example, he mentioned the burst profiles in MAC document.) Mr. Eklund explained he has since done additional edits to have greater PHY independence. This was submitted as a contribution, which was the first contribution, accepted.
- 2.3.3 Mr. Eklund acknowledged there are still some PHY dependencies, which were missed, which have now been moved into Phy section.
- 2.3.4 Mr. Eklund reported Task Group 1 concentrated this week on protocol and convergence sublayers, including items such as Packing layer. He reported some agreement that this is a good idea for ATM but the group was not so sure for variable length packets. He stated that this item is one area Task Group 1 is looking for input from Task Group 3.
- 2.3.5 Mr. Eklund explained the document identifies some fragment sequence numbers associated with ARQ. He offered that the placeholders are there and that it was felt not needed to remove it. He acknowledged some scheme for frequency and fragment numbers may be needed, but said it was inappropriate for Task Group 1 to define it in Task Group 1. He stated Task Group 1 is in need of a decision on whether to remove this for the first release.

2.4 QUESTIONS AND DISCUSSION FROM THE FLOOR ON TG1 MAC SUMMARY

- 2.4.1 Ken Stanwood questioned whether contention based data transfer is wanted. Mr. Yanover responded for Task Group 3 that it is presently not being considered.
- 2.4.2 Mr. Vladimir asked Mr. Eklund how he sees the MAC activity proceeding after the release of the document. Mr. Eklund answered he was not sure.
- 2.4.3 Mr. Marks clarified that after the standard is published (after the first draft is done), the Working Group will submit comments and the Task Group will continue to respond. Mr. Marks emphasized the Working Group is responsible for developing the standard and the Task Group is assigned to publish the standard. He explained that when it is published, the Task Group dissolves. He pointed out that the Working Group, however, might wish to continue on this – in which case the Working Group could open a new PAR to start a new project to create an updated/new standard.
- 2.4.4 A question was raised as to who is responsible to do simulations. Was it the TG? Mr. Marks responded that there is no obligation to do simulations and it is difficult for the group to do this - especially, for example, over items such as sharing costs etc. He added that if, however, someone undertakes a simulation and submits the result for the group for broader view, then this is considered.
- 2.4.5 A question from the floor asked when the group would like to advance the standard. It was remarked that the Task Group 1 would like to go to a letter ballot as soon as the session is over. Mr. Marks pointed out that to get it perfect before the balloting process is not as good as to move forward with a document.
- 2.4.6 Ken Liddell commented that it seems late in the process to be adding comments, such as ARQ. Mr. Marks responded that this was not a problem. That ARQ can be added and not hold up the baseline was offered as an example. To remove what is there on ARQ to give Task Group 3 and Task Group 4 more freedom to work was subsequently offered as a suggestion.

2.5 TASK GROUP 3 MAC REQUIREMENTS AND INPUT

- 2.5.1 Subir Varma summarized the work in Task Group 3 and the requirements Task Group 3 sees for the Task Group 1 MAC.
- 2.5.2 Mr. Varma summarized that Task Group 3 and Task Group 4 had a joint meeting and went over 10 contributions. He explained various contributions to add new features to the Task Group 1 MAC to make it friendlier for a Task Group 3 and Task Group 4 environment were reviewed. He stated that by the end of the meeting, a list was shortened and distilled to the following key issues with the MAC:
 - 1 MAC Header Format
 - 2 Concatenation/Fragmentation Scheme
 - 3 ARQ
 - 4 Flexible Framing
- 2.5.3 On the MAC Header Format, Mr. Varma stated they would like to see a MAC header that is more extensive than it is today to allow features to be added in future.
- 2.5.4 On Concatenation & Fragmentation, Mr. Varma stated that it is presently not supported in the current MAC. He offered that there was one contribution in Task Group 1 for this. Also, that there were 2 contributions in Task Group 3 and 4 to carry out this function. He explained that this is an important area for IP traffic.
- 2.5.5 For ARQ, Mr. Varma reported there were several proposals. He stated that flexibility in the header structure is needed on this issue.
- 2.5.6 On the issue of framing, Mr. Varma stated they need the ability to change the frame structure in a more dynamic manner.
- 2.5.7 Mr. Varma finished by adding that not mentioned here in the list, but also important, is the MAP messages. He stated that greater flexibility for the ability to add new formats or change existing formats is needed.

2.6 QUESTIONS AND COMMENTS ON TASK GROUP 3 AND 4 MAC REQUIREMENT

- 2.6.1 Mr. Eklund questioned that, regarding flexibility for the concatenation and fragmentation schemes, he would like to know why this flexibility is needed since it may be already covered by

- the protocol in a subtlety that is not obvious. Mr. Eklund explained he finds it hard to justify the change without having identified a clear reason for it. Mr. Varma replied that concatenation is several SPUs in a single PDU and that it is not in the present proposal.
- 2.6.2 Mr. Eklund responded that it was planned at the sublayer. Mr. Eklund indicated that he thinks that this would not require a specific change. Mr. Varma responded that there is general agreement in the Task Group 3 and Task Group 4 to have support for concatenation. He cited an example of its need was a study of the number of small packets of 64 bytes.
- 2.6.3 Phil Guillemette questioned whether there was a study made of the arrival rates of the traffic. Mr. Varma replied there was not, but confirmed that typically things arrive in bursts and that in this case, concatenation helps a lot.
- 2.6.4 Mr. Yanover asked what is meant that the protocol 802.16 is the same. For example, in the case of a new MAC header and PHY. Mr. Marks responded that it is difficult to define what is meant by the "the same". He stated that there is nothing to prevent a change, but acknowledged that if it was not backwards compatible it would be difficult perhaps to get it approved at the Letter Ballot.
- 2.6.5 Mr. Yanover suggested making the header more flexible for future development.
- 2.6.6 On the other three items, Mr. Yanover pointed out that different independent submission all hit the same items. He stated that this helps show that there is functionality that people want deployed.
- 2.6.7 Juan Carlos Zuniga agree that if the header changes that it is a different protocol. He suggested, however, if we take 802.3, even there where there is completely different media, they still benefit from commonality in areas of the chip. With respect to flexibility, he commented there is the option of reserved bits.
- 2.6.8 Mr. Yanover responded that in 802.11 they defined the frame structures, (frame transmissions) and a type field. And the type field is the main field for flexibility. He commented that today we see further development of .11 and that they have more types and more formats to provide quality of service. He pointed out this is an example, -- and a good example: they built mechanisms for flexibility. Mr. Yanover stated he feels this is needed since Task Group 1 is further advanced than Task Group 3.
- 2.6.9 Mr. Eklund agreed that one approach, as said by Mr. Yanover, is to have a type field in the header, and this allows a different header. Another approach, he explained, is, as in IPV6, that something can be added to the existing header without fundamentally changing. Mr. Eklund continued that in the latter case, a long type field is not required. He stated that what is needed is something to indicate that there is another header coming after the first header. He put forth that this is another way to solve the problem and suggested Task Group 1 would be happy to provide this solution. Mr. Yanover responded that this had already been considered in a proposal.
- 2.6.10 Kenn Liddell voiced he is more supportive of the flexible header proposal of Mr. Yanover since it is more efficient, especially, when considering we are very sensitive to bandwidth and do not want to transmit excess header.
- 2.6.11 Mr. Stanwood commented that the goal of saving bandwidth is the goal for suggesting subheader for ARQ etc. He explained that for connections and systems that may not need to use those features, there is then no overhead associated with it.
- 2.6.12 Mr. Baragar commented that the point is not necessarily for bandwidth savings, since this is already the goal of Mr. Stanwood in Task Group 1, but that the header provides complete flexibility for the future.
- 2.6.13 Mr. Yanover questioned whether there is an opportunity to explore how this would be possible. Mr. Varma suggested we respond to a session where we could have a more united approach on this.
- 2.6.14 Mr. Eklund asked what the issue is with flexible framing. He reminded that presently the Task Group 1 drafted 802.16 MAC has a downstream structure that has no framing in it and another that has flexibility in the framing. Mr. Yanover responded that the point is there is a need to imply some sort of packet based communication that includes framing -- where the frame is the period of time where the base station transmits the MAP and make some arrangement. He stated Task Group 3 wants this to be variable. He pointed out the existing draft has 3 values. Mr. Eklund said this has been moved to the Physical Layer.
- 2.6.15 Mr. Stanwood reminded that the downlink framing, the 3 times, are for Mode B since Mode A has no framing and one can literally send the maps when they wish. Mr. Stanwood indicated there is nothing in the protocol to preclude sending new frame info in every MAP or message. Mr. Eklund summarized that there is nothing in the protocol to not allow it to be flexible, but that there is also anything that can not allow something (a variable) to adjust the framing.

2.6.16 Mr. Varma commented that there are also other issues, which are not tabled. Mr. Trinkwon asked for a complete description and commented that then this issue goes away. Mr. Varma commented that there is not time to do a complete list.

2.7 JOINT MAC SUMMARY AND CLOSING DISCUSSIONS

- 2.7.1 Mr. Varma with support of the panel and Secretary summarized the findings on the four issues:
- On (1) the MAC header issue, that the Mr. Yanover submitted flexible frame format or modification was well received and had general support,
 - On (2) concatenation issue, there are three proposals and that this area needs more work,
 - On (3) ARQ issue, that was general agreement to take ARQ out and leave the place holders (remove the specifics), and
 - On (4) Flexible framing, that although not covered explicit in the MAP, there is probably enough flexibility to allow this.
- 2.7.2 Mr. Yanover confirmed he felt we should be able to come to consensus on headers.
- 2.7.3 Mr. Eklund offered that Task Group 1 would take a look at the concatenation issue.
- 2.7.4 Mr. Trinkwon questioned why not have Task Group 3 involved with Task Group 1 to look at this concatenation. Mr. Eklund responded with the comment this it not rocket science and suggested that Task Group 1 can present the results of their findings.
- 2.7.5 Mr. Marks suggested the groups find time to schedule a period for this activity.
- 2.7.6 Mr. Marks summarized that he does not see any showstopper or things that cannot be resolved.
- 2.7.7 A question of clarification was raised whether fragmentation was separate from concatenation with the intent of ensuring that the proposals are not only concatenation or only fragmentation, but rather both.
- 2.7.8 A final suggestion was to include discussions on the MAP on Thursday.
- 2.7.9 Yigal Leiba commented that although ARQ is not in the Task Group 1 version of the document he would like it to be added. He asked whether Task Group 3 would like to make an addition there and made the following suggestion: take the Task Group 1 document to letter ballot, and if people can make an addition to ARQ, then Task Group 3 could make that addition. Mr. Trinkwon pointed out that at the end it is a Working Group issue. He stated Task Group 1 would like it to be option, but it is a Working Group decision.
- 2.7.10 Mr. Kostas questioned that if it (ARQ) is intended to be there, why can it not be explicitly stated. Mr. Zuniga added that this can be put in as comments and through the process the document had and continues to improve immensely.
- 2.7.11 Mr. Marks called for input on Thursday to get some feedback as to where we are going, and where the comments might go for the next version. He stated that the further the document can progress (and the more that can be consolidated this week) the sooner, the better.
- 2.7.12 Ken Stanwood pointed out that Task Group 1 are at the point in the document where they are following a formal process and that nothing gets in the document without a comment and something formally in the database that is tracked an in the database. Mr. Stanwood offered, for instance, that he has a comment already on packing giving line by line changes. He noted that the same did not come with the other packing schemes.
- 2.7.13 Mr. Marks concurred and pointed out that you cannot expect an editorial process to deal with this without submitting formal comments. He explained that with the editorial process that is established, the rule is that a new document is not presented (since no one will know what the old and the changes are). Instead the rule is that the changes are adopted, (side by side), and then the document is sent to a professional editor. Mr. Marks added that this is what starts the editorial process for all the documents.
- 2.7.14 Mr. Trinkwon responded that he has two comments to this. First, that Task Group 3 is on a different time frame so they do not know what the specific comments should be and moving platform. And Second, that if comments are submitted, if the submitter knew when they going to be addressed, the submitter could be there rather than having comments rejected because the submitter was not present. He suggested a scheduling so that when the comments are being addressed, the submitter can be there to address the comment. Mr. Marks responded by first stating that that comments are rejected for the submitter not being there is simply not true. Mr. Marks pointed out that if one talks to the chair, it should

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- be possible to arrange the time when the comments are going to be discussed and that it should be possible to arrange a time to be there. Mr. Eklund reminded that in the previous meeting Task Group 1 fetched Mr. Varma to deal with a comment.
- 2.7.15 Mr. Guillemette also pointed out that it is helpful to have as much detail as possible.
- 2.7.16 Mr. Kostas commented that at least on the surface he felt the group was not being even handed sometimes and that red tape and process gets in the way, and at other times, this is not applied. He continued that he feels that there should be a way to make it more productive than the result that an editorial comment is made on. Mr. Marks confirmed that this it not the process and that 802.16 strives to be even handed.
- 2.7.17 Mr. Yanover suggested the issue was problematic. He stated most have a form of change request and have details. He suggested the only issue is that the submitters did not send all their comments to Task Group 1 in response to the call to comments. For these issues, Mr. Yanover explained that each felt that the best way to submit comments is to team up with Task Group 3.
- 2.7.18 Jay Klein responded to comments of Mr. Kostas. He stated in at least more than one case there were editorial comments that were technical comments in disguise. He emphasized that they were meant to be technical, but acknowledged we need to be careful about the process to allow a purer result.

2.8 AJOURNMENT OF JOINT MAC

- 2.8.1 Mr. Marks thanked all for coming and adjourned the meeting 9 PM.
- 2.8.2 The attendance books recorded 120 people attending this joint MAC discussion period.

3.0 Friday, January 26, 2001, IEEE802.16 Closing Plenary

3.1 CLOSING PLENARY -- OPENING AND AGENDA

- 3.1.1 Mr. Marks opened Session opened at 9:30 AM.
- 3.1.2 The meeting start time was advanced forward 30 minutes to allow more time before attendees had to depart for flights.
- 3.1.3 Mr. Marks reviewed the agenda. It was approved.

3.2 CLOSING PLENARY -- TASK GROUP 1 REPORT

- 3.2.1 Mr. Marks provided a report on Task Group 1. He reported on that the focus was on comment resolution. There were 320 comments plus 22 comments left unresolved which were also wrapped up. There is a very tidy database.
- 3.2.2 He reported the Task Group 1 worked together to meet with Phy and MAC subgroups to coordinate comments as well as for MAC and other topics with Task Group 3 and Task Group 4.
- 3.2.3 Mr. Marks reported consensus was reached that there was good opportunity to modify the Task Group 1 MAC to make the changes needed for Task Group 3 and Task Group 4. He stated the process would be to do this through comment resolution.
- 3.2.4 Mr. Marks announced Task Group 1 would like to begin the progress to start the Working Group Letter Ballot and a motion was made:
 - Motion: to initiate Working Group Letter Ballot of IEEE802.16.1/D1-2000, as modified by comment resolutions in IEEE 802.16.1-01/04m and 802.16.1.
- 3.2.5 Question: Mr. Trinkwon asked when there would be a clean draft of the document? Answer of Mr. Marks answered that this is an excellent point and that, yes, the Letter Ballot would not start until the document is released.
- 3.2.6 Mr. Marks opened the floor for discussion. There was no discussion.
- 3.2.7 Vote on the Motion to initiate Working Group Letter Ballot of IEEE802.16.1/D1-2000, as modified by comment resolutions in IEEE 802.16.1-01/04m and 802.16.1. was held. Result: In favor 24. Opposed. 0 Abstentions: 1. Motion carriers.

3.3 CLOSING PLENARY -- TASK GROUP 2 REPORT

- 3.3.1 Phil Whitehead reviewed the status of the Task Group 2. He reported progress is going well and that they are ready to initiate Sponsor Ballot.
- 3.3.2 Motion to initiate Sponsor ballot:
 - Motion: To initiate Sponsor Ballot of IEEE802.16.2/D1-2000 subject to successful completion of final re-circulation ballot. Entered in Record. No discussion.
- 3.3.3 Vote on motion to initiate Sponsor Ballot of IEEE802.16.2/D1-2000 subject to successful completion of final re-circulation ballot. Vote -- For: 22; Opposed: none; Abstentions: one. Result: Motion carriers.

3.4 CLOSING PLENARY -- TASK GROUP 3 REPORT

- 3.4.1 Brian Kiernan reported on the PHY that:
 - There were 14 proposals with 6 return invitees as a result of the proposals.
 - The task group adopted 802.16 as baseline and presented summary charts.
 - The results are summarized in individual reports and the Task Group 3 Summary Report.
 - The task group approved revised PHY Evaluation Criteria.
 - Invitations to PHY proposals were reviewed, including changes.

- changes included making higher criteria to meet (e.g. now 7 required)
 - Invitees are listed; approvals will be going out after this meeting.
- 3.4.2 Mr. Kiernan called for MAC enhancements and reported that:
- Task Group 3 is asking for modifications to Task Group 1 MAC.
 - The specific issues were identified: e.g. ARQ, MAP, Timing (specifically Time Stamp and Polling).
 - March 7 has been set as the deadline for the submissions.
- 3.4.3 Mr. Kiernan reported that Task Group 3 has agreed to meet with Task Group 2 on sub11 GHz coexistence at Session 12.
- 3.4.4 Andrew Macdonald commented that he thinks that for Task Group 3 coexistence is complex and difficult and needs Task Group 2 assistance.
- 3.4.5 Mr. Chayat commented that in future for the OFDM contributions, people should get together to coordinate specific interests. He offered to set up a discussion group to discuss this.
- 3.4.6 Mr. Marks reiterated the process that as a standard is delivered, then the Task Group is closed out.
- 3.4.7 Mr. Marks questioned with respect to the call for contribution whether there would be an interim meeting. Mr. Kiernan confirmed that there would not be an interim meeting. Mr. Marks responded he would like an announcement to let people know about these discussions. Mr. Kiernan indicated he would put a note out on the reflector. Mr. Marks replied that this is sufficient notice to let people know.

3.5 CLOSING PLENARY -- TASK GROUP 4 REPORT

- 3.5.1 Ken Pierce, Secretary of Task Group 4, reported that Task Group 4:
- met each of the days;
 - had 17 contributions, 11 of which were MAC; 6 were PHY;
 - have split the working group into a PHY and a MAC team and made great progress;
 - have boiled down the PHY and MAC contributions to some key issues to make great headway;
 - will be identifying drafts for the February interim Meeting;
 - are working with the contributions that they have; and
 - plan to work on an ITU-R liaison letter.
- 3.5.2 Mr. Pierce issued the following Working Group 4 statement:
that for the Task Group 4 MAC that there would be a request for a Type field of 8 bits for Generic Header upstream and downstream.
- 3.5.3 Mr. Pierce added that there are negotiations going on that will let them get a type field of 8 bits.
- 3.5.4 Mr. Pierce prioritized the Task Group 4 issues as ARQ, MAP flexibility, DFS, followed by ranging issues, etc.
- 3.5.5 Task Group 4 Nominations and Voting was covered. Mr. Pierce reported
- that Sanjay Moghe was proposed for the position of Vice Chair and recommended he be appointed; and
 - recommended for Regulatory lead, that David Chauncey be appointed.
- 3.5.6 For PHY consensus, Mr. Pierce indicated there is consensus for concentrating on TDD operation, OFDM modulation, and interference mitigation techniques.
- 3.5.7 Mr. Pierce announced that Task Group 4 plans an Interim Meeting in February at the San Jose Hyatt to consolidate proposals into a single document. He added he would like to have most of this worked out by the time the March meeting rolls around. Registration deadline was announced as next Wednesday, January 31, 2001.
- 3.5.8 Mr. Marks thanked Mr. Pierce and responded that he would like to have Task Group 4 take the lead on the ITU letters. He reminded that the letters would need to be approved by the Working Group before they go out.
- 3.5.9 Mr. Marks accepted the Task Group 4 recommendations and appointed Sanjay Moghe as the Vice Chair of Task Group 4 and David Chauncey as the co-existence liaison.

3.6 CLOSING PLENARY -- PAR UPDATE (IEEE 802.16-01/03r1)

- 3.6.1 Mr. Marks reviewed the background behind the plan to update the PAR. He reminded that the update proposal was first put together in the November meeting and that discussion was deferred to this meeting pending more discussion on the item. He explained this item, to change the proposal, is a maintenance issue. (see Session 11 Document IEEE 802.16-01/03r1)
- 3.6.2 Mr. Marks summarized the proposal. He explained the first Issue is to change the title to improve the prefix of titles by removing words that were originally thought necessary but are not required. Change to include putting "Fixed" in front of Broadband Wireless Access. The second issue is to make minor changes to improve the Scope and Purpose.
- 3.6.3 Mr. Marks presented the old and new text of the title change. He reviewed the proposals improvements such as words to clarify focus on the GHz range; delete elements of the scope statement dealing with Satellite systems, and, after great debate, the band plans (i.e. there is no possibility to have coordinate band plans so it was deleted from the scope).
- 3.6.4 Mr. Marks continued with the proposed change of the project number from 802.16.1 to just 802.16 (which was the original PAR) and change the title to Local and Metropolitan Area Networks -- Part 16: Standards Air Interface ...
- 3.6.5 For Task Group 4, Mr. Marks reviewed the proposed change from 802.16.4 to 802.16b as well as a change in title to improve formatting. He explained that this helps show that it is an amendment to 802.16. In IEEE this reflects that this document is part of the 802.16 document and that in future, the documents could be merged.
- 3.6.6 Mr. Marks called for comments on the proposed changes. There were none.
- 3.6.7 Similarly for Task Group 3 the proposal: change 802.16.3 to 802.16a. Mr. Marks explained this makes it an amendment to 802.16 rather than a standalone document. Also, as with Task Group 4, a change in title.
- 3.6.8 Mr. Marks called for comments and discussion.
- 3.6.9 Mr. Trinkwon responded with the suggestion we refer to the standard number and not the letter number so that the letters can be assigned in order with when they come out. Mr. Marks replied that the IEEE standards board controls this numbering -- and although the a and b are backwards in terms of the order in which they come out, that is the number that IEEE will assign to the standard. Mr. Marks suggested what is really important is to be able to call out different portions of the PHY with a name so that we can refer to it by the name (as Ethernet does) rather than the Standard number.
- 3.6.10 Motion by Mr. Chayat: "to accept the changes to the PAR". Mr. Eklund seconded the motion. Vote: in favor: 25; Opposed: None. Abstentions: None. Motion carried.

3.7 CLOSING PLENARY -- FUTURE MEETINGS DISCUSSION

- 3.7.1 For session 12, Mr. Marks reviewed that will be held March 12-15, 2001. He relayed he is concerned over reservations at the hotel for Session 12 at the Marriott Hilton Head Gold Resort (formerly Hyatt Regency Hilton Head). He warned there are problems with the reservations due to renovations and reports that are full not accepting reservations, when actually they still are.
- 3.7.2 Mr. Stanley commented he was having problems on hotels for this next meeting. Mr. Marks confirmed that space is to be reserved for the 802.16 meeting.
- 3.7.3 Mr. Marks urged all to try to reserve space and to let him know if people are having problems.
- 3.7.4 For the Interim Session Feb 15-16 for Task Group 4, Mr. Marks confirmed that this session would be in San Jose. He reminded that space is short for this interim meeting and asked attendees to let Mika Kasslin know if they are planning to attend.
- 3.7.5 For Executive Committee and Plenary Meetings, Mr. Marks informed attendees of a proposal at 802.16 to limit time of executive committee meetings to Friday morning to make all of Thursday available to the groups. Mr. Chayat commented that some people start travelling back Friday morning and so he objects to this change. Mr. Marks indicated he would flag this issue to the executive from our Working Group.
- 3.7.6 The starting Plenary on Monday morning was discussed. Mr. Marks suggested leaving it as be with the Plenary starting later. He reminded that the session and meetings could always start on the Monday morning.
- 3.7.7 On Session 13 Mr. Marks reported a person had been identified for coordination.
- 3.7.8 For Session 14, Mr. Marks confirmed that Session 14 is a Plenary Session and will be in Portland.
- 3.7.9 For Session 15, Mr. Marks reported that

- the location is presently open and that
 - 802.16 have been invited by IEEE 802.11 and 802.15 groups to participate with 802.11 and .15 in holding the meeting with them in Sydney, Australia.
- 3.7.10 Mr. Marks commented that it might be helpful for technical exchanges by having all these people together in a joint meeting. On the downside he cautioned there will be complicated logistics (they have 360 people) and calls for joint meetings etc. which can make it more difficult for the Working Groups to do their work.
- 3.7.11 Mr. Marks then raised the question for the working group to decide: do we accept this offer for a joint meeting in Sydney, Australia or not. He asked for suggestions from those interested in hosting this meeting elsewhere.
- Mr. Chayat responded he was interested in hosting the meeting in Tel Aviv.
 - Mr. Chang expressed interest in hosting the meeting in San Jose.
 - Mr. Marks commented someone else was interested in hosting the meeting in Idaho.
- 3.7.12 Mr. Marks asked if anyone has any concerns with including non-member in this vote. There were no concerns raised.
- 3.7.13 Mr. Marks posed the question: do we accept this offer to have the meeting in Sydney or not?
- 3.7.14 Discussion: Mr. Eklund expressed he is not happy with the location of Orlando for Session 13.
- 3.7.15 Mr. Guillemette questioned what the benefit was in doing the 802.16 Session with 802.11 and 802.15. Mr. Marks answered that there is an affinity and that the 802 Groups can maybe share some common interests. He added it is difficult though for people that attend both since periods would clash.
- 3.7.16 Mr. Marks questioned who attends both 802.11 and 802.15. One person responded (Mika Kasslin).
- 3.7.17 A straw poll was taken of the interest in accepting the offer to attend the meeting with 802.11 and 15. Results: Those in favor: 17; Opposed: 19. Mr. Marks concluded, that since more than 50% are opposed, we would turn down offer to hold the meeting with them.
- 3.7.18 Question: Mr. Kostas asked if 802.16 could make a fallback approach if we choose Tel Aviv. Mr. Marks responded he is always willing to hold the meeting in Denver or Boulder as fall back.
- 3.7.19 Question: Mr. Trinkwon inquired into the possibility of not joining 11 and 15 in Orlando and asked whether we (802.16) could change. Mr. Marks responded we are committed to Orlando.
- 3.7.20 Naftali Chayat proposed Tel Aviv as a site for Session 15 and asked whether we could decide this now. Mr. Trinkwon responded it might be better to wait.
- 3.7.21 Mr. Marks took a straw poll of interest in holding the meeting in the various sites. Attendees were invited to indicate the site (or sites) they were interested in. Results were as follows:
- Tel Aviv: = 29
 - San Jose: = 27
 - Coeur d'Alene (Idaho): = 41

Mr. Marks will recommend that a proposal be submitted for holding the meeting in Coeur d'Alene, Idaho (as well as from other groups) for Session 15.

3.8 CLOSING PLENARY -- LIAISON LETTERS

3.8.1 TM4 Liaison Letter on IEEE ISTO versus IEEE 802.16 (IEEE 802.16I-01/04)

- 3.8.1.1 Mr. Marks reported he received a letter from TM4 received wondering about the relationship with BWIF under IEEE noting that there appears to be duplications when this group is asking for liaison.
- 3.8.1.2 Mr. Marks read his response letter. The response letter explained the charter of IEEE-SA and formal relationship with IEEE-SA and ETSI. The response letter stated that ISTO is under industry, is part of industry activity -- not standards works -- and had no accreditation as a standards body. The letter stated that IEEE recognizes IEEE 802.16 as the sole standardization activity in fixed broadband wireless access.
- 3.8.1.3 Mr. Trinkwon asked about strengthening the wording and whether IEEE could send this letter from higher up. Mr. Marks responded that the preference is to send this directly from the WG to expedite the response and send a letter from the Working Group to IEEE.
- 3.8.1.4 Mr. Kostas commented he agreed with this approach and asked the letter include reference to the IEEE SA. Mr. Marks agreed and indicated he would also add the IEEE Computer Society to the cc list of the letter.

3.8.1.5 Mr. Trinkwon comment that Ms. Goldhammer had given the words and, based on this, he voiced concern that the words used the term "Standard". Mr. Marks responded he looked at the letter and that it was as was indicated in the letter from ETSI.

3.8.1.6 Mr. Marks called for any further discussion. There was none. He announced this reply letter was therefore approved. (see Session 11 Document IEEE 802.16I-01/04)

3.8.2 TM4 Letter regarding comment on Document 802.162/D1-2000. (IEEE 802.16I-01/05)

3.8.2.1 Mr. Marks presented the TM4 Letter from ETSI which comments on Document 802.162/D1-2000 form ETSI.

3.8.2.2 Mr. Marks presented and read the draft reply, which he indicated was written Ms. Goldhammer wrote the draft reply with his assistance.

3.8.2.3 The draft reply was reviewed briefly. The reply letter indicated the new TM4 Work Items are of high interest in 2-11 GHz carried out by our Task Group 3 and that the comments by Barry Lewis were accepted as modified.

3.8.2.4 Mr. Marks also showed the letter dealt with the RPE Antenna and Gain, the Hub Antenna RPE below the horizon limits, and the Size of Subscriber Antenna topics. The wording was reviewed and approved. (see Session 11 Document IEEE 802.16I-01/05)

3.8.3 ETSI BRAN Letter (IEEE 802.16I-01/06)

3.8.3.1 Mr. Marks presented a final letter reviewed this week from ETSI BRAN (Jan 19, 2001). He indicated the rule of 802.16 is that someone has to participate, and the letter is the details on how to do this. Response letter from Mr. Marks indicates that there is a plan to indicate the HIPERLAN and HIPERMAN is satisfactory.

3.8.3.2 Liaisons were authorized as Jay Klein to HIPERACCESS and Marianne Goldhammer to HIPERMAN. Authorization are to provide our 802.16 draft documents to HIPERACCESS and HIPERMAN participants at the meetings. This is to be in accordance with the status of IEEE copyrights of the documents; the drafts must not be further distributed.

3.8.3.3 On a second note in the letter, Mr. Marks informed ETSI BRAN that the IEEE 802.16 MAC has reached an advanced drafting state for frequencies above 10Ghz and has been approved for Working Group Letter Ballot. The letter indicated that in the next few months to more effectively address frequency below 11Ghz, this might lead to more efficiency/additional MAC support with a wide range of service with QoS. The letter encouraged comments.

3.8.3.4 The letter also noted that the IEEE802.16 WirelessHuman™ project targeting the development of interoperability standards for license exempt band has evaluated and chosen the IEEE 802.11a and ESTI BRAN HIPERLAN/2 standards as the baseline for the development of its PHY interoperability standards.

3.8.3.5 Mr. Marks asked whether there were any objections. There were none. Mr. Marks therefore approved the letter. (see Session 11 Document IEEE 802.16I-01/06)

3.8.4 Summary of Session 11 for Release

3.8.4.1 Mr. Marks reviewed the summary letter to be released to summarize Session 11. He reviewed that attendance was 166 -- a record for an 802.16 interim meeting.

3.8.4.2 The letter reviewed the resolutions and Task Group highlights:

- TG1 -- resolution of 373 comments, ballot was approved.
- TG2 -- resolved comments designed to close Working Group Letter Ballot of the Draft Recommendation: pro-active for Coexistence of Broadband Wireless Access Systems, with a focus on 23.5-43.5 GHz. All remaining disapproved votes were converted to approve. Discussion commenced on additional coexistence projects.
- TG3 -- Heard 14 Phy proposals, 2 of the invited proposals indicated intent to consolidate. (Stated Mr. Kiernan authorized him to take his report and summarize accordingly.)
- TG4 -- Worked with Mr. Pierce. Following December approval of its PAR, Sanjay Moghe was selected as Vice Chair and David Chauncey as regulatory liaison.

- Working Group reviewed a plan to review the 802.1 PAR. The plan united all the 802.16 three air interfaces.
- Liaison the Working group approved the 3 letters
- Future Meetings -- Session 12. 12-14 March, etc.
- Minutes TBA
- Liaisons

Mr. Marks asked for comments. There were no comments.

3.8.5 Thank you letter for hosts.

- 3.8.5.1 Mr. Marks reported he would draft letter thanking the Hosts for the Session 11 meeting.
- 3.8.5.2 Mr. Chayar commented that this has been a very good and efficient meeting and that he prefers separate meetings such as this meeting.

3.9 CLOSING PLENARY -- NEW BUSINESS

3.9.1 Session 11 and Surplus Finances.

- 3.9.1.1 Mr. Costa gave a financial summary for Session 11: revenues, \$22,273; expenses \$11,079; Surplus for IEEE 802.16: \$11,193.

3.9.2 Surplus Expenditure

- 3.9.2.1 Mr. Demo Kostas recommended that the surplus be saved for an under run of future meetings.
- 3.9.2.2 Mr. Marks responded he has a proposal for use of surplus. Mr. Marks announced approximately \$9,000 surplus fund accumulated from previous meetings.
- 3.9.2.3 Mr. Marks made a proposal to use this money to support editorial expenses. He explained IEEE has a number of professional editors which they use to proof read and format a document when it is turned over to them. He emphasized that they have a program to use their staff to help us, but they will charge us (802.16) for it. Mr. Marks stated he has reviewed the proposal (their costs and services) and feels it is a good deal.
- 3.9.2.4 Mr. Marks outlined the proposals details: for the TG1 draft, with various comment resolution and seeing it through the process, a cost of \$9,000 including the travel costs to attend the interim meeting in San Diego (which the writer/editor has already come to.) He stated the plan in TG1 is that the technical team is responsible to put together the technical changes in the data base and send the changes to the technical editor (qualified in Frame Maker) to include these changes. He stated his proposal is to authorize the surplus in funds for editorial costs for draft development.
- 3.9.2.5 Mr. Kostas reiterated his concern that the surplus should be used to share the risk moving forward. He agreed that the sponsor will absorb the deficit if there is one, and if there is a surplus, the surplus goes to 802.16.
- 3.9.2.6 Mr. Trinkwon commented he supported the concept of the surplus being used for editorial work, but that the surplus from this meetings was a great deal and suggested that half of it be reserved to reduce the cost of the next interim meeting (the other half on editorial). Mr. Marks responded that he would prefer to keep the money we have and ask that budgeting on future meetings be cut more closely -- possibly with 802.16 bearing the costs of deficits to allow them to have a reduction in the costs. Mr. Trinkwon responded he did not agree with this.
- 3.9.2.7 Mr. Marks put the question to the attendees: Any objection to using past surplus revenues to support editorial work of the working group. There were no objections. Mr. Marks announced he would go forward with the proposal.

3.9.2.8 MOTION: Mr. Twinkwon moved to use half of the surplus of this meeting to offset the costs of the next meeting. Mr. Kostas seconded the motion. Comment: better to keep in one place since half is not that great. Vote: For: 3, Opposed: 14. Result: Motion Fails.

3.9.3 Other business

3.9.3.1 Mr. Twinkwon made a suggestion for having a motion revising the PAR change. Mr. Marks responded that there is not time remaining in this session. Mr. Marks suggested this be brought forward at the next meeting.

3.10 CLOSING PLENARY – ADJOURNMENT

3.10.1 Motion to adjourn by Mr. Kiernan. Seconded by Mr. Chayer. Objections – none.

3.10.2 Attendance books recorded eighty-six people signed in at the Closing Plenary.

3.10.3 The Session 11 Closing Plenary was adjourned at 11:45 AM, Friday, January 26, 2001.

Appendix A, Attendance at Session#11

Session#11 was an interim session. The 75% interval attendance criteria for Session #11 were 7 or more intervals. Please contact the 802.16 Session 11 Secretary (baragar@nortelnetworks.com) if you feel your attendance has been recorded incorrectly.

The following 148 people registered attendance at 7 or more intervals and met the attendance criteria.

Arefi, Reza	Falconer, David	Leiba, Yigal
Arrakoski, Jori	Fishel, George	Leimer, Donald
Ashtijou, Mohammed	Fleishman, Emanuel	Leng, Minfei
Audeh, Malik	Florea, Adrian	Lewis, Barry
Avivi, Eli	Forlini, Franco	LI, Xiaochuan (Frank)
Banihashemi, Amir	Garrison, G.Jack	Liddell, Ken
Baragar, Ian	Goldhammer, Marianna	Liebetreu, John
Baugh, C.R. (Rick)	Gowans, Andy	Lo, Titus
Behl, Rahul	Grinfeld, Ron	Lycklama, Heinz
Belec, Yvon	Groleau, Rejean	Lysejko, Martin
Benyamin- Seeyar, Anader	Guillemette, Phil	MacDonald, Andrew
Beser, Burcak	Haimov, Daniel	Malkemes, Robert
Brennan, James	Hakim, Joseph,	Manor, Yonatan
Bronstein, Valdimir	Hamilton, Michael	Marks, Roger
Bushue, Carl	Harenneck, Moritz	McCallister, Ronald
Buskila, Baruch	Hebron, Yoav	McKown, Russell
Caso, Gregory	Heise, Bob	Meyer, Ronald
Chan, Norbert	Hinton, Brandon	Middleton, Andrew
Chang, Dean	Hum, Coleman	Mody, Apurva
Chang, Kuor- hsin	Husson, David	Moghe, Sanjay
Chauncey, David	Jackson, DU Wayne	Myers, William
Chayat, Naftali	Jacobsen, Eric	Nelson, Robert
Chayer, Remi	Jorgensen, Jacob	Padan, Uzi
Cheng, Wei- Kang	Kasslin, Mika	Patullo, Michael
Costa, Jose	Kiernan, Brian	Peirce, Kenneth
Crilly, Jr., William	Kitnser, Itzik	Pihlaja, Juha
Donahue, Michael	Klein, Allan	Ponnuswamy, Subbu
Dudley, Jennifer	Klein, Jay	Quilez, Vincente
Edmonston, Brian	Kostas, Demosthenes	Rafie, Manouchehr
Eidson, Brian	Kravtsov, Vladimir	Ran, Moshe
Eilts, Henry	Krinock, Jerry	Regev, Einan
Eklund, Carl	Kwak, Joe	Resheff, Guy
El-Damhougy, Hesham	Lamoureux, Pierre	Rhodes, Valentine
Erceg, Vinko	Langley, John	Ritter, Mike
	Lee, Chin- Chen	

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Sarca,
Octavian
Sarejedini,
Amir
Satapathy,
Durga
Scarpa, Carl
Schwartz,
Randall
Selea, Radu
Seller, Olivier
Shalom, Rafi
Shan, Tie-Jun
Shani, David
Shenhav,
Chaim
Shirali, Chet
Singleton, Ken
Smith, Steven
Sonander,
Sean
Stamatelos,
George
Stanwood,
Ken
Stewart,
Michael
Struhsaker,
Paul
Sydor, John
Tappenden,
Chris
Taylor, Shawn
Thompson,
Paul
Tolia, Anish
Trinkwon,
David
Tse, Clement
Van Waes,
Nico
Varma, Subir
Wachira, Muya
Waks,
Matitiahu
Wang, Arthur
Wang, Lei
Wang, Stanley
Wang, Chao-
chun
Ward, Robert
Waterhouse,
John
Whitehead,
Philip
Williams, David
Wu, Yiyang
Yang, S.
Michael
Yanover,
Vladimir
Yasocharan,
(Yaso) A.

You, Charles
Zhang,
Wenhan
Zuniga, Juan
Carlos

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The following 18 people registered attendance of 6 intervals or less and did not meet the attendance criteria.

Akhter,
Mohammad
Bogan, Zev
Chang, Kai
Evans, Tim
Fisher, David
Hadad, Zion
Huang, Jun
Kipens,
George
Mwikalo, Rama
Ng, Vincent
Chee
Sammoun,
Samir
Scaringi, Vito
Sumi, David
Tavormina,
Joe
Whiting,
Robert
Williams, Tom
Yanikomeroglu
, Halim
Zebarth, Ja