

**IEEE P802.11
Wireless LANs**

**Tentative Minutes of the P802.11 Full Working Group
Orlando, Florida
March, 2007**

Date: 2007-03-16

Author(s):

Name	Company	Address	Phone	email
R. R. Miller	AT&T	180 Park Ave, Florham Park NJ	973-236-6920	rrm@att.com

Abstract

This document records minutes of the 802.11 meeting of March 2007 at Orlando, Florida.

Notice: This document has been prepared to assist IEEE 802.11. 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 material 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 802.11.

Patent Policy and Procedures: The contributor is familiar with the IEEE 802 Patent Policy and Procedures <http://ieee802.org/guides/bylaws/sb-bylaws.pdf>, including the statement "IEEE standards may include the known use of patent(s), including patent applications, provided the IEEE receives assurance from the patent holder or applicant with respect to patents essential for compliance with both mandatory and optional portions of 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 stuart@ok-brit.com as early as possible, in written or electronic form, if patented technology (or technology under patent application) might be incorporated into a draft standard being developed within the IEEE 802.11 Working Group. **If you have questions, contact the IEEE Patent Committee Administrator at patcom@ieee.org.**

1. Monday Afternoon Opening Plenary, March 12, 2007

1.2. Opening

1.2.1. Call to Order

- 1.2.1.1. Number of people in the room: 177
- 1.2.1.2. Stuart Kerry (Stuart): I call the meeting to order.
- 1.2.1.3. Meeting convened at 1339 hours.
- 1.2.1.4. Stuart: There is some difficulty with the attendance system. We are attempting to fix the problem. Will the first person who notices the system is working again, please advise?
- 1.2.1.5. This is 102nd meeting. Our agenda (document number 07/0075r2) is shown. There is a notice asking you to switch off your phones. Use of any recording device is prohibited. Still photography is allowed only by permission of the chair. Both of these prohibitions are covered in the rules and procedures. Is everyone aware of these procedures? Yes.
- 1.2.1.6. Notification from floor: Attendance now working.

1.3. Process

1.3.1. Review/Modify the Agenda

- 1.3.1.1. Stuart: I ask that we approve the agenda as shown. [reviews items]. Is there any objection? Yes.
- 1.3.1.2. Adrian Stevens: We started a discussion at last session regarding process improvements. I would like to ask that we continue this discussion.
- 1.3.1.3. Stuart: I acknowledge your suggestion, and suggest that we schedule this for the Wednesday session. OK? Yes. Added to agenda for Wednesday.
- 1.3.1.4. Stuart: Any further modifications? Any objection to approving unanimously? None. So moved and approved. Adopted unanimously.

1.3.2. Review/Approve Minutes

- 1.3.2.1. Stuart: We need to approve the London minutes. Is there any objection to approving unanimously? None. Moved and approved unanimously.

1.3.3. Poll of First-Time Attendees

- 1.3.3.1. Stuart: Who is attending for first time? 7 attendees.

1.3.4. Financial Summary

- 1.3.4.1. Al Petrick: I show the document 07/0355r0 on the screen. [reviews] We show a healthy balance. We are using a new auditing form, required for non-profit organizations. Historical attendance is shown as well. Questions? None.

1.3.5. Review of LMS Policy

- 1.3.5.1. Stuart: Introduces people on the dais. Bob Miller will be substituting as secretary for this session. You have been issued a voting token. If your token does not indicate you are a qualified voter and you think you should be qualified to vote, see Harry Worstell. We operate under the LMSC P&P.

06/812r3 shows our policies. We operate under Robert's Rules of Order. Voting can be obtained by attending two of the last 4 plenary meetings, or one plenary and one interim. Once you reach voter status, you must contact the appropriate vice-chair requesting voting rights 14 days in advance of the session. Once you receive your voting rights, you may attend study groups and task groups, with the voting token required to vote when motions are offered. See 07/344r0 which is new participant orientation.

1.3.5.2. Comments to media/press: Comments will be provided only by chairs and vice-chairs, and only on the week's activities.

1.3.5.3. Regarding reflector services: The reflector can be invoked for your use via ieee802.com/11. Click the task bar for reflector access. There is a confidentiality disclaimer. If you submit, you will be added. Attendees are responsible for maintaining accurate contact information; see Harry for questions. 5.2.11 of the rules requires declaration of affiliation. The affiliation is now required and will be shown on the minutes:

1.3.5.4. Stuart Kerry: NXP Semiconductor

1.3.5.5. Al Petrick: WiDefi

1.3.5.6. Harry Worstell: AT&T

1.3.5.7. Bob Miller (Temporary Secretary): AT&T

1.3.6. Review of Patent Policy

1.3.6.1. Stuart: Review of patent policy. [reads]

1.3.7. Review of Inappropriate Topics

1.3.7.1. Stuart: I'd like to review inappropriate topics. Contact the patent committee if you know of any violation. Anti-trust laws forbid certain discussions. Under U.S. copyright law, all submissions become the property of the IEEE. We represent individually, so no references to companies should be used. Any questions? None.

1.3.7.2. Gunther: How are we doing on attendance this week?

1.3.7.3. Stuart: Harry Worstell will explain.

1.3.7.4. Stuart: Al Petrick will now cover changes to code of ethics.

1.3.8. Review of Ethics Requirement Changes

1.3.8.1. Al Petrick: The SA has indicated that significant changes will occur with respect to patent policy. There has been rich input and legal counsel, leading to these policy changes. The patent group is now editing the patent policy. You can get access to some material on the IEEE site. In the April time-frame, the changes will be made final. I would like to cover them [reads]. Policy highlights were covered, including letters of assurance. Use of LOA form, which is now mandatory. Flexible licensing terms are now allowed. Questions? None.

1.3.8.2. Stuart: There is a tutorial tonight (tutorial #1) covering this material. Harry, Al, and I will attend. Chairs of task groups are urged to attend as well. Representatives of the SA patent committee and legal counsel will be present for questions.

1.3.8.3. Stuart: Does the chair need to be informed about any letters of assurance? None. Is everyone aware of the patent policy? No dissent. Any questions? No. We shall be operating as per these rules.

1.3.8.4. I have received an e-mail regarding a possible patent overlay for 802.11. I have talked to the IEEE patent secretary regarding CSIRO, which submitted a letter of assurance for 802.11. I have also requested a letter for 802.11n. This request will be sent to the appropriate contact.

1.3.9. Other Announcements

- 1.3.9.1. Stuart: Discussion on process. LMSC rules regarding 15 and 30 day ballots.
- 1.3.9.2. The TGT chair has requested to step down. Suman has volunteered.
- 1.3.9.3. The TGv chair, Pat Calhoun, is stepping down. I am seeking nominations. Joe Epstein has volunteered. I will act on Wednesday or Friday depending on feedback from groups.
- 1.3.9.4. Regarding the Working Group secretary: Tim Godfrey could not attend this meeting. Bob Miller is stepping in.
- 1.3.9.5. Task Group "r" Appeal: The review judgment was issued, with the right to appeal which closed 3/10. Dan, will there be any appeal? No. There will be no appeal from Dan. Clint, will you choose to appeal? No. Gentlemen, thank you for abiding by the decision of the review.
- 1.3.9.6. An "Open Office" will be held this meeting. Use the opportunity to ask questions.
- 1.3.9.7. Are there any other announcements from the table? No. Any other announcements from the floor? No.
- 1.3.9.8. Caution: Book now for hotel in Montreal.
- 1.3.9.9. Regarding the Montreal schedule: Due to a previously-scheduled function, there will be no tutorials next time in Montreal on Monday night.
- 1.3.9.10. In September we shall meet at Waikoloa, HI. For November, Asia and the Far East are being considered. Auckland and Singapore appear too expensive. Taipai currently tops the list. Taipai is expensive, but we will draw down the treasury to partially subsidize the attendance fee. The break point will be 450 people. This will be the last international event, as discussed last time. In subsequent years only one international event will be held per year.
- 1.3.9.11. In May 2008 we are scheduled to meet in Jacksonville. March 2008 had been scheduled for New Orleans, however Hyatt has informed us that they cannot hold the event. Other choices by Hyatt were provided in other cities. The Caribe Royale also gave a good rate. The choices are, accordingly, Chicago, San Francisco, or Orlando. I'd like a poll to sample member view:
- 1.3.9.12. Anyone in room can vote (once).
- 1.3.9.13. Chicago: 30
- 1.3.9.14. San Francisco: Many (no count)
- 1.3.9.15. Orlando: Many (no count)
- 1.3.9.16. Andrew: Are we not having multiple international sessions?
- 1.3.9.17. Stuart: One per year has been decided by the group.
- 1.3.9.18. Stuart: I'd like to review PAR activities: QAW, 1AX, .3rev, .16c, .17c I'd appreciate feedback on these PARs. Are there any comments on these? No comments, no positions. You should reply by Wednesday if you have any comments.
- 1.3.9.19. Al Petrick: I shall post for a meeting to discuss. Watch poster board.
- 1.3.9.20. Stuart: Tutorials: Monday #1 Patent Policy, #2 Video over 802.11, Tuesday #3 Emergency Services for IEEE 802.
- 1.3.9.21. Harry: Wireless Update - We have over 50 APs here. Coverage should be complete. We have also gained free wireless access. Login: "IEEE", Password "802". Hotel has limited BW into our area, and we are negotiating to expand that.
- 1.3.9.22. Stuart: Harry will cover attendance.
- 1.3.9.23. Harry Worstell: Attendance update. See document 07/0369r1. It shows details of this gathering with TG credits for sessions. Tutorials count for 1 meeting if you attend both. You have to attend 12 meetings this week to get 75% credit. You can go to <http://newton.events.ieee.org> and select 802.11 or

- go to <http://newton.events.ieee.org/bin/attendance.cgi/802.11>. You must sign in initially with your badge number before claiming credit. [runs through sign-in and attendance processes]. It is your responsibility to sign in. No corrections will be made after the fact, per Stuart's and CAC's policy. Newton.events.ieee.org can also be used to access documents, with years shown. Any new draft will be in the "drafts" area. Those drafts have not been entered yet, but will be shortly.
- 1.3.9.24. Floor: For tutorials, which session should be chosen? Tutorials aren't listed.
- 1.3.9.25. Harry: We will correct to add that.
- 1.3.9.26. Floor: Is there a way to log attendance as a function of time?
- 1.3.9.27. Harry: We are working on that. We have been selected as the beta test org for new features. For documentation, there is a new system that has been built. It is being trialed by chairs now. When tested thoroughly, it will replace 802wirelessworld.com. Hope to have it on line soon. Bob LaBelle is working on this with his team.
- 1.3.9.28. Stuart: A new web site is being prepared as well. [shows]
- 1.3.9.29. Harry: Voter Summary - 325 voters, with potential new voters at this meeting 34, nearly voters (haven't asked for rights yet) 36, aspirants 177, lost privileges 24. By not voting on letter ballots, many are losing their voting rights.
- 1.3.9.30. Stuart: You must click on voter request to request voting privileges, after you are convinced that you have met qualifications.
- 1.3.9.31. Stuart: Policy and Procedures Update will be provided by Al Petrick.
- 1.3.9.32. Al Petrick: We have been collecting input since last July. We have document 07/362r0 showing proposed changes to P&P. Document 07/360r0 contains the redlined version. I shall post these shortly. I would like you to forward comments to me. In the future, I also request that you e-mail me comments on an ongoing basis. Absent comments, the new policy will go into effect soon. We reviewed the changes proposed to CAC last night, with only one spotlighted issue. There is proposed text, current text, and the rationale for the change. [reviews each change]. Special consideration from last evening, treasurer's activities: If an ad-hoc meeting is happening external to 802.11, then none of the expenses will be reported to the working group or be assigned to the IEEE. I removed the text that relates to such meetings. All of these requirements are mandated by the LMSC. Please read through the documents and forward comments to me. Any questions? Yes.
- 1.3.9.33. Stuart: What happens next?
- 1.3.9.34. Al: Assuming no comments, the changes will be voted in at next meeting in July and become active.
- 1.3.9.35. David Hunter: Robert' Rules allow a chair to temporarily step down to allow him/her to make a technical comment, with the vice-chair continuing as chair until he/she is finished.. This appears to have been removed. Is that the intention?
- 1.3.9.36. Al: Let's take that off-line.
- 1.3.9.37. Stuart: Working Group Publicity - Al Petrick will cover publicity this week if issues arrive.
- 1.3.9.38. Stuart: Richard Paine will cover timelines.
- 1.3.9.39. Richard Paine: Timeline - Chairs must deliver timeline estimates to me by Thursday. Editors must reference the version of the .pdf document. Harry will run the editors' meeting.
- 1.3.9.40. Harry: Editors' Meeting Substituting for Terry Cole. At the editors' meeting, we shall resolve TBD use, update the "Editor's Best Practices" document, include reports on internationalization status, timelines, updates to the format in baseline, and discuss whether timeline is for WG or SA. The meeting is at 7 am tomorrow.

- 1.3.9.41. Stuart: ANA Assignment - Bob O'Hara. I would like to thank Bob and his team for completing the Rev-ma product. It will be published in July of this year. We have a difference between the ma draft and its issue. I am working on authorization to vend the draft until then. Draft 9.0 will be available in the members' area.
- 1.3.9.42. Bob O'Hara: Draft 9.0 is already in the members' area. There has been no ANA activity since last plenary. There is no indication that "n" will be asking for numbers this session, if not, ANA will have nothing to do.
- 1.3.9.43. Clint Chaplin: The only draft 9.0 posted is the redlined version.
- 1.3.9.44. Stuart: That will be fixed.
- 1.3.9.45. Stuart: Under "ma", Bob has been doing interpretations. There have been none.
- 1.3.9.46. Stuart: Next, we have a WMM-802.11e study group reaffirmation vote. We did not have a quorum in the previous meeting. Is there any discussion on this? No. We shall vote to reaffirm the vote to approve WMM-802.11e study group formation at the last meeting. Voters only, please hold up your tokens.
- 1.3.9.47. Approve: 70, Disapprove: 17, Abstain: 28 (80.46% Approval). The motion to approve the vote passes.
- 1.3.9.48. Similar motion:
- 1.3.9.49. Reaffirmation: To approve the vote on WMM-802.11e task group formation:
- 1.3.9.50. Approve: 81, Disapprove: 1, Abstain: 10 (Approval 98.7%) The motion to approve the vote passes.
- 1.3.9.51. Steve McCann: We shall be meeting to discuss IMT Advanced as well as supporting the tutorial on Video.
- 1.3.9.52. Richard Paine: TGk Summary. LB86 closed Feb 15th, with comments in 07253r4. This week we will create more comment resolutions. Document 07/376r0 shows the agenda.
- 1.3.9.53. Stuart: Regarding the 802.11n LB97 ballot results: 83.4% approved of the "n" draft. Statistics:
- 1.3.9.54. Qualified Voters: 325
- 1.3.9.55. Participant Voters: 306
- 1.3.9.56. [Secretarial Note: The participant voter count was found after the session to have been in error. The correct number is 305. The other data, including percentages was found to be correct]
- 1.3.9.57. Return Ratio: 94.2%
- 1.3.9.58. Approve Votes: 231
- 1.3.9.59. Approve %: 83.4%
- 1.3.9.60. Do Not Approve Votes: 46
- 1.3.9.61. Do Not Approve %: 16.6%
- 1.3.9.62. Abstain Votes: 28
- 1.3.9.63. Abstain %: 9.2%
- 1.3.9.64. Invalid Votes: 4
- 1.3.9.65. Stuart: One individual showed a "no" vote but with no comment attached. I ask that his input be considered. I have arranged that draft 2.0 will be available for sale at the end of this week (\$90 Non-member, \$70 IEEE-Member)
- 1.3.9.66. Bruce Kraemer: Assembled comments from the letter ballot. 3163 comments received, some duplicates. 1141 were editorial, with 1635 technical. We shall be busy doing comment resolution. Questions? None.
- 1.3.9.67. Stuart: Adrian, please change document cover from 2006 to 2007.
- 1.3.9.68. TGp: Lee Armstrong. Still resolving comments

- 1.3.9.69. TGr: Clint Chaplin. 22 comments remaining from last meeting. Some others due to internal work. Document 06/1895r18 shows resolutions. Document 07/244r13 shows internally-adopted work items.
- 1.3.9.70. Stuart: This contains all comments, right?
- 1.3.9.71. Clint: Yes.
- 1.3.9.72. Stuart: There was some criticism on "n", where there was no consolidated resolution sheet.
- 1.3.9.73. TGs: Donald Eastlake. Concluded LB93. 07/213r3 shows agenda, Document shows 07/23r20 with resolutions. If a PAR change happens, we will have to revise the draft document.
- 1.3.9.74. TGT: Charles Darwin. Looking for nominee for TG as new chair. Will then hear proposals for remaining comments. No questions.
- 1.3.9.75. TGu: Allocation sheet is being corrected. 802.21 is shown as having an ad-hoc with TGu today in error. TGu will have a joint meeting with .21 tomorrow. Liaison and comment resolution.
- 1.3.9.76. TGv: Bob O'Hara for Pat Calhoun. Complete comment processing from internal review and proposals for additions to draft.
- 1.3.9.77. TGw: Jesse Walker. Finish resolving LB88 comments. Request WG send next version of draft for recirculation.
- 1.3.9.78. Stuart: You are also the JTC SC6 representative?
- 1.3.9.79. Jesse Walker, Yes, submitting comments on liaison statement for meeting in Xian, China in April.
- 1.3.9.80. TGy: Peter Ecclesine: Recirculation approved. Joint meetings with other groups to explore coexistence protocols.
- 1.3.9.81. DLS-SG: Suman Sharma. [Inaudible]
- 1.3.9.82. Darwin Engwer: I shall cover document 374r1 - IMT Advanced. I was asked to investigate. Bruce Kramer helped. IMT uses different nomenclature and process from us. The document shows an overview. What I believe should happen is that we should indicate we'll produce a response. We should send the response by May, 2007. We should work this week. If not, it could be done by executive e-mail letter ballot. We alternatively could produce a more detailed response, with an early indication now. I suggest Tuesday night or Thursday night to work the response, and on Friday that we form a team to work on more advanced topics. Assuming approval by 802.18, we could approve in the closing plenary. Reference document 375 and 202 (introduction)
- 1.3.9.83. Steven McCann: I agree.
- 1.3.9.84. Gunther: Why is 802.16 not mentioned?
- 1.3.9.85. Darwin: Wasn't mentioned because this is 802.11. We shall meet with a variety of other groups along with 802.18 (RR-TAG) and other groups on Tuesday. Questions? Yes.
- 1.3.9.86. Stuart: Can you remain our representative?
- 1.3.9.87. Darwin Yes. Tuesday and Thursday.
- 1.3.9.88. Stuart: Are you a voting member of 802.18? No. I would like both of you in there as well as myself as I am the only voting member.
- 1.3.9.89. Al Petrick: FYI, I have posted the P&P documents.

1.4. Closing

1.4.1. Recess

- 1.4.1.1. Stuart: We are recessed.
- 1.4.1.2. Recess at 1530 hours.

2. Wednesday Morning Mid-Session Plenary, March 14, 2007

2.2. Opening

2.2.1. Call to Order

- 2.2.1.1. Stuart Kerry (Stuart): I call the meeting to order.
- 2.2.1.2. Meeting convened at 1032 hours.

2.3. Process

2.3.1. Review/Modify the Agenda

- 2.3.1.1. Stuart: The only change in r2 is the cellphone notice, shown on the screen. Audio and video recording is prohibited according to the operating manual, the only exception being approval of the chair who will announce any exceptions. The Adrian Stevens discussions, John Barr discussion, and joint discussions on IMT Advance have been added. Are there any other changes to the agenda? No.
- 2.3.1.2. May we approve by unanimous consent? Yes. So moved and approved.
- 2.3.1.3. Patent policy: Are there any questions on the patent policy of the IEEE. No. We shall be operating under these rules. Are there any LOAs that the chair should no about? No.
- 2.3.1.4. The chair confirms that a letter has been sent to CSIRO regarding the request for an LOA. [the item was mentioned in the Monday session]
- 2.3.1.5. Harry: Attendance Recording - You must sign in with 5 minutes grace. You must achieve 75%. The server has been working, so you should be having no problems.
- 2.3.1.6. Stuart: Any announcements from the table? Yes.
- 2.3.1.7. Al: I have received no comments on the PARs.
- 2.3.1.8. On the P&P: One comment from Dave Bagby. The draft had removed specific empowerment motions, they are now added back in. No other comments on proposed changes. Documents are 362.r1 draft, 360r1redline, 363r1 summary. If there is a 360r2, it will be voted in April.
- 2.3.1.9. Stuart: Is Nuraj Sharma in the room? No. Darwin? Yes. Please ensure that Sharma will be in the room Friday.
- 2.3.1.10. Chair positions: Epstein and Stanley for TGv. Any others? No.
- 2.3.1.11. March Plenary in 2009. Want to get view of group of suitability of Israel. Straw poll: Yes 62, No. 25
- 2.3.1.12. I will pass that back to the executive secretary.
- 2.3.1.13. Just before our meeting in Montreal, Steve Mills, SA Chair, would also like to hold an IEEE-sponsored event in Tunisia. I'd like to see if anyone could represent the WG at that meeting. Please notify me by Friday.
- 2.3.1.14. Stuart: Any other announcements from floor? No.
- 2.3.1.15. Last announcement from table.
- 2.3.1.16. Al: Joint meeting with TGy yesterday. Notes will be available after this meeting.
- 2.3.1.17. Stuart: There seems to be a network problem (possible rogue DHCP server), which the contractor is working.
- 2.3.1.18. Presentation: Richard Kennedy, Oak tree Networks, presented document 07/425r0 (.18). Richard is the 802.11 Liaison for 802.18, which is the RR-Tag between various agencies and IEEE. organization. At the meeting, Radio Frequency Medical Devices were discussed. Meeting yesterday with

- 802.16h and 11y discussing possible collaboration in 3650 – 3700 MHz band. Also IMT Advanced meeting, for collaborating all working groups to 8F. This session we shall be evaluating white space proposals and reviewing.
- 2.3.1.19. Peter Ecclesine: There is another meeting IMT Advanced PM1 Thursday
- 2.3.1.20. Stuart: Any votes? No.
- 2.3.1.21. Floor: Between 16h and 11y any conclusions? No.
- 2.3.1.22. Eldad Perahia,: Intel, discussed 802.19. Reviewed text for coordination between 802.16h and 802.11y 802.19 agreed to host. See documents S802.16-07/017r1, C802.16H-07-38 and C802.16H-07-39
- 2.3.1.23. Room count: 192 in room.
- 2.3.1.24. David Hunter: 802.21, Panasonic, 07/0450r0. Chair of 802.21 will present shortly. Interfacing 802.11 with cellular network operators. Representation in TGu and other groups. Now working with EC projects. Security an important issue, coordination difficult. Paging technologies also being worked. In Draft D4, 66% approval. If you are interested, use your 802.11 user ID and password to access the draft. July planned for LB.
- 2.3.1.25. Questions? None.
- 2.3.1.26. Wi-Fi Alliance Liaison: Andrew Myles, Cisco, Document 07/447r0. Preparing presentation in May. 802.11 Chair challenged Wi-Fi Alliance to review process between 802.11 and Wi-Fi. General presentation planned in Montreal. Seeking questions from group. Much work in Alliance is based on work in 802.11. Congratulates body on 802.11n, and making draft available. Activities related to WMM Michigan Trials, thank working group to transition to 11r and 11k also useful for voice and video. Mesh also important. Joining
- 2.3.1.27. Dorothy Stanley: IETF Liaison. Aruba Networks. Document 07/423r0. There are two items highlighted. 1) ECRIT two outstanding items: request for review of ECRIT framework document in TGu, request for overview presentation of 802.11 Emergency Services approach, also being addressed in TGu. Steven developing presentation. and 2) CAPWAP documents for review in April, with response in may. I need a time slot at next meeting to deal with that response.
- 2.3.1.28. Questions? No.
- 2.3.1.29. Stuart: Which day for IETF slot?
- 2.3.1.30. Dorothy: Will take off line.
- 2.3.1.31. JTC1 SC6 Jesse Walker Intel. The joint development agreement SC6 and IEEE has been under review. Disposition of comments received by international bodies looks favorable to continuation of relationship. Will be voted on April 9-13 in Xian China. Previous meeting worked on presentation for Xian, where IEEE endorsed going-forward.
- 2.3.1.32. Questions. None.
- 2.3.1.33. Stuart: 3GPP Liaison is Open Volunteers for position? None. Third call. Removed by P&P
- 2.3.1.34. TIA Liaison is Open. 1st call for volunteers. Steve Whitesell, VTech. Currently chair of TR41 future premises terminal equipment. Have done liaison duty in the past.
- 2.3.1.35. Stuart: Are you a regular attendee? Yes.
- 2.3.1.36. Stuart: Is there any objection to appointing Steve? None. Very well, Steve will be the liaison.
- 2.3.1.37. Stuart: We now have Old business from Monday Plenary
- 2.3.1.38. 802.11s PAR discussion
- 2.3.1.39. Donald Eastlake: Document 1107/391r1, Motorola. Chair of TGs. Amend PAR of 802.11s. Current PAR written too narrowly. Donald gave several examples of situations where an enlarged PAR would allow mesh solutions

- to be used in the context of ESS infrastructure, home networking and 802.11 for first responders. No reason why all of these applications have to be APs. This tends to force the mesh into operation in an environment with less-restrictive beacons, etc. Specific Text 07/149r5 with tracked changes. Replaces "access point" with "station" and a few other changes. Discussion covered three scenarios for proceeding and the changed PAR was viewed as the best. Low attendance in London. Failed vote at plenary by one vote. Intend to bring forward again.
- 2.3.1.40. Stuart: Questions?
- 2.3.1.41. Bob O'Hara: Since this needs to be approved by EC, has the 5-criteria also been updated as well as the coexistence document?
- 2.3.1.42. Donald: The 5 criteria update is included in the referenced document.
- 2.3.1.43. Bob O'Hara: The larger number of devices will not impact coexistence with 802.11 devices in the same environment?
- 2.3.1.44. Garth Hillman: What is the difference between APs and mesh points?
- 2.3.1.45. Donald: Mesh points provide a peer-peer like relationship. People can roam on a peer-peer level with multi-hop forwarding. Two or more peer relationship between nodes.
- 2.3.1.46. Discussion of Ballot Timing
- 2.3.1.47. Adrian Stevens, Intel UK Limited, showing document 377r1. I'd like to bring forward an issue with 802.11n task group. 400 comments from ballot, and would like to go to recirculation. P&P allows 15 day procedural ballot with 30 day technical ballot. To meet timing, we must operate in "hero" mode. The chart shows no slack between session activities. 15 day ballot comes from LMSC with no difference between regular and recirculation ballots. Could either change LMSC rules to 10 day ballot, (may be hard-LMSC just went from 10-15 days). Task group chair could "pre-authorize" the ballot after examining the edits. Point is that task group chair is required to determine that draft is complete. This would be a continuation of that technique. I would ask for two straw polls. First no discussion, 2nd with discussion.
- 2.3.1.48. Stuart: OK.
- 2.3.1.49. Should we attempt to modify the LMSC rules to allow a 10 day ballot that do not affect the contents of a draft standard?
- 2.3.1.50. Stuart: Will voters please rise?
- 2.3.1.51. Yes 110, No 7, Abstain 26.
- 2.3.1.52. Question: Jim if we pass this it is just a straw poll. All the chairs have to certify the quality of the document.
- 2.3.1.53. Charles Wright, Azimuth Systems: How does this affect the time on the server rule? I believe that the rules say that a task group can move as fast as it wants to but someone can ask to see the draft. Seems like a good idea to go that way.
- 2.3.1.54. Jesse Walker, Intel. We should move the ballot along as fast as possible. I would like the group to recommend that the draft is ready for ballot.
- 2.3.1.55. Adrian: I would not propose to ruin the normal process.
- 2.3.1.56. Steve McCann: When you say there would be a "motion against the task group chair" to start the ballot.
- 2.3.1.57. Adrian: Haven't thought about details.
- 2.3.1.58. Steve: This would seem to place some responsibilities on the chair.
- 2.3.1.59. Jim Petranovich, Conexant: I'd like to understand the history of this, having had a process in place. Why was the LMSC rule changed in the first place?
- 2.3.1.60. Adrian: As I recall it was caused where a draft clearly went to letter ballot without proper inspection. The trust with the editor was broken once, and must be repaired.

- 2.3.1.61. Darwin Engwer: We have good reasons for the four-hour rule. I am concerned that your new process would open the opportunity for abuse. For myself, I could endorse this if we required a checklist that drafts would have to meet before going out to review.
- 2.3.1.62. Adrian: The four-hour rule may need to apply to certain documentation, because they could determine the proper outcome of changes. WRT the checklist it seems like a good idea.
- 2.3.1.63. Stuart: Recess for 30 seconds [discusses poll with Adrian].
- 2.3.1.64. Stuart: In session again.
- 2.3.1.65. Straw Poll on screen:
Should we attempt to modify our rules to allow something like the following strawman sequence (details TBD):
- Editing instructions are approved by motion in a TG (e.g. comment resolutions).
 - The TG determines it wants to ballot the draft after editing instructions are executed by motion.
 - The TG chair declares the completeness of the draft, given that the editing instructions are incorporated
 - The WG approves going to letter ballot, contingent on the determination of the TG chair that the editing instructions have been properly applied
 - The editor does the editing and produces a draft
 - The TG chair determines if the edits have been properly applied
 - The TG chair informs the WG chair of this determination and the WG chair starts the ballot if satisfied.
- 2.3.1.66. Stuart: Let us vote. There can be abstains.
- 2.3.1.67. Yes 37, No 13, Abstain 72
- 2.3.1.68. Stuart: Is there any new business? We have 4 items with 15 minutes left. I must reduce the times of presentations? [negotiates]. OK with all presenters? Yes.
- 2.3.1.69. John Barr, Motorola, presented 07/419r1 outlining the very high throughput study group. New market requirements suggest a 1Gbps LAN should be considered. To keep up with activities elsewhere, we should create a PAR. There has been a call to collaborate with IMT Advanced and there has been discussion in the next-generation group. 802.11 is close to finishing. Wi-Fi Alliance is already preparing products. Market opportunities for streaming video, etc. and IMT Advanced would suggest work on this should begin soon, aiming at standard in 2009. We would like to move that 802.11 approve a study group.
- 2.3.1.70. Motion:
- 2.3.1.71. IEEE 802.11 WG requests approval by IEEE 802 LMSC to form a study group to address requirements for >Gbps... (Harry to provide motion text)
- 2.3.1.72. Bruce Kraemer Marvel Semiconductor
- 2.3.1.73. Stuart: Questions? Yes. Let us alternate, in-favor, against.
- 2.3.1.74. Bruce Kraemer: In favor. Seems a stretch, but mirrors 11g while considering 11n. Past history suggests a never-ending need to have more throughput.
- 2.3.1.75. Steven McCann: Speak against. From the WNG point of view, we may be in the position of having two groups asking ExCom to consider two study groups at the same time, because of the Video group.
- 2.3.1.76. The video group is headed for incremental improvement on what we have now. Here we are looking at very high throughputs that would probably required more restructuring.
- 2.3.1.77. Darwin Engwer Nortel Networks In favor. Presentation in WNG. 412r1 explained reasons. This is the right time to start the next thing. This is not related to IMT Advanced, however.

- 2.3.1.78. Jim Petranovich, Conexant: The way the motion is worded, it is independent of other initiatives.
- 2.3.1.79. Andrew Myles: I speak against. This is difficult. It takes time for a standard.
- 2.3.1.80. T. K. Tan: I have been approached by several other people, and I speak in favor.
- 2.3.1.81. Stuart: Comments on motion? None remaining.
- 2.3.1.82. Members come to rest for 30 seconds. [discussion with Barr]
- 2.3.1.83. Back to order
- 2.3.1.84. Stuart: Vice-Chair suggests changing to greater-than-or-equal than 1 Gbps.
- 2.3.1.85. Any objection to the modification to changing the motion before you? No objections. Change inserted.
- 2.3.1.86. Voting members only, please rise. 75% required
- 2.3.1.87. Yes 123, No 1, Abstain 12. The motion passes.
- 2.3.1.88. I shall be requesting a volunteer to chair the study group.
- 2.3.1.89. Stuart: Can we begin the presentations? Can we go with NIST first? No objection. Agenda item 6.3 moving to Friday with approval of presenter.
- 2.3.1.90. Nader Moayeri/Michael Souryal NIST presented 07/297 Real time Deployment of Reliable Multihop Networks. Describes need for a “drop in” solution for radio communication with first responders and mobile users. Target requirements: Self-configuration, adaptation to maintain links. Looking beyond simulation platform, looked at a different platform from 802.11 at 900 MHz, low power sensor network solution. Studies done to understand PHY attributes. Fashioned deployment algorithm. Looked at link quality with single transmitter, multiple receiver scenarios. Two learnings: 1) the deployment is not “can you hear me now” because there is no time when EOR occurs. Instead “how loud do you hear me”. Second, topology-related, large multipath fades, require deployment algorithm and diversity. OFDM frequency adaptation and diversity could also be used. Real time examination of link integrity with multiple connections offered as valuable deployment tool (drop one here). Resulting data from studies were presented. Presented a demo to 802.15, not enough time here. Test system set up in building on NIST campus. NIST is neutral on what standard/solution arises, but would like to gauge interest in 802.11.
- 2.3.1.91. Stuart: Questions/discussion? None. Appreciate presentation.
- 2.3.1.92. Darwin Engwer, Nortel Networks, presented document 452r1, Summary of 802.18 IMT-Advanced Joint Meeting. Not much progress. Saw a number of documents, including 802.16 docs with Roger Marks. The document was not yet approved. 802.20 had a document but not shown. Timelines involved May and Jan 2008 with some confusion. Different parts of IMT Technology part in January. There is not requirement for technical input before January. Plan to continue discussions. There may not be time to complete work this week. Talking about ways to keep work going external to meeting. Perhaps team in 802.11 to allow local activities.
- 2.3.1.93. Questions? Yes.
- 2.3.1.94. John Noter 802.18. There is information on the 802.18 web site in the public area.
- 2.3.1.95. Stuart: More discussion? No.
- 2.3.1.96. Stuart: The 802.21 presentation has been moved to Friday. Is that OK with the presenters? Yes.
- 2.3.1.97. Is there any other business? None.

2.4. Closing

2.4.1. Recess

- 2.4.1.1. Stuart: We are recessed.
- 2.4.1.2. Recess at 1222.

3. Friday Morning Closing Plenary, March 16, 2007

3.2. Opening

3.2.1. Call to Order

- 3.2.1.1. Stuart Kerry (Stuart): I call the meeting to order.
- 3.2.1.2. Meeting convened at 0811 hours.

3.3. Process

3.3.1. Review/Modify the Agenda

- 3.3.1.1. Stuart: I ask that we approve the agenda as shown. [reviews agenda r3 items].

3.3.2. Business/Motions

- 3.3.2.1. Stuart: For the record, I have sent the request for an LOA to CSIRO. I have not yet received a response.
- 3.3.2.2. Stuart: Is everyone familiar with the patent policy? Are there any questions? No. We are operating under these rules.
- 3.3.2.3. Stuart: Item 1.2. We previously approved the minutes from the London meeting, but these did not have a document reference number. The document number for the minutes is 07/0504-00-0000. TK Tan flew in Thursday from Korea and back on Wednesday. Steve McCann as agreed to cover WNG this time.
- 3.3.2.4. Stuart: The chair position of the WMM study group is open. Bob O'Hara has volunteered. Are there any others? No. Are there any announcements from the table?
- 3.3.2.5. Al Petrick: There is a press release document, 05/0003r0.
- 3.3.2.6. Stuart: Are there any floor announcements? Yes.
- 3.3.2.7. Bob O'Hara, Cisco, presented a contribution on congestion control. The presentation reviewed 802.11 progress, including applications of CSMA. What would be needed to support the mechanism in other regimes? Outlines CSMA procedure applied to letter balloting process.
- 3.3.2.8. Stuart: Are there any other announcements? No.
- 3.3.2.9. Harry: Documentation. The new server is expected to be on line shortly. It will look a lot like we have now, but it should be much easier to find individual documents. We shall retire "wirelessworld" at that point.
- 3.3.2.10. Petrick: P&P. Refer to document 812/r3 for the set of changes. I received one input from Dave Bagby. Proposed procedures may be found in 362r1; 360r1 contains the current text. 07/360r2 will issue in July.
- 3.3.2.11. Publicity: Al Petrick. Approval of the previously-mentioned press release will be requested as motion from TGN from Bruce Kraemer/Sheung Lee.

- 3.3.2.12. Work Load Timeline, Richard Paine: [shows on screen] Comments on changes in timeline. Note the addition of editor's columns in the new version, along with a name-change for 802.11ma version9 to 802.11 2000. TGk had one change for sponsor ballot recirculation. TGn had no changes. TGs has changed. TGr had no changes. TGT had no changes. TGu slipped a whole session. Tgv has no changes this time. Tgw has no changes. TGy changed by two months. Questions? No.
- 3.3.2.13. Stuart: 802.11ma Rev d will now show 802.11 2007.
- 3.3.2.14. Harry Worstell: Editors' meeting. We covered guidelines for TBDs, including a list of TBDs for drafts leading to ANA. This should reduce confusion for drafts. Mandatory Editorial board attendance. Representative of SA attended (Michelle) and she has given a lot of assistance. Staff will provide checklist for sponsor ballot up through the approval chain. The timeline has been updated to show what version and what file type what is available. We have now expanded the document to show what the format is (e.g. frame, Word etc.). We also created a document baseline template.
- 3.3.2.15. Bob O'Hara: ANA. A few identifiers and a single bit have been preserved for TGn pending a motion later this morning.
- 3.3.2.16. Stuart: I'd like a straw poll:
- 3.3.2.17. Did you like this hotel with these facilities?
- 3.3.2.18. "Yes", many. "No", few. Majority "Yes".
- 3.3.2.19. Steven McCann: See document 07/460r0 for WNG. Five presentations. Video streaming over 802.11 SG motion. High speed broadband wireless initiative begun. Darwin Engwer will speak further on future initiatives. Questions? Yes.
- 3.3.2.20. Darwin: Darwin document is 412r0 not 460r0
- 3.3.2.21. Stuart: May I have task group chairs to the microphone?
- 3.3.2.22. TGk Richard Paine: See document 497r1. The task group has been resolving LB 96 comments. Want to go to recirculation ballot. Have resolved all comments. Will have a motion to request conditional sponsor ballot. We held teleconferences and consolidated the "no" voter list. We also conducted an e-mail campaign to convert "no" votes. Objectives for May: Comment resolution on sponsor ballot. Will hold teleconferences at noon Thursdays beginning 29 March. Our goal is to go to sponsor ballot recirculation ballot. There will be a motion offered for recirculation LB. There are no changes in this draft. The WG motion will request conditional approval under clause 20 for approval for LB. Are there any questions? None.
- 3.3.2.23. TGn Bruce Kraemer. Refer to document 07/496r0. The group just closed LB #97, which passed. There were 3163 total ballot returns. 95 duplicates, 1470 unique, 1594 were technical. Matched volunteers to resolution topics. All but 97 are assigned. Distribution by topic graphic was shown. Most comments were on Coexistence. We revised the ad-hoc structure to adjust for new leaders. We are targeting separate spreadsheets with a composite comment sheet in document 07/336. We shall also produce a set of ad-hoc reports with PowerPoint status files. For major technical ad-hoc sessions, tracking for sessions and progress will be provided. We shall be concentrating primarily on how to get to draft 3.0. Schedule: Trying for LB3 in July. Anticipate ad-hoc in SF. Overall timeline. LB in Fall, followed by sponsor ballot cycle. Timeline was moved to September.
- 3.3.2.24. Stuart: Must report draft 2.0 is now available. Please take back to WFA, Andrew Myles? Yes.
- 3.3.2.25. Questions for TGn? None.
- 3.3.2.26. TGp, Lee Armstrong. See document 07/499r0. 174 comments addressed, 134 resolved. 9 presentations. 1060 comments, 649+ still to be resolved.

- Draft 2.01 is on the site. Weekly telecons Thursday at 1400. Potential for using TGs-like beacon exploration via teleconferences.
- 3.3.2.27. Stuart: Questions? None.
- 3.3.2.28. TGr, Clint Chaplin. See document 07/495r0. Comments for LB91: (691), 23 comments addressed at meeting. No comments left. Will authorize ad-hoc Apr 24-26 and June 21 in Toronto. The 5.0 draft is available. Motion to approve comments and resolutions was passed. Motion to go to letter ballot passed. Goals: Recirculation, then possibly another.
- 3.3.2.29. Stuart: Questions? None.
- 3.3.2.30. TGs, Donald Eastlake: See document 07/464r0. TGs is making progress on comments from LB93. There were 5713 originally. All editorial comments have been resolved as well as about half of the technical. Motion to amend PAR will be offered. We shall be holding teleconferences as well as an ad-hoc in Eindhoven in April and Hillsboro, Oregon in June.
- 3.3.2.31. Stuart: Questions? None. Acknowledges Charles' work on TGT.
- 3.3.2.32. TGT, Charles Wright: See document 0322r0. Recommendation for new chair: Nuraj Sharma.
- 3.3.2.33. Stuart. I ask that we appoint Nuraj as chair of TGT by acclamation. Unanimously approved by acclamation.
- 3.3.2.34. Charles: There are 29 remaining deferred comments from our internal review. Presentations for resolving 22 of them were made. 7 difficult ones were declined. We will move on to letter ballot D0.14 draft to be produced. Will move for LB this time. Motion to instruct editor to create draft. Motion for confirmation ballot, and to the authorize 30 day letter ballot to request sponsor ballot. Plans for next meeting: LB comment resolutions. Recirculation planned after September. Telecons are set for Thursday from now to May meeting starting 29 March.
- 3.3.2.35. Stuart: Questions? None.
- 3.3.2.36. TGu, Steven McCann: See document 07/490r0. We re-approved all comments from the ad-hoc. Presentations were heard. We tried to tackle liaison issues. Liaison letters for NENA 3GPP, etc. also joint meeting with 802.21. Teleconferences are planned. We also plan to have an ad hoc meeting 25-27 March in Singapore.
- 3.3.2.37. TGw, Jesse Walker: See document 07/483. Our goal was to complete LB88 comment resolution, which was completed. All comments are resolved. Document 06/1729r22 contains the comment resolutions. We shall be offering a motion to approve a 15 day e-mail ballot on draft output from this session on draft 1.03, and then a 15 day recirculation on draft 2.0. We plan no ad-hoc meetings. Goal for next meeting is to resolve comments from the recirculation.
- 3.3.2.38. Stuart: Questions? None.
- 3.3.2.39. TGy, Peter Ecclesine: See document 07/487r1. Document 07/008r12 contains comment resolutions. We shall be offering the motion shown [shows]. We held joint meeting with 802.16h and 802.19. Document 07/0395 contains the joint minutes. We shall also offer a motion to ask for ANA element IDs. The schedule is for executive committee approval in July instead of March, sliding two months. We shall make a motion for a 15 day recirculation ballot.
- 3.3.2.40. Secretarial Note: Attendance is 165 people in room.
- 3.3.2.41. Stuart: Questions? None.
- 3.3.2.42. DLS-SG, Suman Sharma. See document 07/493r0. Goal to Prepare PAR and 5 criteria. Prepared document and study group 07/225r2. Motion to extend study group. Presentations. Motion to approve PAR will be coming to WG. Another to extend study group. Motion to approve telecons for 3 April and 1 May. Plan to hear technical presentations.

- 3.3.2.43. TGv, Bob Miller for Pat Calhoun. See document 07/485. All 446 internal review comments have been addressed with comment resolutions and normative text to be applied to 0.1 draft. Dorothy Stanley recommended by TG as next chair.
- 3.3.2.44. Stuart: May we accept Dorothy as chair of TGv by acclamation? Yes. Dorothy approved unanimously.
- 3.3.2.45. Al Petrick: I would like to make a bulk motion to empower telecons. See slide.

Motion

Move to empower the following TG(s)/SC(s)/Ad-Hoc(s) to hold teleconference calls beginning no sooner than March 25, 2007 through 15 days past the end of the July 2007 Plenary Session.

Group	Start Date	Frequency	Time
Task Group "k"	March 29, 2007	Weekly	12:00 ET
Task Group "n"	April 4, 2007	Weekly	11:00 ET
Task Group "p"	March 29, 2007	Weekly	14:00ET
Task Group "x"	April 4, 2007	Weekly	11:00 ET
Task Group "s"	March 26, 2007	Weekly	10:00 ET
Task Group "T"	March 29, 2007	Bi-Weekly	12:00 ET
Task Group "u"	April 19, 2007 May 2, 2007	Once Once	10:00 ET
Task Group "v"	N/A	N/A	N/A
Task Group "w"	N/A	N/A	N/A
Task Group "y"	March 27, 2007 July 16, 2007	Bi-weekly Once	13:00 ET 13:00 ET
BLS SG	April 3, 2007 May 1, 2007	Once Once	11:00ET
IMT-Advanced	April 6, 2007	Weekly	11:00ET

- 3.3.2.46. Move: Al Petrick (as individual)
- 3.3.2.47. Second: Clint Chaplin.
- 3.3.2.48. Stuart: Any objection to approving unanimously? None. Moved and approved unanimously.
- 3.3.2.49. Move to empower the 802.11 WG, Task Groups, SGs, and SCs to hold meetings during the May 2007 Interim Session to conduct business as deemed necessary.
- 3.3.2.50. Moved on behalf of all groups.
- 3.3.2.51. Move: Harry Worstell
- 3.3.2.52. Second. Bruce Kraemer
- 3.3.2.53. Stuart: Discussion? Yes.
- 3.3.2.54. Bruce Kraemer: Request a change for IMT Advance from 1100-1200.
- 3.3.2.55. Stuart: Any objection to approving unanimously? No objection. Unanimously approved.
- 3.3.2.56. Publicity motion. Al [shows release]
- 3.3.2.57. Move to approve doc: 07/0503r0 as a suggested IEEE 802.11n press release and forward to IEEE 802 Excom approval for immediate Media release by the IEEE staff.
- 3.3.2.58. Move: Al Petrick (as individual)
- 3.3.2.59. Second: Bruce Kraemer
- 3.3.2.60. Stuart: Discussion? None. May we have a 30 second rest?
- 3.3.2.61. Secretarial Note: 165 in room
- 3.3.2.62. Stuart: Let us vote.
- 3.3.2.63. For 88, Against 0, Abstain 2.
- 3.3.2.64. IMT Advanced 1 Motion
- 3.3.2.65. No other agenda items in WG to do.

- 3.3.2.66. Report on document 07/488 Darwin Engwer
- 3.3.2.67. In 11 opening report, mid-week report, closing report. Tuesday joint meeting, second joint on Thursday constructed response (1 page letter: 802 is interested). Work plan process. Document expected to be approved in 802EC. A correspondence process was fashioned to maintain progress. Individual working groups will produce individual docs then harmonize through 802.18. Approved 18/7-19r2 as draft doc. Needed: more research, input to technical requirements. Submit to 18 with consensus. As needed provide input to 802.11 Gigabit wireless effort.
- 3.3.2.68. Stuart: Questions? None.
- 3.3.2.69. Bruce Kraemer provided an overview of technical requirements outline 07/506r1 provides technology background. ITU technical document covers table of contents show issues. The TOC will have appendices that will be forced upon us. Higher spectral efficiencies, higher data rates, ranges, mobility---good match to 802.11. Output letter from .18. No motion.
- 3.3.2.70. Stuart: Observation on presentation: no disclaimer notice? Ad-hoc group dealing with Darwin and Bruce formed in London. Teleconferences. 2 hour slot in Montreal.
- 3.3.2.71. WNG-SC Motion Steven McCann
- 3.3.2.72. Move to form an IEEE 802.11 Study Group (recommended by the WNG SC) to examine issues related to Audio/Video Streaming over 802.11 (ref: IEEE 802.11-07-400r1), with the intent to create a PAR and five criteria to form a new Task Group.
- 3.3.2.73. TG moved by Ganesh Venkatesan
- 3.3.2.74. TG Second Ed Royce
- 3.3.2.75. Moved on behalf of WNG SC (WNG result 59-3-11) Steve McCann standing in for TK Tan.
- 3.3.2.76. Stuart: The EC had understood "Video" only. We now understand group wants it to be "Audio/Video?"
- 3.3.2.77. EdReuss: In discussions during presentations it was recognized that there are problems beyond video. Expect streaming for audio and video, but usually audio sync'd to video. We should coordinate.
- 3.3.2.78. Stuart: The motion says "Audio/Video". Are any other members of the group present? No other members of group present. Ganesh, can you represent at Excom? Yes.
- 3.3.2.79. Move to form IEEE SG for Audio/.Video Streaming 07/0400r1.
- 3.3.2.80. Stuart: Discussion? Yes. Ed Reuss.
- 3.3.2.81. Ed Reuss: I think I was the seconder, which resulted in confusion with the name.
- 3.3.2.82. Who seconded? Modify seconder from Royce to Reuss. Any objection? None.
- 3.3.2.83. Further discussion?
- 3.3.2.84. Peter: Did the motion in the SG contain "audio"? Yes.
- 3.3.2.85. Steve: These slides came from WNG.
- 3.3.2.86. Myron Heading, Intel: I speak against the motion. 802.1 concerns.
- 3.3.2.87. Suman: Can we amend to remove "Audio"?
- 3.3.2.88. Stuart: We just went through that. Were you member of WNG? Yes.
- 3.3.2.89. Suman: Audio was added later. I suggest only video streaming.
- 3.3.2.90. Stuart: Rest [discussion with Bob O'Hara] If we do this change it will be a motion to amend the motion before us. Dictate to Harry how to amend.
- 3.3.2.91. Suman: Delete "Audio/"
- 3.3.2.92. Harry: There is a motion to remove audio.

- 3.3.2.93. Move to amend, removing audio
- 3.3.2.94. Suman: I so move.
- 3.3.2.95. Second Peter Ecclesine
- 3.3.2.96. Stuart: Discussion? Yes.
- 3.3.2.97. Bruce. Any reasonable use would include both audio and video. If this is just a general thing, then OK.
- 3.3.2.98. Peter: Issue of A/V is the result of the study group's recommendation.
- 3.3.2.99. Ganesh Intel: I'd like to clarify. We meant to include video with audio part of the stream. The idea was to have audio and video together, rather as separate streams. I speak in favor.
- 3.3.2.100. EdReuss: I'm torn on this. Don't want to step on other orgs. 802.1 looking more at routing issues, etc. This group would be working MAC issues in .11. The streams contain audio and video components. I have no resolution for voting.
- 3.3.2.101. Bruce: Complementary to Ed. If we document in minutes that the video includes audio, if this comes into question, then the minutes can serve to amplify.
- 3.3.2.102. Harry: Is that the intent of the group? Intend that video includes audio?
- 3.3.2.103. Straw poll
- 3.3.2.104. Petranovich: Point of order. What are we voting for? Motion should be clear.
- 3.3.2.105. Darwin: Seeking clarification on what group is going to do. Wonder if group will be looking at streams in general. If they are focusing on video only, there are pieces missing.
- 3.3.2.106. John: Speak in favor of keeping the motion as is, dumping revision. I was in WNG when the motion was created. The intent was not to limit the scope. We should not limit the scope in the working group. Should leave open.
- 3.3.2.107. EdReuss: Not just audio and video, but also supplementary data. I suggest streaming over 802.11. The motion may not have been framed correctly, but everyone seems to understand the intent. Suggest related to streaming.
- 3.3.2.108. Petranovich: I don't know what we are voting for. I object to the whole process.
- 3.3.2.109. Steve McCann: We should agree with what Ed said, meaning that we should use "multimedia streaming". We are arguing over semantics. Change to multimedia streaming, and carry on.
- 3.3.2.110. Stuart. No changing these words at this point. The exact words can be changed as the group works forward. Two more speakers only.
- 3.3.2.111. Bob O'Hara: I've heard a number of people that video is OK; others say multimedia streaming, which seems too broad. The tutorial seemed to center on delivery of a video transport stream.
- 3.3.2.112. Art Aspen: Concern is for chair sent to ExCom with this motion and can envision motion from wired groups saying, "Why is this an issue only for wireless?" Why not an issue for 802.3, etc?
Harry: Any further discussion? No.
Amendment to motion. Remove "Audio/"
[shows on screen without Audio/]
- 3.3.2.113. Move to form an IEEE 802.11 Study Group (recommended by the WNG SC) to examine issues related to Video Streaming over 802.11 (ref: IEEE 802.11-07-400r1), with the intent to create a PAR and five criteria to form a new Task Group.
- 3.3.2.114. For 31, Against 38, Abstain 19, 44%
- 3.3.2.115. The motion to amend fails.

- 3.3.2.116. We are now back to the original motion: [shows, with Audio/Video]
- 3.3.2.117. Move to form an IEEE 802.11 Study Group (recommended by the WNG SC) to examine issues related to Audio/Video Streaming over 802.11 (ref: IEEE 802.11-07-400r1), with the intent to create a PAR and five criteria to form a new Task Group.
- 3.3.2.118. Discussion:
- 3.3.2.119. Suman Sharma: I suggest we alter it to be "...delivery of Video Transport Streaming."
- 3.3.2.120. Move to form an IEEE 802.11 Study Group (recommended by the WNG SC) to examine issues related to delivery of Video Transport Streaming over 802.11 (ref: IEEE 802.11-07-0400-r1), with the intent to create a PAR and five criteria to form a new Task Group.
- 3.3.2.121. Move Suman Sharma
- 3.3.2.122. Second Charles Cook
- 3.3.2.123. Suman: Want to change from Streaming to "Streams"?
- 3.3.2.124. Harry: Does everyone agree? Yes.
- 3.3.2.125. Harry: Let's have short discussions.
- 3.3.2.126. Bagby: I am not sure it is the chair's prerogative to foreclose debate, rather the group's.
- 3.3.2.127. Harry: Only 1 minute per person. OK? Yes.
- 3.3.2.128. Bruce: For, think this is a good change.
- 3.3.2.129. Harry: Any objection to calling the question on the amendment? No.
- 3.3.2.130. Move to form an IEEE 802.11 Study Group (recommended by the WNG SC) to examine issues related to delivery of Video Transport Streams over 802.11 (ref: IEEE 802.11-07-0400-r1), with the intent to create a PAR and five criteria to form a new Task Group.
- 3.3.2.131. For 58 Against 2 Abstain 28 96% approval
- 3.3.2.132. Any objection to limiting debate to 1 minute/person?
- 3.3.2.133. Donald Eastlake: Call the question.
- 3.3.2.134. Read the motion:
- 3.3.2.135. "...Video Transport Streams"
- 3.3.2.136. Move to form an IEEE 802.11 Study Group (recommended by the WNG SC) to examine issues related to delivery of Video Transport Streams over 802.11 (ref: IEEE 802.11-07-0400-r1), with the intent to create a PAR and five criteria to form a new Task Group.
- 3.3.2.137. For 76, Against 1, Abstain 25, 98.7%
- 3.3.2.138. The motion passes.
- 3.3.2.139. Stuart: Any other motions for WNG?
- 3.3.2.140. Steven: Do you need nominations for the study group?
- 3.3.2.141. Clint: Not formed yet.
- 3.3.2.142. Stuart: In order, any nominations for SG? Ganesh Venkatesan Intel. Are there any other nominations? Thank you.

3.4. Closing

3.4.1. Recess

- 3.4.1.1. Stuart: I think that we should break until 1025 hours.
- 3.4.1.2. Recess at 1003 hours.

3.5. Opening

3.5.1. Call to Order

- 3.5.1.1. Stuart Kerry (Stuart): I call the meeting to order.
- 3.5.1.2. Meeting convened at 1035 hours.

3.6. Process

3.6.1. Business/Motions

- 3.6.1.1. Stuart: Let us resume with motions.
- 3.6.1.2. Richard Paine: Motion to go to recirculation of draft 7.0 with no changes from last recirculation.
- 3.6.1.3. *Believing that comment responses in 07/253r7 and the draft mentioned below satisfy WG 802.11 rules for letter ballot recirculation,*
- 3.6.1.4. Move to authorize a 15-day WG recirculation LB of 802.11k draft 7.0.
- 3.6.1.5. TGK Moved by: Joe Kwak
- 3.6.1.6. TGK 2nd: Brian Hart
- 3.6.1.7. Richard: Moved on behalf of the Task Group (7-0-1)
- 3.6.1.8. For 67, Against 0, Abstain 8
- 3.6.1.9. Richard: I'd like to take the opportunity to relate the history of the ballot. [recounts ballot results]. We went through a campaign to convert no votes. 10 carried-over no voters, so 371 affirmative, 20 remaining "no" votes. With e-mail conversion 95% 21/404 remain "no". We are recirculating draft 7.0 with no changes, editorial or technical. Shows summary of no voters. Included carry-over of "no" votes. See 502r1. Shows track of no voters. Of the 21 comments active, one can see the categories. The carryover "no" votes are also listed.
- 3.6.1.10. Next, I have a motion go to sponsor ballot.
- 3.6.1.11. To approve document 07/0502r1 as the report to the 802 Executive Committee (EC) on the requirements for conditional approval to forward 802.11k D7.0 to sponsor ballot, requesting the chair of 802.11 to forward this report to the EC on behalf of the working group.
- 3.6.1.12. Richard: Moved on behalf of task group
- 3.6.1.13. Second Brian Hart
- 3.6.1.14. Stuart: Any objection to calling the question No.
- 3.6.1.15. For 66, Against 0, Abstain 8
- 3.6.1.16. Richard: Move to request conditional approval, under clause 20 of the IEEE 802 policies and procedures, to forward the P802.11k draft 7.0 to Sponsor Ballot
- 3.6.1.17. Moved by Richard Paine on behalf of the Task Group (8-0-1).
- 3.6.1.18. Stuart. Are clause 20 requirements complete? Yes. Discussion on the motion? Yes.
- 3.6.1.19. Al Petrick: I need a first and second from task group.
- 3.6.1.20. Vote was 8-0-1 in the TG.
- 3.6.1.21. Stuart: Is there any further discussion? None.
- 3.6.1.22. For 61, Against 0, Abstain 10.
- 3.6.1.23. The motion passes
- 3.6.1.24. Stuart: TGn motions. Bruce Kramer

- 3.6.1.25. Move to request TGn be authorized to conduct an ad hoc meeting for the purpose of resolving comments received during WG letter ballot 97 on TGn Draft 2.0
- 3.6.1.26. to be held Wednesday May 9 thru Friday, May11, 2007
- 3.6.1.27. (just prior to the May Interim in Montreal Canada)
- 3.6.1.28. at the Fairmont Hotel in Montreal Canada
- 3.6.1.29. Approved unanimously in TGn
- 3.6.1.30. Move Bruce Kraemer on behalf of TG
- 3.6.1.31. Stuart: Discussion? None.
- 3.6.1.32. OK to approve by unanimous consent? Yes. Approved unanimously.
- 3.6.1.33. Move to Request TGn be authorized to conduct an ad hoc meeting for the purpose of resolving comments received during WG letter ballot 97 on TGn Draft 2.0
- 3.6.1.34. to be held Wednesday July 11 thru Friday, July 13, 2007
- 3.6.1.35. (just prior to the July Plenary in San Francisco, CA)
- 3.6.1.36. with the preferred option being the Hyatt Regency Embarcadero in San Francisco, CA
- 3.6.1.37. Approved unanimously in TGn
- 3.6.1.38. Moved by Bruce on Behalf of TG
- 3.6.1.39. Stuart: Discussion? None. Any objection to approving unanimously? None.
- 3.6.1.40. Unanimously Approved
- 3.6.1.41. Move to have the ANA assign values for the following items found in Draft P802.11n_D2.0.pdf:
- An element ID for the Extended Channel Switch Announcement Element
 - An element ID for the Supported Regulatory Classes element
 - An extended capabilities bit for the HT Information Exchange Support capability
- 3.6.1.42. Move to have the ANA assign values for the following items found in draft P802.11n_D2.0.pdf.
- 3.6.1.43. References:
- 3.6.1.44. Draft P802.11n_D2.0.pdf
- 3.6.1.45. 11-07-0336-00-000n-tgn-lb97-comments.xls
- 3.6.1.46. See CID 210, 223, 224
- 3.6.1.47. Unanimous in TG
- 3.6.1.48. Moved by Bruce on behalf of task group
- 3.6.1.49. Stuart: Discussion? Yes
- 3.6.1.50. Peter: We have ANA motion coming forward so that all task groups will get to use numbers jointly.
- 3.6.1.51. Bruce: I will request the same.
- 3.6.1.52. Stuart: Please minute that ANA should share all numbers among the relevant groups.
- 3.6.1.53. Further discussion? None.
- 3.6.1.54. For 68, Against 1, Abstain 4.
- 3.6.1.55. Stuart: The chair requests to incorporate into ANA database. Bob O'Hara do you accept? Yes.
- 3.6.1.56. TGr, Clint.
- 3.6.1.57. Move to authorize a 15-day Working Group Recirculation Letter Ballot of 802.11r draft 5.0, asking the question "Should the 802.11r draft 5.0 be forwarded to sponsor ballot?"
- 3.6.1.58. By (TGr): Kapil Sood

- 3.6.1.59. Second (TGr): Michael Montemurro
- 3.6.1.60. TGr Result: Yes - 12; No - 0; Abstain - 2.
- 3.6.1.61. Moved on behalf of TG by Clint Chaplin
- 3.6.1.62. Stuart: Discussion? None.
- 3.6.1.63. For 67, Against 0, Abstain 3.
- 3.6.1.64. Move to authorize an IEEE 802.11 TGr ad-hoc meeting on June 19th through June 21st, 2007, in Toronto, Canada
- 3.6.1.65. By (TGr): Michael Montemurro
- 3.6.1.66. Second (TGr): Kapil Sood
- 3.6.1.67. TGr Result: Yes - 10; No - 0; Abstain - 5.
- 3.6.1.68. Moved by Clint on behalf of TG
- 3.6.1.69. Stuart: Any objection to approving unanimously? None. So moved and approved. Is there a sponsor in Toronto? Yes.
- 3.6.1.70. TGs, Donald Eastlake.
- 3.6.1.71. Move to request that the 802.11 WG authorize an ad hoc on 13-15 June 2007 (to be cancelled if TGs goes to Letter Ballot again from the May meeting) in Hillsboro, Oregon, to work on comment resolution.
- 3.6.1.72. In TGs:
Moved: Steve Conner Seconded: Michelle Gong
- 3.6.1.73. Yes: 23 No: 0 Abstain: 1
- 3.6.1.74. Stuart: Discussion? None. May we approve by unanimous consent? Yes. So moved and approved.
- 3.6.1.75. Move to approve the amendment in 11-07/149r5 to the P802.11s PAR and 5 Criteria and forward this PAR and 5 Criteria amendment to the 802 Executive Committee for their approval and further transmission.
- 3.6.1.76. In TGs:
Moved: Guido Hiertz Seconded: Steve Conner
- 3.6.1.77. Yes: 26 No: 0 Abstain: 2
- 3.6.1.78. Note by Stuart: 30 day Executive Committee requirement.
- 3.6.1.79. Moved by Donald on behalf of TG
- 3.6.1.80. For 53, Against 5, Abstain 11.
- 3.6.1.81. TGT, Charles Wright Azimuth Systems
- 3.6.1.82. Question: Necessary to include language when ballot should finish? No.
- 3.6.1.83. Believing that the P802.11.2 draft D0.13 and all motions and resolutions adopted during the Orlando plenary will satisfy all 802.11 WG rules for letter ballot, Moved,
- To instruct the editor to create D0.14 incorporating all approved motions and resolutions,
 - To request the 802.11 WG chair to conduct a 15-day confirmation ballot on D0.14,
 - To request the 802.11 Working Group to renumber 802.11.2 Draft D0.14, if the confirmation ballot succeeds, as D1.0 and authorize a 30-day Letter Ballot asking the question "Should P802.11.2 draft D1.0 be forwarded to Sponsor Ballot?"
- 3.6.1.84. Moved/Seconded: S.Tolpin/M.Emmelmann
- 3.6.1.85. Yes/No/Abstain: 4/1/4 (technical; passes)
- 3.6.1.86. Moved on behalf of TG by Charles Wright
- 3.6.1.87. For 48, Against 1, Abstain 8.
- 3.6.1.88. TGu, Steven McCann.

- 3.6.1.89. Move to approve liaison document 07/0489r1 and then request the IEEE 802.11 WG chair to forward it to 3GPP SA2 as the response to their request for information from IEEE 802.11u.
- 3.6.1.90. Moved by Steven McCann on behalf of TG
- 3.6.1.91. Stuart: Secretary of TGu, do you have TG vote? Yes 9-0-0
- 3.6.1.92. Stuart: Discussion. None. Vote due to output document.
- 3.6.1.93. For 51, Against 0, Abstain 11
- 3.6.1.94. Move to approve liaison document 11-07-0476r1 and then request the IEEE 802.11 WG chair to forward it to IETF ECRIT as the response to their request for information from IEEE 801.11
- 3.6.1.95. Moved Steven McCann on behalf of TG
10-0-1 in TG vote in task group
- 3.6.1.96. Stuart: Any discussion? No.
- 3.6.1.97. For 50, Against 0, Abstain 8
- 3.6.1.98. Stuart: Forward the first letter in my name. Dorothy will present the second.
- 3.6.1.99. Move to approve an IEEE 802.11u ad-hoc from April 25 to April 27th 2007 in Singapore
- 3.6.1.100. Steven McCann for TG
- 3.6.1.101. Stuart: Is there a sponsor? Yes. Panasonic.
- 3.6.1.102. Stuart: May we approve unanimously? Yes. Passes unanimously.
- 3.6.1.103. TGw, Jesse Walker
- 3.6.1.104. Move that the IEEE 802.11 Working Group conduct a 15 day e-mail ballot reviewing TGw draft P802.11w D1.03. Upon successful completion, the draft shall be renamed as P802.11w D2.0 and a Working Group Recirculation Ballot initiated.
- 3.6.1.105. Moved by Jesse Walker on behalf of TG. 10-0-1 vote in TG
- 3.6.1.106. Stuart: Ask that e-mail be changed to electronic ballot instead of e-mail. Accepted? Yes.
- 3.6.1.107. For 60, Against 0, Abstain 3
- 3.6.1.108. TGy, Peter Ecclesine
- 3.6.1.109. Peter Ecclesine 7 voting in room + me so 7-0-0 on votes.
- 3.6.1.110. Move to authorize a 15-day Working Group Recirculation Letter Ballot of P802.11y draft 2.0, asking the question "Should the P802.11y draft 2.0 be forwarded to sponsor ballot?"
- 3.6.1.111. TG Moved Dan Lubar
- 3.6.1.112. TG Second Yasuhiko Inoue
- 3.6.1.113. TG Results: Unanimously approved
- 3.6.1.114. Moved by Peter Ecclesine on behalf of TG
- 3.6.1.115. Stuart: Discussion? No.
- 3.6.1.116. For 56, Against 0, Abstain 4
- 3.6.1.117. Move to request that the 802.11 WG approve requests for assignment by the ANA of three Element IDs, one Spectrum management Action Value, and Regulatory Class values for 5-, 10- and 20-MHz channel bandwidths.
- 3.6.1.118. TG Moved Rich Kennedy
- 3.6.1.119. TG Seconded Roger Durand
- 3.6.1.120. TG Results: Unanimously approved
- 3.6.1.121. Moved by Peter Ecclesine on behalf of the Task Group.
- 3.6.1.122. Stuart: Discussion? None.
- 3.6.1.123. For 61, Against 1, Abstain 1
- 3.6.1.124. DLS SG, Suman Sharma

- 3.6.1.125. Move to request the IEEE 802.11 Working Group approve the PAR and 5 Criteria document IEEE 802.11-07/0225r2 and forward it to ExCom for Approval.
- 3.6.1.126. SG Moved: Menzo Wentink
- 3.6.1.127. SG Second: Michael Livshitz
- 3.6.1.128. SG Vote: 22/0/2
- 3.6.1.129. Moved by Suman Sharma on behalf of TG
- 3.6.1.130. For 43, Against 2, Abstain 18
- 3.6.1.131. Move to request the IEEE 802.11 Working Group to extend the DLS Study Group through the July 2007 meeting and forward to the Executive Committee for Approval.
- 3.6.1.132. SG Moved: Kevin Hayes
- 3.6.1.133. SG Second: James Yee
- 3.6.1.134. SG Vote: 21/0/1
- 3.6.1.135. Stuart: Discussion? None.
- 3.6.1.136. For 51, Against 0, Abstain 10
- 3.6.1.137. Stuart: Item 4.5.1 - 802.21 Update. I spoke to StephenMcCann who agreed to remove this item and transfer it to the May meeting. New business? None
- 3.6.1.138. Item 6? Any other business from table? No. Do we have volunteers for 1Gbps? No. 802.11 WMM? Bob O'Hara. Video over 802.11? Ganesh. Any other nomination for 1Gbps SG? John Barr? Not present.
- 3.6.1.139. Stuart: For WMM, any objections, Bob O'Hara? Bob accepts. Accept by acclamation? Yes.
- 3.6.1.140. Video Transport Streams. Ganesh. Others? No. Appoint Ganesh? By acclamation. Yes.
- 3.6.1.141. Other items to be done later. 1 Gbps. The Volunteer is John Barr, but he is not here.
- 3.6.1.142. Stuart: Reviews letter ballots. Total 7 ballots. On behalf of memberships announced at CAC on Thursday night. Trying not to stifle innovation and movement, some comments coming in are not pertinent to ballot.
- 3.6.1.143. Stuart: Any other business? Table? Yes
- 3.6.1.144. Al Petrick: Received P&P comments. Now 07/360r2 is the P&P document. P&P proposed changes may be found in document 07/362r2. 360r3 will constitute the new document draft following inclusion of the latest proposed changes.
- 3.6.1.145. Bagby: In old days we said we would never run more groups in parallel.
- 3.6.1.146. Stuart: We authorized 5 sessions in parallel two years ago and we are not going to change
- 3.6.1.147. [Secretarial Note: The secretary wishes to acknowledge and thank Garth Hillman for capturing the minutes from this point on.]
- 3.6.1.148. Adrian: ANA info on IEEE 802.11 web site is not up to date
- 3.6.1.149. Adrian: wants to form a group of volunteers to change P&P regarding letter balloting; Volunteers were requested and Stuart appointed Al Petrick and the following people volunteered – Don Eastlake III, Bill Marshall, and Harry Worstell.
- 3.6.1.150. Jim Petranovich: what is policy affiliation?
- 3.6.1.151. Chairs' put slide 15 from 11-07-0340r1 on the screen from Bob Groh slide set at 802 plenary; affiliation must be stated if requested to do so.
- 3.6.1.152. Jim Petranovich: Can we simply make stating affiliation mandatory to save time?
- 3.6.1.153. Stuart: I believe members should automatically state affiliation. Chair will take advice from SA and 802.

- 3.6.1.154. Dave Bagby: Recommend we stick to LMSC rules and not have to state affiliation automatically.
- 3.6.1.155. Stuart: LMSC affiliation rules are indeed vague.
- 3.6.1.156. Steve McCann – does every name in minutes need to have affiliation attached? Chair – no because they will be in the consolidated minutes with the affiliations attached.
- 3.6.1.157. No more business.

3.7. Closing

3.7.1. Recess

- 3.7.1.1. Stuart: Next meeting May 13-18 at Fairmont in Montreal; suggest you book now! We are adjourned.
- 3.7.1.2. Chair adjourned at 11:49 AM