Project	**IEEE 802.20 Working Group on Mobile Broadband Wireless Access** **<http://grouper.ieee.org/groups/802/20/>**	
Title	**DRAFT Minutes, 802.20 Session #5, Albuquerque, NM, November 10-14, 2003**	
Date Submitted	**2003-11-20**	
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Re:	**802.20 Session#5**	
Abstract	Minutes of the Session	
Purpose	Minutes of the Session.	
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Meeting Minutes of the 802.20 Session #5

November 10-14, 2003
Albuquerque, NM
(DRAFT)

Rao Yallapragada
Recording Secretary.

The fifth meeting of 802.20 was held at the November plenary meeting of IEEE 802 in Albuquerque, NM.

Following a brief announcement that in the morning the 802 Executive Committee had confirmed the three officers elected in the March, 2003 Plenary, the Chair Jerry Upton, Procedural Vice-Chair Gang Wu and Liaison Vice-Chair Eshwar Pittampalli led the WG session.

The 802.20 WG had a joint opening plenary session with 802.11, 802.15, 802.18, and 802.19 from 1:00 PM to 3:30 PM on Monday November 10, 2003.

Contributions and WG documents referenced in these minutes may be found at the 802.20 website, http://www.ieee802.org/20/

See Appendix A for the attendance list.

Minutes of 802.20 Monday November 10, 2003

Meeting started at 4:00 pm.

Rao Yallapragada was appointed the Recording Secretary.

The Procedural Vice-Chair read the IEEE 802 rules regarding the patent policy, IPR disclosures, and topics inappropriate for discussion at IEEE working group meetings.
The Procedural Vice-Chair instructed Recording Secretary to record in the minutes that all appropriate IEEE policies were covered.

Chair discussed the logistics with respect to Electronic Sign-in, local website and other WG information.

Participants and especially potential working group leaders were strongly encouraged to attend the tutorials on Education, Mentoring and Support.

Chair presented the agenda for the Monday afternoon's meeting and the overall agenda for the whole session.

One of the contributions "Priority Access for 802.20" was withdrawn.

Motion:

Motion to approve the agenda (Appendix B)
Moved: Gang Wu
Seconded: Henry Ellis
Approved by unanimous consent.

Motion:

Motion to approve the minutes of the plenary session in San Francisco in July 2003and the interim session in Singapore in September 2003
Moved: Eshwar Pittampalli
Seconded: Gang Wu
Approved by unanimous consent

Presentation by Khurram Sheikh on "System Requirements Update" (C802.20-03/15)

- Covered the current status of the update on system requirements
    - Version 9 of system requirements document is posted on IEEE 802.20 website
    - Consensus was reached on 31 out of 57 items

- Reviewed the objectives of 802.20

- Khurram Sheikh presented an overview of all the items that were discussed in Singapore for the benefit of the participants who did not attended the Singapore session

Motion:

Motion to recess
Moved: Eshwar Pittampalli
Seconded: Mark Klerer
Approved by unanimous consent
Time: 5:40 pm

Meeting recessed at 5:40 PM.

Minutes of 802.20 Tuesday November 11, 2003

Meeting started at 8:05 am.

Chair started the day by reviewing the working agenda (Appendix B) for the day.

Presentation by Joseph Cleveland on "Preparing for Convergence" (C802.20-03-97)

To meet the goal of 802.20, i.e., "Ubiquitous and seamless user experience", it was recommended to build functional requirements to ensure interoperation with other cellular systems: GSM/EDGE, CDMA2000, WCDMA, 1xEV-DO etc.

The presentation recommended that a handoff between an 802.20 system to another 802.20 system be clearly defined. The presentation called for hooks in MAC/PHY specifications to support for handoffs and interworking with other systems.

There was a general discussion on the need to address MAC/PHY requirements for the interworking possible between two different systems.

There was also discussion on not converging all different technology air interfaces in MAC & PHY layers and the parameters essential to ensure interworking between different systems be defined clearly at the application layer.

Presentation by Nat Natarajan on "Support of Layer 2 Triggers for faster HOs" (C802.20-03-95)

Presentation called for a clear definition of L2 to L3 communications and optimization of network layer.

Presentation recommends that "helpful L2 to L3 communication of helpful hints (triggers) can facilitate faster handoff performance and other potential benefits based on the use of such hints".

Nat requested explicit inclusion of the above statement in section 4.5.1.1. for IP level handoffs in the requirements document.

Presentation by Jim Tomcik on "Handoff for 802.20" (C802.20-03-92)

The discussion after the presentation called for a clear definition of the terms "Interworking" and "Handoff".

A requirement was requested to include the number of Handoffs/sec that can be supported by the 802.20 systems.

Break between 9:40 am to 10:10 am

Presentation by Eshwar Pittampalli on "Status of Current Mobile Wireless Access System Standards" (C802.20-03-100)

The presentation summarized the status of some of the standards and performance of current mobile wireless access systems.

Specifically, the presentation proposed new performance target requirements for 802.20 systems.

Presentation by Dan Gal on "Plurality of Technologies and Channel Bandwidths" (C802.20-03-105)

The presentation dealt with the possible system requirements based upon a broad view of the scope of 802.20.

In the following discussion, it was agreed that text presented in Section 4.1.3 with respect to FDD and TDD frequency block assignments in the requirements document was needs to be further clarified**.**

PM1 meeting started at 1:45 pm

Presentation by Anna Tee on "Implication of End-User QoS Requirements on PHY & MAC" (C802.20-03-106)

This document gave a brief overview of the QoS classification and requirements by ITU and 3GPP, and used the information to derive the latency and error rate requirements for 802.20 in support of IETF DiffServ structure.

The presentation provided considerations for Latency and Packet Error Rate performance targets for IEEE 802.20 standard based on QoS requirements of 3GPP standards for different application classes.

Presentation by John Humbert on "Detailed Discussion of SRD Issues" (C802.20-03/110)

John Humbert (Systems Requirements Document Editor) discussed with the participants to reach an agreement on several open sections of the Systems Requirements Document.

a) The following new text was added to section 4.1.3 of the current requirements document:

"This section is not intended to specify a particular channel bandwidth. Proposals do not need to fit into all block assignment".

The section was marked closed by unanimous consent.

b) Discussion on Section 4.1.2: Spectral Efficiency

A point was raised regarding if there should be different targets for different speeds.

It was agreed that there is a need for consensus on the definition of a "cell."

It was decided to revisit the topic on Thursday, Nov 13, 2003.

Discussion was left with competing paragraphs for consideration. It was decided to have an Adhoc Drafting team work on revised text for this section.

c) Discussion on Section 4.1.6: Aggregate Data Rates – Downlink and Uplink

It was decided an Adhoc Drafting team would work on clarifying the text further.

d) Discussion Section 4.1.4: Duplexing

The following is the current text in the document.

"The AI shall support both Frequency Division Duplexing (FDD) and Time Division Duplexing (TDD)"

There was discussion regarding changing the above text.

Motion:

Motion to approve the following text for section 4.1.4,

Proposal: "An AI proposal may support either a Frequency Division Duplexing or Time Division Duplexing or both"

Moved: Dan Gal
Seconded: Jim Mollenauer
Time: 4:10 pm

Motion:

Motion to postpone the vote until Thursday at 10:00 am
Moved: Joanne Wilson
Seconded: Mark Klerer

Vote on motion to postpone:
In favor: 43 votes
Against: 6 votes
Abstentions: 0 votes
Motion passed
Time: 4:22 pm

e) Discussion on Section 4.1.7 (Number of Simultaneous Active Users)

It was generally agreed to change the wording of the current text. An Adhoc Drafting team was formed to work on the new text.

f) Discussion on Section 4.1.9 (Frame Error Rate)

Following a discussion on the correct value, it was decided to postpone the discussion till other related issues were discussed.

Anna Tee was requested to write a contribution for proposed text in Section 4.1.9.

g) Discussion on Section 4.2.3 (Performance under Mobility & Delay Spread)

There was substantial discussion on the content of the section but there was no general agreement.

It was decided to put the discussion back on the Requirements email reflector.

Tuesday, Nov 11th meeting recessed at 6:01 pm.

Minutes of 802.20 Wednesday November 12, 2003

Meeting started at 8:35 am.

Preceding the meeting, Requirements Adhoc Drafting teams met from 7:30 to 8:30 am.

Chair reviewed the working agenda for Wednesday, November 12 and Thursday, November 13 (Appendix C).

The morning meeting began with John Humbert (Systems Requirements Document Editor) continuing with the detailed discussion of SRD issues.

4.1.10 Support for Multi Antenna Capabilities (closed)

4.1.11 Antenna Diversity

- Latest proposal: At a minimum, the air interface shall provide support for receive diversity.

Option 1: The BS should provide antenna diversity, which may be an integral part of an advanced antenna solution. The standard shall neither require nor preclude the use of antenna diversity at the mobile stations.

Discussion: Suggestions were made not to mandate smart antenna technologies for the MS. A request was made to keep the subject open for the market to decide.

Chair requested an Adhoc Drafting team of interested members to develop proposed new text that converges to consensus.

802.1Q Tagging (4.5.2):

Most recent proposal:

- 802.1Q tagging shall be supported by the system
- (such that network egress traffic can be switched by a L2 device to the appropriate L2 termination device for managing backbone traffic authentication vlans and or captive portal redirection to enable purchase and provision retail models or distinguish traffic for wholesale partners in a wholesale environment)

- Discussion:

Issue was raised not to limit the architecture to a specific methodology at this time.

Chair suggested a more generic proposal maybe the best approach.

Topic was placed on email reflector for further discussion of proposals.

MAC Complexity Measures (4.5.5)

Option 1

- Delete Section

Option 2

- To make the MBWA technology commercially feasible, it is necessary the complexity is minimized at the MAC, consistent with the goals defined for the technologies. This section defines complexity

No objections to deleting this section.

This section was deleted.

System Architecture (Section 3.1)

- Discussion on guidelines:
  - The 802.20 systems must be designed to provide ubiquitous mobile broadband wireless access in a cellular architecture. The system architecture must be one of the following architectures:
    - Point to multipoint topology
    - Mesh network topology
    - Hybrid of both mesh and point to multipoint

- Discussion on content; different proposals of the text were voiced:

  - The 802.20 system must support non-line of sight outdoor to indoor scenarios. The system must be designed to enable a cellular architecture (macro/micro/Pico cells) with allowance for indoor penetration.

  - The 802.20 systems must be designed to provide ubiquitous mobile broadband wireless access in a cellular architecture. The 802.20 system must support non-line of sight outdoor to indoor scenarios. The system must be designed to enable a cellular architecture (macro/micro/Pico cells) with allowance for indoor coverage.

  - The 802.20 systems must be designed to provide ubiquitous mobile broadband wireless access in a cellular architecture (e.g., macro/micro/pico cells etc.). The 802.20 system must support non-line of sight outdoor to indoor scenarios and indoor coverage.

- Chair suggested the group review these alternatives overnight and the group should revisit again on Thursday morning during the Adhoc Drafting teams readouts.

Other Open Sections:

These sections are currently open. No new activity had occurred on the email reflector.

- Multi-Carrier support
- Call blocking
- MAC/Phy measurements

- Duplexing
- OA&M support
- QoS (sections 4.1.14 & 4.4.1)
- FER
- Best Server Selection

Discussion on Section 4.5.4 (OA&M Support)

Discussion regarding whether the current text in brackets should be deleted
Suggestions: Separate the text that is specific to equipment requirements and the text that is traditional in 802 standards.

A consensus was reached on the last line of the section, as follows:

- "These statistics should be made available via an IEEE compliant MIB".

Chair requested a small group of interested members develop a complete section proposal including defining what details are needed in this documents versus other documents.
There was a short discussion on the merits of adopting different architectures.

A request was made not to preclude any future contributions on this subject.

Multi-Carrier Support

A new section "Multi-Carrier Support" was proposed for incorporation:

There was a discussion on the topic of Multi-carrier Support. The following options for the text were suggested:

- The AI shall have the ability to support multiple carriers within the same scheduler so that carriers can be stacked within sectors and shall allow flexible augmentation of capacity

Or

- The AI shall have the ability to support multiple independent channels within the same sector to allow flexible bandwidth utilization and augment capacity within a sector

Topic was placed on the email reflector. Interested members were encouraged to made further proposals on Thursday.

Morning meeting recessed at 10:30 am for a break.

Meeting started again at 10:50 am.

Presentation by Qiang Guo "Channel Models for IEEE 802.20 MBWA System Simulations – Rev 03" (C802.20-03-92, Rev. 03)

Qiang Guo, document editor, reviewed the current text on Channel Models and parameters for the 802.20 system simulations.

Discussion ensued on **Section 2.4: MBWA Channel Environments**

It was suggested to include Indoor Pico Cell channel model for the Section 2.4 on MBWA Channel environments. Agreed this should be studied for possible inclusion.

For any contributions and additions to this document, the Chair requested members first introduce the proposals on the email reflector for discussion.

12:00 – Break for Lunch and Adhoc Drafting teams meetings Meeting Resumed at 2:45 pm

Presentation by Farooq Khan (Document Editor) on "Evaluation Criteria" (C802.20-03/94, Rev. 6)

Discussion:

- The list of performance metrics used in the evaluation is viewed as incomplete.
- Input is needed from the Traffic Modeling CG on the list of applications supported before the application specific performance metrics can be defined.

New Issues

- The need for simulation and evaluation on various channel bandwidths was discussed. No conclusions were reached.

- Discussion on whether to simulate the technologies on one bandwidth or for multiple bandwidths. Further discussion regarding how to reach consensus on the test/evaluation criteria bandwidths.

It was noted that progress was slow given the lack of contributions and needed inputs from the other CGs.

Discussion regarding the needed inputs from the other Correspondence Groups (CGs)

Input from the Traffic Models CG

- Application specific performance metrics and higher layer protocols details cannot be finalized until the details on the traffic models are available.

Input from the Requirements CG:

- Great level of detail and specification in the SRD would help simplify the evaluation criteria task.

Chair encouraged the group to provide more clarification and contributions for the Evaluation Criteria. Chair also suggested the editor create a priority list of needed inputs from the other Correspondence Groups.

Review by Farooq Khan of 802.20 Evaluation Criteria Document Rev 6 (C802.20-03/94)

Time: 4:15 pm

There was discussion regarding whether members can have access to the channel model described in 3GPP2 for 1xEV-DV for 802.20 evaluations. There was no agreement. Discuss followed regarding the proposed fairness criteria with no consensus reached.

Chair requested members make contributions on this topic. The topic was also placed on the email reflector for further discussion.

Discussion ended at 5:35 pm.

Given lack of time for the remaining item of the agenda: “Presentation: Evaluation of 802.20 Proposals - Coexistence Affecting Characteristics” (C802.20-03-99), it was moved to Thursday Morning (11/13).

Chair reviewed a revised Thursday Working agenda (Appendix D). No objections were raised.

However, there was concern from a member that document number C802.20-03-100 was not completely discussed. Chair suggested if there were more inputs we could discuss on Thursday during the Requirements read-outs.

Meeting recessed at 5:51 pm.

Minutes of 802.20 Thursday November 13, 2003

Meeting started at 9:40 am.

Preceding the meeting, Requirements Adhoc Drafting team meetings were held from 7:30 am to 9:30 am.

Presentation by Dan Gal on "Presentation: Evaluation of 802.20 Proposals - Coexistence Affecting Characteristics" (C802.20-03-99)

Presenter recommended the group adopt and incorporate this contribution into the Evaluation Criteria document.

Discussion was interrupted due to standing orders on the postponed motion of Tuesday, Nov 11, 2003.

At 10:00 am, Nov 13, 2003, the group took up the following motion that was made on Tuesday, Nov 11, 2003 at 4:10 pm.

Motion to approve the wording on section 4.1.4 (Tuesday, Nov 11, 2003, Time: 4:10 pm)

Current Text: The AI shall support both Frequency Division Duplexing (FDD) and Time Division Duplexing (TDD).

Proposal: An AI proposal may support either a Frequency Division Duplexing or Time Division Duplexing or both.

Moved: Dan Gal
Seconded: Jim Mollenauer

Further debate on the wording occurred.

The following friendly amendment to the current proposal was made.

Amended Proposal: The AI standard shall support both Frequency Division Duplexing (FDD) and Time Division Duplexing (TDD). An AI proposal may support either a Frequency Division Duplexing or Time Division Duplexing or both.

The friendly amendment was accepted.
Time: 10:07 am.

Additional discussion and debate on further wording changes occurred.

Secondary Motion:

Move to remove the word "standard" in the Amended Proposal.
Moved: Dan Gal

No Second was received.
Time: 10:12 am

Motion:

Motion to “Call the Question”
Moved: Gang Wu
Second: Mark Klerer

Vote:
In Favor: 55
Against: 0
Abstentions: 0
Motion passed.
Time: 10:18 am

Vote to approve the wording of amended proposal:

In favor: 26
Against: 31
Abstentions: 3

Motion fails
Time: 10:30 am

Resumed discussion on Dan Gal’s Presentation on “Evaluation of 802.20 Proposals - Coexistence Affecting Characteristics” (C802.20-03-99)
Time: 10:32 am

Further discussion regarding defining a detailed evaluation methodology for assessing the coexistence capability (of proposals) in a well-defined representative RF environment and scenarios

Proposal was to add coexistence capability material to the text.

Agreed that interested members should write detailed proposals for inclusion in the evaluation criteria document

Time: 10:46 am

Chair reviewed the status of the working agenda. Minor changes were made to the Working Agenda.

Break at 10:48am

Meeting restarts at 11:05am

Presentation by Jim Tomcik on "Coexistence Inputs for 802.20 Project" (C.802.20-03/103)

This contribution is a continuation of the recent discussion on coexistence in 802.20. The contribution dealt with how coexistence should be handled in the project. The contribution suggested a series of steps to handle the issue of coexistence.

Suggested Incumbent Technologies/Bands and presented Coexistence scenarios

Suggested it is also important to understand how 802.20 affect intra-technology deployments in selecting technologies.

After selecting technology (ies), presenter suggested that 802.20 should develop a coexistence guidelines document for the selection(s).

Much discussion of the Pros & Cons. Agreed that concrete proposals are needed to properly evaluate.

Chair recommended the group further study the subject and encouraged members to develop proposals for converging different views.

Presentation by Reza Arefi "Coexistence CG's Recommendation to IEEE 802.20 WG" (C802.20-03/96r2)

Presented the background on the formation and the activity of a study group and a task group

Proposed a charter to form a coexistence study group in 802.20

Discussion regarding the task of the Study Group and potential structure a document produced by the Task Group.

There was discussion with no consensus regarding how coexistence would be addressed in the Evaluation Criteria document and process.

Motion:

Move to approve the formation of a working group study group on coexistence, chartered through the end of March 2004 session with the following charter:

- To develop a PAR for a coexistence Task Group (CTG) that would produce a coexistence document with focus on performing coexistence analyses and deployment guidelines for coexistence between 802.20 systems as well as between 802.20 and non -802.20 systems. The PAR shall follow the recommendations of the Coexistence Corresponding Group's output as reported to the 802.20 WG in the document C802.20-03-96r2.

Moved: Reza Arefi
Second: Eshwar Pittampalli

Friendly Amendment was suggested to change “shall follow” to “should build upon” – Not Accepted.

Friendly Amendment made to change “shall follow” to “shall build on” - Accepted.

Amended Motion:

Approve the formation of a working group study group on coexistence, chartered through the end of March 2004 session with the following charter:

- To develop a PAR for a coexistence Task Group (CTG) that would produce a coexistence document with focus on performing coexistence analyses and deployment guidelines for coexistence between 802.20 systems as well as between 802.20 and non -802.20 systems. The PAR shall build on the recommendations of the Coexistence Corresponding Group’s output as reported to the 802.20 WG in the document C802.20-03-96r2.

Moved: Reza Arefi
Seconded: Eshwar Pittampalli

Discussion and debate on the motion:
There was support for starting now given steps required to go from study group to task group.
There was a concern regarding the timing of the need and members resources to support the study group now.

Motion:

Motion to “Call the Question”
Moved: Mark Klerer
Second: Gang Wu
Motion approved by unanimous consent.
Time: 1:20 pm

Vote on the Amended Motion to approve the formation of the Study Group on coexistence:

In favor: 29
Against: 32
Abstentions: 3
Motion fails
Time: 12:20 pm

Recess till 1:30 pm

Meeting resumed at 1:32 pm

Requirements Adhoc Drafting Teams Readouts
Section 4.1.2: System Spectral Efficiency readout led by

Michael Youssefmir.

The definition for System "Spectral Efficiency" is read out and agreed upon with some additional discussion. Also, definitions will be included for "Aggregate Throughput" and "Network Wide bandwidth".
Open Action Item: The actual value(s) for spectral efficiency does not have consensus agreement.

Open Items for further discussion on the reflector are:
Single value vs. multiple for uplink and downlink
Actual values [note 1b/s/Hz or downlink > 2 b/s/Hz/cell or sector?) @ 3 km/hr; uplink > 1 b/s/Hz/(cell or sector?) @3 km/hr]
Higher Mobility
TDD/FDD

Read out on following topics led by Bob Love:

1) Handoff
2) Roaming
3) Interworking

Handoff Definition: - The act of switching the communications of a mobile station from one cell (or sector) to another cell (or sector), or between radio channels in the same cell (or sector).

Editors note: sub definitions to be dealt with separately.

Motion:

Motion to accept the definition of Handoff
Moved: Joanne Wilson
Second: Michael Youssefmir

Vote:

In favor: 36
Against: 7
Abstentions: 12
Motion passes.
Time 2:30 pm

After discussion it was agreed the definitions of Active and Idle Handoff would be further addressed on the email reflector.

Intra-Technology Handoff Definition:

- A handoff between two cells employing the same air interface technology.

Inter-Technology Handoff Definition:

- A handoff between two cells employing different [air] interface technologies (e.g. between 802.11 and 802.20 cells).

Motion:

Motion to accept the above definitions of Intra-Technology and Inter-Technology Handoffs:
Moved: David James
Second: Jim Mollenauer
Motion passes by unanimous consent.
Time: 2:40 pm

Definition of Roaming: The use of a communications device outside a specified administrative domain (home domain) as defined by the service provider. A home domain may be defined as a geographic area.

Accepted by consensus
Time: 2:45 pm

Definition of Interworking:
Read out team recommended further discussion on the email reflector.

Readout from drafting team regarding
"Number of Simultaneous Active Users (4.1.7)" led by Mark Klerer.

The following text was discussed for section 4.1.7:

The MAC layer [should][shall] be able to control > [100] simultaneous active sessions per sector. An active session is a time duration during which a user can receive and/or transmit data with potentially only minimal delay (i.e., in the absence of service level controls, e.g. QoS constraints). In this state the user should have a bearer channel available with a delay of less than [25ms].

Discussion regarding how certain applications will be given preferential treatment with respect to delay in order to work, e.g., VoIP.

No consensus on this text and further discussion planned for email reflector.

New Business:

Presentation by Qiang Ni on "Adaptation Interface for Seamless Handover between IEEE 802.20 MBWA/802.11/802.15" (C802.20-3-104)

Presentation suggested ideas on supporting seamless mobility between different wireless networks.

Presentation proposed new virtual interface architecture as a solution to the vertical handover problem.

Chair thanked the presenter and asked if there were any proposed next steps. No next steps were proposed.

Continued Requirements readouts on contributions missed before new business:

Presentation by Anna Tee (C802.20-03-93)

Proposed combining text for 4.1.8 and 4.1.9 as follows:

4.1.8 Latency and Packet Error Rate

A variety of traffic classes have different latency and PER requirements. There are Error Tolerant Applications and Intolerant Applications.

Follow up to contribution C802.20-03.106, which was discussed on 11/11/03.

Discussion:

Impact on the evaluation criterion and how would this be addressed.

A suggestion was made to have evaluation criteria group develop the criteria for this application dependent and channel dependent issue.

There was a concern that this is over specified.

No consensus agreement and further discussion on reflector.

Walter Rausch: System Requirements document (C802.20-03/112)

Presenter raised the importance of choosing a Channel Bandwidth.

Presenter made suggestions to the effect that “Per user performance needs to exceed 3G capabilities (with spectral efficiency, drives minimum BW requirements)”

Presenter proposed the following text for inclusion to the Requirement document:

“The AI shall use a 5 MHz channel size as the baseline (default) bandwidth
This 5 MHz may be sub-or super channelized as required by specific implementations (N x 5 MHz, where N may be an integer or fraction)
Evaluation criteria will use the 5 MHz channel size as the default bandwidth

For a FDD: It is paired BW of 5 MHz
For a TDD: It is a total of 5 MHz”

No agreement and discussion to continue on the reflector.

Time 4:15 pm

New Business:

Chair requested any further new business.

Mark Klerer requests time to discuss a proposal for Roll-Call Votes.

Motion:

Since 802.20 has not yet approved any operating rules it is proposed that 802.20 adopt the following rule for ordering a Roll-Call vote:

- Procedure for Ordering a Roll-Call Vote: Any individual member may make a motion to order a roll-call vote such a motion shall pass if one fifth of those present vote in favor of that motion.

Moved: Mark Klerer
Seconded: Joanne Wilson

The Chair ruled the motion out of order and questioned the appropriateness of voting a single procedural operating rule given the lack of an overall set of 802.20 rules. After feedback from several working group members that this motion was not out of order the chair allowed discussion on the motion to proceed.

Friendly amendment by Youngnam Han

- Procedure for Ordering a Roll-Call Vote: Any individual member may make a motion to order a roll-call vote. Such a motion shall pass if one fifth of those voting “Yes”, “No” or “Abstain”, vote in favor of that motion.

Friendly amendment to the motion was accepted.

Vote on the above motion:
In Favor: 26
Against: 39
Abstentions: 1
Motion fails.
Time: 4:42 pm

Motion:

Move to take a roll-call vote of the previous motion.

Moved: Mark Klerer
Second: Joanne Wilson
Time: 4:48 pm

Vote:

In favor: 25
Against: 44
Abstentions:0
Motion fails
Time: 4:59 pm

Next Meeting Planning:

Bob Love requested time for a short contribution ("Moving Forward" – C802.20-03/113), which the Chair granted.

Chair conducted a poll of members present regarding planned attendance at the Vancouver, Jan. 11-16, 2004 Interim. Approximately 70 people planned to attend.

Key Topics/Contributions Requested for Vancouver Agenda:
Chair suggested the group focus on values and measurable items in Requirements and Evaluation Criteria. Chair stated he would contact all the CG leaders and create a proposed priority list and circulate to the group. The agreed list would form the basis of the January agenda.

Motion:

Motion to adjourn the session
Mover: Eshwar Pittampalli
Second: Steve Crowley

Vote:
In Favor: 46
Against: 15
Motion passes
Session Adjourned.
Time: 5:15 pm

Attendance List of Session #5

Last Name	First Name	Middle Initial	Organization	Gain (%)	Credit (Y: >75%)
Ahn	Jae-Young	null	ETRI	92	Y
Ahn	Sangkwon		Hanaro Telecom	50	N
Alfvin	Richard		Appairent Technologies, Inc.	14	N
Allen	Kenneth	C	NTIA	100	Y
Amer	Khaled		AmerNet, Inc.	85	Y
Ansari	Arif		Nextel	92	Y
Aoki	Hidenori		NTT DoCoMo	28	N
Arefi	Reza		BWTC	7	N
Bajaj	Rashmi		France Telecom R&D	92	Y
Baum	Kevin		Motorola	92	Y
Bernstein	Jeffrey	null	TMG, Inc.	92	Y
Bussey	Chris	J	Bussey Consulting Services, Inc.	92	Y
CHOO ENG	YAP		Panasonic Singapore Labs	100	Y
CULLEN	Robert		DataConsult International	100	Y
Chang	Jin-Weon		Samsung	85	Y
Chang	Soo-Young		Univ. of California, Davis	28	N
Charron	Wendy		LCC International, Inc.	78	Y
Chauvin	Todd	H	ArrayComm	92	Y
Chickneas	Jim		Consultant	100	Y
Chindapol	Aik		Siemens	28	N
Choi	Hyoung-Jin		TTA	78	Y
Cleveland	Joseph	R	Samsung	100	Y
Cole	Terry	L	Advanced Micro Devices	14	N
Conkling	Craig		INPROCOMM	28	N
Crowley	Steven		DoCoMo USA Labs	100	Y
Cypher	David	E	NIST	14	N
Das	Arnab		Flarion Technologies	100	Y
Davis	Chantal		Industry Canada	28	N
Demel	Sabine		T-Mobile	92	Y
Dorenbosch	Jheroen	P	Motorola	100	Y
Dorward	Lynne	A	LADCOMM Corporation	100	Y
Eilts	Henry	S	Texas Instruments, Inc.	100	Y
Entzminger	Lindell		Consultant	100	Y
Epstein	Mark		Qualcomm	100	Y
Falk	Lars	P	TeliaSonera	14	N
Famolari	David		telcordia technologies	28	N
Ford	Brian		BellSouth	85	Y
Gal	Dan		Lucent Technologies	92	Y
Ganti	Hari	V	Flarion Technologies	100	Y
Goldhammer	Marianna	O	Alvarion	85	Y
Gomes	Eladio	R	Double E Enterprises	100	Y
Gowans	Andrew	J	UK Office Of Communications	7	N
Gu	Daqing		Mitsubishi Electric	21	N

Guo	Qiang		Motorola	92	Y
Hafid	Abdel		telcordia technologies	92	Y
Han	Youngnam		ICU	78	Y
He	Haixiang		Nortel Networks	92	Y
He	Xiaoning		DoCoMo USA Labs.	50	N
Humbert	John		Sprint	92	Y
Hunzinger	Jason		DENSO International America	85	Y
Ibbetson	Luke		Vodafone Group	85	Y
Imamura	Daichi		Panasonic	92	Y
James	David	S	OAK B.V.	100	Y
Jeannerod	Laurent		Alcatel	21	N
Jones	Dennis	R.	Taliesen North Consulting	100	Y
KIM	KIYOUNG		LG electronics inc.	14	N
Kakura	Yoshikazu		NEC Corp.	100	Y
Kawahara	Toshiro		DoCoMo USA Labs.	100	Y
Khademi	Majid		Khademi Consulting	92	Y
Khan	Farooq	null	Lucent Technologies	78	Y
Khatibi	Farrokh		Qualcomm	92	Y
Kim	JaeHeung		ETRI	100	Y
Kim	Nak Myeong		Ewha Womens University	85	Y
Kim	Sang	G	LG electronics inc.	100	Y
Kimura	Shigeru		Kyocera	100	Y
Kitamura	Takuya		Fujitsu Laboratories Ltd.	92	Y
Klerer	Mark		Flarion Technologies	100	Y
Knisely	Douglas	N	Lucent Technologies	92	Y
Knowles	Skip		Bussey Consulting Services, Inc.	100	Y
Kolze	Thomas		Broadcom	100	Y
Kuroda	Masahiro		CRL(Communications Research	92	Y
Lalaguna	Pablo		MedStar Systems, LLC	100	Y
Landon	James		Sprint	100	Y
Lawrence	Lisa	B	CTCI	100	Y
Lee	Heesoo		ETRI	92	Y
Lee	Kyoung Seok		ETRI	100	Y
Liu	I-Ru		Arcadyan Technology Corporation	7	N
Loc	Peter		Marvell	7	N
Loewenstein	Uwe		mmO2	14	N
Love	Newton		Alion Science & Technology	85	Y
Love	Robert	D	LAN Connect Consultants	85	Y
Lu	Ben		NEC Labs. America Inc.	78	Y
Lung	Yi-Jen		III	7	N
Maez	Dave		Navini Networks	100	Y
McGinniss	David	S	Sprint	92	Y
McMillan	Donald	C	Advanced Network Technical Solutions	100	Y
Migaldi	Scott	F	Motorola	85	Y
Miyazono	Max		Qualcomm	100	Y
Mollenauer	James	F.	Technical Strategy Associates	100	Y
Mukai	Manabu		TOSHIBA	100	Y
Murakami	Kazuhiro		Kyocera	100	Y
Naguib	Ayman	F	Qualcomm	92	Y

Naidu	Mullaguru	S	Qualcomm	92	Y
Natarajan	Nat		Motorola	92	Y
Nguyen	Tuan	P	N/A	57	N
Ni	Qiang		INRIA	21	N
Nishio	Akihiko		Matsushita Electric Industrial Co. ltd.	92	Y
O'Connor	Jim		IPWireless	85	Y
Obara	Kei		Siemens	28	N
Odlyzko	Paul		Motorola	100	Y
Okubo	Akira		Mitsubishi Electric	100	Y
PARK	SOON-JOON		LG electronics inc.	92	Y
Patel	Vijay		Axcelco LLC	14	N
Peng	Xiaoming		Institute for Infocomm Research	21	N
Petrick	Al		IceFyre Semiconductor	14	N
Pirhonen	Riku		Nokia	92	Y
Pittampalli	Eshwar		Lucent Technologies	92	Y
Poisson	Sebastien		Oasis Wireless Inc	85	Y
Pulcini	Greg		Bussey Consulting Services, Inc.	92	Y
Ragsdale	James	H	Ericsson	100	Y
Rajkumar	Ajay		Lucent Technologies	100	Y
Rausch	Walter	F	Sprint	100	Y
Rudolf	Marian	X	InterDigital Communications	100	Y
Sakakura	Takashi		Mitsubishi Electric	92	Y
Sanchez	Maria		British Telecom	100	Y
Sangchoon	Kim		LG electronics inc.	100	Y
Saviotti	Vanni	null	STMicroelectronics	78	Y
Schein	Brett		ArrayComm	92	Y
Seagren	Chris		Sprint	100	Y
Shaver	Donald	P	Texas Instruments, Inc.	85	Y
Sheikh	Khurram		Sprint	78	Y
Shin	Byung	C	CBNU(Chungbuk Nat. Univ.)	21	N
Shively	David		Cingular Wireless	100	Y
Sohn	Insoo		ETRI	85	Y
Springer	Warren	J	SpringerSystems	92	Y
Staver	Doug	p	N/A	92	Y
Stone	Mike		Independant	100	Y
Sumanasena	Abhaya		Mitsubishi Electric	100	Y
Sutivong	Arak		Qualcomm	100	Y
Takizawa	Kenichi		CRL(Communications Research	14	N
Tanaka	Hideki		Fujitsu Laboratories Ltd.	21	N
Taylor	Leslie		Leslie Taylor Associates, Inc.	100	Y
Tee	Lai-King Anna		Samsung	92	Y
Tomcik	James	D.	Qualcomm	35	N
Trick	John	A	Bussey Consulting Services, Inc.	92	Y
Umehira	Masahiro		NTT	28	N
Upton	Jerry		J Upton Consulting	85	Y
Valls	Juan Carlos		TMG, Inc.	100	Y
Van Poucke	Bart		IMEC	14	N
Vivanco	Silvia	C	TMG, Inc.	100	Y
Vook	Frederick	W.	Motorola	92	Y

Ward	Robert		SciCom, Inc.	92	Y
Wasilewski	Tom	V	TMG, Inc.	92	Y
Watanabe	Fujio		DoCoMo USA Labs	21	N
Wieczorek	Alfred		Motorola	100	Y
Wilson	Joanne	C	ArrayComm	100	Y
Wong	Jin Kue		Nortel Networks	78	Y
Woodyatt	James		Apple Computer	85	Y
Wu	Gang		DoCoMo USA Labs	100	Y
Wu	Geng		Nortel Networks	92	Y
Yaghoobi	Hassan		Intel Corporation	100	Y
Yallapragada	Rao	V	Qualcomm	100	Y
Youssefmir	Mike		ArrayComm	100	Y
Yuza	Masaaki		NEC infrontia Co.	100	Y
imamura	kimihiko		Sharp Corporation	21	N

Appendix B

Preliminary Proposed Agenda	
Monday, November 10, 2003 1:30PM - 3:30PM	
- Joint Plenary 802.11/15/18/19/20 (Attendance Optional)	
Monday, November 10, 2003 4:00PM - 5:30PM	
- Opening of Session - Review and Approval of Agenda - Review and Approval of Minutes - Overview of Requirements CG Output and Issues	C802.20-
Tuesdav. November 11. 2003 8:00AM - 6:00PM	
- **Requirements Contributions and Discussion** Preparing for Convergence Support of Layer 2 Triggers for Faster Handoffs Handoff for 802.20 Plurality of Technologies & Channel-bandwidths in the IEEE 802.20 Standard Priority Access for 802.20 Review of 802.20 Requirements Document Rev 9	 C802.20-03/97 C802.20-03/95 C802.20-03/101 C802.20-03/105 C802.20-03/102 C802.20-03/93
Wednesday, November 12, 2003 8:00AM - 6:00PM	
- (Drafting Group readout) - **Channel Modeling Contributions and Discussion** - **Traffic Modeling Contributions and Discussion** **- Evaluation Criteria Contributions and Discussion** Evaluation of 802.20 Proposals - Coexistence Affecting Characteristics Review of 802.20 Evaluation Criteria Document Rev 6 - (Possible time for drafting groups (on above 3 topics))	C802.20-03/92 C802.20-03/99 C802.20-03/94

Preliminary Proposed Agenda, Contd.	
Thursday, November 13, 2003, 2003 8:00AM - 5:00PM	
- Evaluation Criteria Contributions and Discussion (if needed) - (Drafting group readouts) - Coexistence CG Readout and Contributions Review of 802.20 Coexistence CG Proposal Coexistence for the 802.20 Project - (Possible time for drafting groups & readout) - New Business Adaptation Interface for Seamless Handover between 802.20MBWA/802.11/802.15 Status of Current Mobile Wireless Access System Standards - Planning for next meeting - Close of Meeting	 C802.20-03/96r1 C802.20-03/103 C802.20-03/104 C802.20-03/100

Appendix C

Wednesday Working Agenda

8:30 – 10:30am	Requirements Document Review Continued
10:30 – 10:45am	Break
10:45 – 12:45pm	Channel Modeling Review C802.20-03/92 Traffic Modeling Review
12:45 – 2:45pm	Requirements Drafting Teams and Lunch Break
2:45 – 5:45pm	Evaluation Criteria **Evaluation of 802.20 Proposals – Coexistence Affecting Characteristics C802.20-03/99** **Review of 802.20 Evaluation Criteria Document Rev 6 C802.20-03/94**
5:45 – 6:00pm	Thursday Working Agenda Review(see next slide for proposal)

Thursday Working Agenda

8:00 – 10:30am	Requirements Drafting Teams Readout Requirements Motion 10:00am
10:30 – 10:45am	Break
10:45 – 12:30pm	Co-Existence **Coexistence for 802.20 Project C802.20-03/105** **Review of 802.20 Coexistence CG Proposal C802.20-03/96r2**
12:30 – 1:30pm	Lunch Break
1:30 – 2:30pm	Possible Drafting Teams Time or other Readouts
2:30 – 2:45pm	Break
2:45 – 3:45pm	New Business **Adaptation for Seamless Handover between 802.20MBWA/802.11/802.15 C802.20-03/104**
3:45 – 4:45pm	Planning Next Meeting
4:45 – 5:00pm	Close Meeting and Adjourn

Appendix D

Thursday Working Agenda- (modified)

7:30 – 9:30am	Requirements Drafting Teams
9:30 –	Evaluation Criteria Contribution-**C802.20-03/99**
10:00 – 10:15am	Requirements
10:15 – 10:30am	
10:30 –	Requirements Drafting Teams
12:30 –	Lunch
1:30 –	Co-Existence **Coexistence for 802.20 Project C802.20-03/105** **Review of 802.20 Coexistence CG Proposal C802.20-03/96r2**
3:00 – 3:15pm	
3:15 –	New Business **Adaptation for Seamless Handover between 802.20MBWA/802.11/802.15 C802.20-03/104**
4:00 –	Planning Next
4:45 –	Close Meeting and Adjourn