

In the Matter of the appeal of
Mollenauer, Oprescu, and Wieczorek
Concerning
Decisions of the IEEE 802.20 Working Group Chair

Date: October 17, 2006

To: IEEE Standards Association Standards Board

Subject: Appeal of Appeal panel decision on decisions of the IEEE 802.20 Working Group Chair

Appeal hearing date: March 8, 2006
Appeal hearing location: Hyatt Regency Convention Center, Denver, CO
Appellants: James F. Mollenauer, Val Oprescu, and Al Wieczorek
Appellee: Jerry Upton – Chair, IEEE 802.20 Working Group

Appeal Panel members:
Chair: Matthew Sherman
Member: Pat Thaler
Member: Mike Takefman

This letter is the response of the IEEE 802 Executive Committee Appeal Panel in the matter of Mollenaur (et al) vs. Upton to the appeal of the decision to the SASB.

Mr. Upton has previously requested the IEEE 802 Executive Committee to hold a rehearing of the Appeal Panel during the July 2006 802 Plenary session. The Appeal Panel had requested the 802 EC to authorize a limited rehearing on a specific portion of Mr. Upton's request. During the opening EC meeting, the 802 EC denied Mr. Upton a full rehearing (with a vote of 5/9/1) and granted a limited rehearing (with a vote of 14/1/0) on the question of the appropriate threshold of the revote on the adoption of the Technology Selection Process document. The Panel reconvened at noon on Monday July 17, 2006 and issued a response (Aug 16,2006) that modified the required threshold to 50% from 75%.

Aside from the change in the voting threshold for the TSP, the Appeal Panel stands by its decision and believes the continued appeal of the decision is without merit.

To rebut the majority of Mr. Upton's submission to the SASB, the appeal panel has attached the following documents:

1. The panel's response to Mr. Upton's request to the 802 EC for a rehearing, which rebuts the majority of his points.
2. The panel's original decision.
3. The response to the interpretation request.
4. The section of the 802.20 P&P dealing with the "four hour" rule.

5. A Microsoft word comparison between the TSP submitted by Mr. Klerer and the TSP submitted by Mr. Upton.

With regard to item 4) **The 802 Appeal Panel ruling for a re-vote of the TSP would appear to support the plan of a group of companies from 802.16 WiMAX whose goal may be the disrupting of 802.20.** The appeal panel believes the SASB Report of Actions on IEEE 802.20 issued 19 September 2006 resolves the question of dominating behavior.

The Appeal Panel respectfully requests that the SASB provide direction as to whether the newly reconstituted 802.20 Working Group is still bound by technical and procedural decisions regarding the Technology Selection Process made under the previous chair and whether the remedy provided in this appeal is still relevant.

Respectfully,

Mathew Sherman:	Chair, Appeal Panel
Pat Thaler:	Member, Appeal Panel
Mike Takefman:	Member, Appeal Panel

Re-issued on behalf of the panel by: : Michael Takefman
Dated : 10/17/2006

Appendix A: Appeal panel response to request to the 802 EC for a rehearing

Dated: May 31, 2006

To:

Paul Nikolich (p.nikolich@ieee.org)
Chair, IEEE 802 LMSC
Bob O'Hara (boohara@cisco.com)
Recording Secretary, IEEE 802 LMSC

From:

Matthew Sherman (matthew.sherman@baesystems.com)
Appeal Panel Chair

On Behalf of:

Mike Takefman (tak@cisco.com)
Pat Thaler (pthaler@broadcom.com)
Appeal Panel Members

Matthew Sherman
Appeal Panel Chair

Subject: Rehearing of Mollenauer, Oprescu, and Wieczorek v 802.20 Chair

The Appeal Panel is providing the following response to the request from Mr. Upton (dated May 2, 2006) for a rehearing of the appeal.

1.0 Summary Response:

The appeal panel's interpretation regarding the issue of approval threshold for the TSP was based on the meeting minutes of 802.20. Mr. Upton provided a reference that indicates the type of vote (procedural) was announced at the start of the session. The panel is open to a re-hearing or an agreement between the parties on that one narrow question.

The appeal panel submits this response to Mr. Upton's rehearing request because some of the arguments noted pertain to procedures that the panel believes it appropriately followed. If the EC believes the procedures (e.g., conducting closed deliberations, and issuing a clarification when requested and with no objection from the other party) were inappropriate, the panel requests that the EC provide clear guidance.

Other than the narrow question noted above, the panel believes that there is no justification for a rehearing. If the EC determines that rehearing is appropriate, the Panel is, of course, prepared to reconvene in accordance with that decision and any guidance that it includes.

In determining the appropriate relief, the Panel took into consideration the timing of further proceedings in 802.20. The Panel suggests that the EC arrange that any rehearing granted be completed by 1 PM on July 17, 2006 (Monday of the next Plenary Session). Any later time for completion of the rehearing would impact implementation of the Appeal Panel's recommended remedy.

2.0 Request Letter and Detailed Response:

Included here is Mr. Upton's request and the Panel's responses on a point by point basis. The responses are set off in 'Text Boxes'.

Request for a Re-hearing of the Appeal Panel decision dated April 6, 2006, regarding of the Appeal of Mollenauer, Oprescu, and Wieczorek Concerning Decisions of the IEEE 802.20 Working Group Chair

I respectfully request a re-hearing of the Appeal Panel decision dated April 6, 2006, regarding of the appeal of Mollenauer, Oprescu, and Wieczorek Concerning Decisions of the IEEE 802.20 Working Group Chair. This request is per the IEEE 802 Policies and Procedures section 7.1.6.7 Request for Re-hearing. "The decision of the appeals panel shall become final 30 days after it is issued, unless one of the parties files a written notice of request for re-hearing prior to that date with the EC Recording Secretary, in which case the decision of the appeals panel shall be stayed pending review by the EC at its next meeting."

Response: The appeal panel requests that any proceedings for rehearing be concluded prior to Monday 1 PM at the July 2006 802 Plenary. In this way their remedy if upheld will not be impacted.

Summary Rationale for Re-hearing request:

1. **Appeal Panel Ruled In Error:** The Appeal Panels ruled in error because their finding and remedial action regarding the re-approval of the Technology Selection Process document is beyond the scope of the appellants' appeal. The appellants requested remedy did not request a revote of the document. The Appellants clearly stated in their Appeal, dated October 21, 2006, that it did not address this document's approval.

Response: Consider the following Text from clause 7.1.6 in the LMSC P&P:

"The appeal brief shall state the nature of the objection(s) including any resulting adverse effects, the clause(s) of the procedures or the standard(s) that are at issue, actions or inaction that are at issue, and the specific remedial action(s) that would satisfy the appellant's concerns..."

Each party may adduce other pertinent arguments, and members of the appeals panel may address questions to individuals before the panel. The appeals panel shall only consider documentation included in the appeal brief and reply brief,...

The appeals panel shall render its decision in writing within 30 days of the hearing, stating findings of fact and conclusions, with reasons there for, based on a preponderance of the evidence. Consideration may be given to the following positions, among others, in formulating the decision: a) ..."

Response Continued:

The text requires the Appellants to state a remedial action that would satisfy their concerns. However it encourages the Appeal Panel to probe the facts presented and does not limit the Appeal Panel in any way for their findings or recommended remedial actions. While the Appeal Panel must limit themselves to the evidence presented they need not limit themselves to the arguments presented by either the Appellants or Appellee. The primary complaint for the Appellants was that “decisions were made hastily and without adequate due process”. While the specific arguments made by the Appellants were not entirely correct, the Appeal Panel has concluded that the evidence presented does in fact support this assertion. While the Appeal Panel believes the requested remedy to be inappropriate, in accordance with the LMSC P&P they are free to recommend other remedies (as they have). Accordingly, the Appeal Panel does not believe a rehearing on this basis is justified.

2. **Lack of Technology Proposal Diligence:** The Appellants’ oral statements at the March 8th appeal hearing clearly indicate a seeming lack of diligence in developing and preparing a technology proposal for Working Group consideration. This fact is evidenced by the liberal use of the Appellants’ quotes in the Appeal Panel decision text. These quotes and the Appellants lack of a specific request of the Chair and Working Group for a proposal submission extension support my rehearing request to address the validity of the Appellants’ request for something that they showed no diligence in pursuing. This suggests the Appellants have no standing to pursue their claim.

Response: The Appeal Panel agrees that there was a lack of diligence on the part of the Appellants. This Appeal Panel noted this in the decision and took it into account in determining the appropriate remedy. However, this lack of diligence does not completely nullify their request. They are entitled to due process. Also, there is a general duty on the part of the IEEE802 committee to ensure due process exists. If due process is not followed, such situations should be rectified in a way that best balances the need for process with the need for progress. The recommended remedy reflects these facts and gives due weight to the degree of diligence on the part of the Appellants. Accordingly, the Appeal Panel does not believe a rehearing is justified on this basis.

3. **Out of Context or Incorrectly Interpreted Oral Statements:** The Appeal Panel decision includes text that suggests oral statements by the 802.20 Chair during the March 8th appeals hearing were taken out of context or incorrectly interpreted. In particular, assertions made in the Appeal Panel decision text regarding the conduct of the September 2005 Working Group meeting are not factual based on my personal attendance at the meeting and my follow-on discussions with other attendees.

Response: The Appeals Panel respectfully disagrees with the Chair of 802.20 and a detailed response is given following the detailed rationale. As stated in 7.1.6 of the LMSC P&P (quoted above), the appeal panel is required to base its decision on the documentation provided with the appeal briefs and the hearing. The appeal panel is not empowered to go on fact finding missions and interview others outside the hearing. It is up to the appellants and appellees to provide adequate documentation for their cases and to express themselves clearly.

4. **Late and Invalid Second Ruling:** The Appeal Panel issued a second ruling two weeks after the initial official ruling. The decision process leading to this second ruling was not an open and appropriate process and violates the appeals process. The second ruling deals with how to re-vote of the Technology Selection Process document. It is not correct. If an appropriate further review of the matter had been undertaken, then it would have been clear the document was approved with a procedural vote in the September 2005 Working Group session. The second ruling by the Appeal Panel after its first ruling clearly requires a re-hearing and is another indication that a further Appeal Panel decision review is required.

Response: The Appellee errs in that he treats this ‘Second Ruling’ as an matter independent of the ‘First Ruling’. Rather it is a requested interpretation of the first ruling. No rules currently exist for interpreting the findings of an Appeal Panel. However the Appeal Panel believes the process followed was reasonable given existing governance and precedent. Notwithstanding this, the Appeal Panel recognize that elsewhere in this document the Appellee identifies new evidence that has direct bearing on this ‘Second Ruling’ and agree that rehearing / reconsideration is required on that matter.

In summary, the Appeal Panel decision was not based on a preponderance of the evidence, as per Section 7.1.6.6 of the 802 P&P. A thorough re-hearing of the evidence will support a revised set of findings.

Response: The Panel respectfully disagrees with the appellee and believes that a general re-hearing is not justified on this basis.

Rationale for Approving the Re-hearing Request:

1. Appeal Panel Ruled In Error:

The Appellants requested the following remedy:

“To remedy the situation, we request that the Executive Committee set aside the Work Plan as recently announced by the Chair of 802.20 and direct him to put forward a call for proposals which allows three normally-scheduled meetings (or six months) for the submission of proposals before any elimination is done.”

The Appeals Panel found without merit the Appellants’ objection to the Work Plan and its proposal submission schedule.

The Appellants did not request the Appeal Panel to do anything with the approved the Technology Selection Process document. Appellants did not request a re-vote of this document.

The Appellants stated in their appeal that the Technology Selection Process document was the subject of a separate objection made by Kyocera Working Group members. The Appellants stated that their appeal addressed a different problem from the Kyocera appeal. As you know, the Kyocera appeal was satisfactorily resolved and withdrawn. The Kyocera letter withdrawing the appeal states the Working Group was granted a full

opportunity to modify the document, and it was appropriately adopted prior to its subsequent execution. The Kyocera letter is in Appendix B.

Thus, the Appeal Panel ruled in error because their decision regarding the re-vote is beyond the scope of the Appellants' appeal.

Even though the Appeal Panel decision on the approval of the Technology Selection Process document is out of the appeal scope, for completeness in providing background data to support the re-hearing request, the Panel's incorrect interpretation of the 802.20 Policies and Procedures is addressed here. The Appeals Panel stated, "The modified TSP document itself was not approved in accordance with 802.20 Policies and Procedures, specifically the requirement that a document be available for 4 WG session hours prior to a motion to approve the document." This is not correct. A reading of the cited section 2.6 of the 802.20 P&P shows the correct interpretation is that 4 hours only applies to motions that change a draft - - not other motions.

The ruling that the 802.20 Working Group should by Working Group motion retroactively accept the Technology Selection document is out of the appeal scope and the Appellants' requested remedy, and therefore should be rescinded.

Response: In addition to the response already provided, it is noted that the 'scope' of the appeal is determined by the complaint, and the evidence presented – NOT by the remedy requested. Therefore the arguments presented by the Appellee above concerning scope are incorrect. The conclusions of fact reached by the Appeal Panel were based on the complaint, and evidence presented. The remedy was selected based on conclusions of fact reached and need not relate in any way to the requested remedy, or the proceedings on other appeals (withdrawn or otherwise).

In regard to Appellee's interpretation of the 802.20 P&P, the facts presented are out of context and the interpretation incorrect. The complete text from that section reads:

“A motion may be made at any time during the meetings. However, a motion that changes a draft shall be presented in a submission that has been;

- Accepted by document control (see 2.5)
- Available electronically (via flash card or on the server).

A motion can only be voted on when its submission has been available to all voters who are participating in the session for a time not less than four WG session hours before the vote. Motions to adjourn a session per the approved agenda are the exception.”

Response Continued: For motions concerning a draft, there are two specific requirements. These concern acceptance by document control and electronic availability. There is nothing stated about the length of time the document must be available. In the following paragraph (which applies to all motions) it notes that submissions must be available for four hours before the vote. The paragraph explicitly excludes “motions to adjourn”. If the text only applied to motions concerning drafts this would not be necessary. Therefore it is the clear intent of the 802.20 P&P that this section applies to all motions except motions to adjourn. It is important to note that not all motions require submissions. Changes to the draft must have a submission, and any motion that deals with a submission must satisfy the time requirement.

It is also noted that while the text of 2.6 uses “drafts” the 802.20 P&P generally uses “draft standard” when that is what it means and it identifies at least one other class of drafts – “draft positions or statements.” Therefore draft may be interpreted with a broad meaning to draft documents. If the intent was that it apply only to a particular kind of draft such as a draft standard, 802.20 should consider changing draft to draft standard to avoid future problems.

Accordingly the Appellee’s interpretation is in error, the TSP was not adopted correctly and a rehearing is not justified.

2. Lack of Technology Proposal Diligence:

The Appellants’ oral statements at the March 8th appeal hearing indicate a seeming lack of diligence in developing and preparing a technology proposal for the Working Group’s consideration.

The Appeal Panel Decision, pages 10-11, shows the following Appellants statements:

“The Appellants were asked during the hearing (paraphrased):

Were they in the process of developing a submission for the October deadline?

The Appellants responded that (paraphrased):

They were, but an act of god (hurricane in Florida) prevented the main author from finishing the work.

The Appellants were asked during the hearing (paraphrased):

Did they seek any relief from the chair to submit a late contribution given the nature of the delay?

The Appellants responded that (paraphrased):

They did not contact the chair for an extension or other relief as the chair had clearly stated that no late contributions would be accepted.

The Appellants were asked during the hearing (paraphrased):

Did they continue to work on their proposal so that it would be ready for submission at a subsequent meeting or should the appeal panel render a decision in their favor that they would be ready to submit it?

The Appellants responded that (paraphrased):

A business decision was made not to put resources on the development of a submission in anticipation of a decision in their favor.”

The Appellants did not request the 802.20 Chair to grant an extension for a proposal submittal based on the Florida hurricane. The Appellants did not make a specific request

of the Working Group to approval a late technology proposal from them at the November Plenary. A motion would have only required a two-thirds approval to modify the TSP document. If their technology proposal were available at the November Plenary or earlier, the Chair and Working Group members would have likely viewed any such request for consideration favorably given the special situation created by the hurricane.

The Panel conclusion states:

“The appellants described the pace of development of IEEE 802.20 to be leisurely at best. The appellants did not claim that there were major changes to the TSP. Therefore, it is reasonable to expect that all participants of IEEE 802.20 should have been working towards having submissions ready. While the appellants might have been caught by the change to the schedule, the appellants have not done a reasonable amount of work between September 2005 and March 2006 to lead the panel to believe that they have tried to mitigate the damage to them and preserve a reasonable schedule for the project.”

The above Panel conclusion seems contradictory to the remedy granted. The Appellants should not be granted the right to submit, more than 6 months later, a complete proposal at an 802.20 plenary meeting. Additionally, based on the Appeal Panel conclusion and statements made by the Appellants at the hearing, the Appellants do not have a valid standing for requesting such a remedy in an appeal.

Response: As already noted, the Appeal Panel agrees that there was a lack of diligence on the part of the Appellants. However, this lack of diligence does not completely nullify their request. They are entitled to due process. Also, there is a general duty on the part of the IEEE802 committee to ensure due process and openness exists. It is the belief of a majority of the Appeal Panel that a preponderance of evidence indicates that due process was not followed. The late submission and lack of disclosure of the changes to the TSP constituted a failure of openness in the process. If due process is not followed, such situations should be rectified, taking into account the Appellants’ diligence. The remedy recommended by the Appeal Panel reflects these facts and takes Appellants’ diligence into account.

3. Out of Context or Incorrectly Interpreted Oral Statements:

The Appeal Panel decision includes text that suggests oral statements by the 802.20 Chair during the March 8th appeals hearing were taken out of context or incorrectly interpreted.

Under the Panel Conclusions section page 9 of the Decision document the Panel states:

“The Working Group had the opportunity to not accept the late contribution or to delay voting on it, and we are reluctant to upset the decision of a majority of the working group in attendance at the meeting. Nonetheless, given the statements made by the Working Group Chair at the hearing, it appears that the chair did not fully and fairly disclose the nature and amount of changed content in the document. Apparently, Mr. Klerer's presentation on a related document (46r1) immediately after the Chair's presentation did not highlight any of the key changes either. The position of Chair produces an aura of authority and trust for the Chair's statements. Ideally, the Working Group members should have verified for themselves what the changes were before they approved the document but that does not override the Chair's duty to state clearly the nature of any material changes that he had made. There is no record indicating that this occurred. The

chair's denial at the hearing that the proposal contained a material change convinces us that no full and fair disclosure was made to the Working Group members."

The above statements are not accurate. The speculative nature of statements is clearly indicated by the Panel's use of the words "it appears" and "apparently....did not". Since "minutes of the hearing" were not issued until the decision was rendered, it was surprising that oral hearing statements attributed to the Chair were used as fact instead of referencing the approved minutes of a session. The Working Group had a clear and full disclosure of the Technology Selection document. The September session minutes show that the Chair made revisions based upon comments from the group and created a revised contribution. This could have only occurred with a full review of the document with the members. The actual Call for Proposals was reviewed and modified based on members' suggestions in the September meeting

Response: The approved 802 procedure allows the questioning of the parties to the appeal, it does not allow the calling of witnesses. Mr. Klerer is not a party to the appeal and has no standing. The approved 802 procedure does not require minutes of the hearing to be produced. Therefore, the Appeal Panel is completely within its rights to consider both the written and oral testimony and to report in its finding whatever it considers relevant to understanding its decision.

To that end, a comparison of the contributions by Mr. Klerer (46r1) and Mr. Upton (57) clearly indicates a large number of changes, many of them causing large differences in the process, whereas the differences between contributions 57 and 57r1 shows only minor changes and not in any of the areas that would be contentious.

The testimony of the Appellants and Appellee was that no significant changes were made to the TSP document over its evolution. It was the unanimous opinion of the panel that a reasonable person would reconcile the clear difference in the verbal and documentary testimony as a preponderance of evidence that full and fair disclosure did not occur. A minority of the panel felt that intent to deceive had to be proven, whereas the majority of the panel believes that the apparent lack of openness was sufficient to taint the process and was not in keeping with the development of standards for the public good.

The minutes do not detail what portions of the document were discussed, or what changes were considered and rejected. As noted above, a comparison of the documents 57 and 57r1 shows at best minor changes. Hence the supposition that the Chair fully discussed all changes to the document with the Working Group is not supported by the evidence.

The assertions by the Panel regarding "who said what" and "what was said by whom" during the September Working Group session are speculative. No member of the Appeal Panel attended the session. This speculation includes Mr. Klerer's presentation. The panel did not ask Mr. Klerer his views. Based on my conversation with Mr. Klerer, he does not agree with the purported claim.

Response: The approved 802 procedure allows the questioning of the parties to the appeal, it does not allow the calling of witnesses. Mr. Klerer is not a party to the appeal and has no standing. In the presence of facts and party-testimony that are contradictory, it is the role of the Panel to rule based on the preponderance of evidence. Consistent with the rules, the panel based its ruling on the evidence and testimony presented at the Appeal Hearing and filed in the briefs.

The Panel also stated under Panel Conclusion (page 9):

“The vote to extend the selection process to allow further submissions failed with 26.8%, it is therefore not clear that an informed vote to adopt the schedule provisions of the TSP would have passed by 75%. Thus, it appears that the Working Group made the decisions to accept and vote on the late contribution based on misleading information. It appears to the majority of the Appeal Panel that a preponderance of evidence exists supporting the fact that the chair did this knowingly.”

This conclusion seems to assume the TSP was approved by a technical vote of 75%. The Technology Selection Process (TSP) document was approved as a procedural document requiring only a 50% approval. Per the TSP, section 5.0, the Working Group can modify the document with a two-thirds vote. Though not stated in the decision document, this conclusion references a motion taken at the November 802.20 plenary session. If passed, this November motion would have modified the TSP. At the appeal hearing, the 802.20 Chair stated the TSP could be modified anytime by a two-thirds vote. However, a paraphrase of this statement does not appear in the decision document. As stated earlier, the Chair fully reviewed the document and made revisions in the session.

Response: The Appeal panel concedes that this particular argument may have been in error. However, this argument was not central to the panel’s decision, and the panel would reach the same conclusion based on other arguments (such as failure to meet the 4 hour rule). Thus the appellant’s claim of failure to follow due process still holds, and the recommended remedy is still appropriate. Therefore the arguments here are not sufficient grounds for a re-hearing on the question of re-voting the TSP.

Therefore based on the above, the ruling to re-vote the TSP document is not appropriate.

Response: The majority of the Appeal Panel found that the approval of the TSP document clearly violated the Policies and Procedures of the 802.20 WG with regard to the period of time for Working Group review. The question of what threshold applies does not invalidate the argument that the ‘4 hour rule’ was not met and therefore due process was not followed. Therefore the arguments here are not sufficient grounds for a re-hearing on the question of re-voting the TSP.

4. Late and Invalid Second Ruling:

On April 20, 2006 the Chair of the Appeal Panel, Mat Sherman, issued the following second ruling regarding re-voting the Technology Selection Process document.

“After consulting with the panel we have unanimously concluded that the vote should be 75% based on the fact that it is the approval of a technical document. We believe that this is supported by the 802.20 minutes given that the practice appears to be marking the required threshold only if it wasn't 75%.”

Based on the email in Appendix A, it appears the second ruling was issued in response to a request from Jim Mollenauer dated April 14th. This Appeal Panel ruling after the official decision does not follow an open and appropriate process and violates the 802 P&P appeals process. Issuing a second ruling after the first official ruling without a re-hearing or open forum for discussion is not appropriate. The first Appeal Panel ruling was issued within the required 30 days on April 6, 2006. This second ruling was issued two weeks later, thus after the 30 day period.

The first Appeal Panel Decision stated the Working Group by motion shall retroactively vote to accept the TSP document. Under the 802 P&P, the Working Chair decides whether the vote is procedural or technical. To ensure accuracy and as a basic principle of fairness, the Working Group Chair should have been asked for a set of facts regarding the September vote before any ruling based on the Mollenaur request was issued. A further review of this matter would show that the Chair's Opening Slides for September session stated the Technology Selection Process document was a procedural document and only required a 50% approval. Please refer to slide 11 in the Chair's Opening Slides posted as C802.20-05/56 (<http://www.ieee802.org/20/Contribs/C802.20-05-56.ppt>) as a contribution and as included in the approved September minutes. The slide is also show in Appendix C.

Response: The Appellee's suggestion that "This Appeal Panel ruling after the official decision does not follow an open and appropriate process and violates the 802 P&P appeals process" is not correct. First, the Appellee was informed on 4/14/06 that the Appeal Panel had received this request and was planning to consider it. The Appellee did not object at that time, even though the Appeal Panel kept him fully informed throughout and even though Appellee has previously made immediate objections to what he considered inappropriate proceedings.

Second, the Appeal Panel did not consider this to be a 'second ruling' but rather an interpretation on their first ruling. It is not a second independent ruling but a clarification of the first ruling and continuation of those proceedings. Currently, there is no process defined for interpreting the findings of an Appeal Panel. The Appeal Panel believed it appropriate that the question addressed to it be answered. The Appeal Panel notified the Appellants, the Appellee, and the LMSC chair that they were discussing the question. No objections were made. Further the Panel believed that only evidence presented for the first ruling should be considered, and that the same deliberation process applied in the first ruling should be applied to the interpretation. The process was a continuation of the process followed. The deliberations were closed as the deliberations on all IEEE 802 Appeal Panels have been closed to date.

Response Continued: Concerning the findings in the interpretation, the Appeal Panel did their best to render a decision based only on the facts presented for this Appeal. As noted, the 802.20 minutes do not make clear which motions are technical and which are procedural. Since this is not always clear from context the Panel believes the 802.20 minutes are deficient in that they do not indicate the required approval threshold on such votes. The Panel believed there was a preponderance of evidence that in fact the practice of the WG was only to notate procedural votes. However, preponderance does not ensure certainty. Given the new evidence presented by the Chair of 802.20 the Appeal Panel agrees it is appropriate to rehear the issue of what threshold should be applied for the vote on the TSP.

Because this interpretation was separate from the original decision from the Appeal Panel we believe that the EC decision in this matter should be separable from a decision on the rest of the issues raised by Mr. Upton. If the EC determines that a rehearing is required on this specific issue we request that this not influence the EC's decision on a request for a rehearing on the other issues.

In summary, the Appeal Panel decision was not based on a preponderance of the evidence as required by the 802 P&P section 7.1.6.6. A thorough re-hearing of the evidence will support a revised set of findings. The second Appeal Panel ruling after its first decision requires a re-hearing. Therefore, I respectfully request the 802 Executive Committee direct the Appeal Panel to conduct a re-hearing.

Sincerely,
Jerry Upton
Chair, 802.20

Response: Appendixes deleted for space ...

Appendix B: Original Panel Decision

In the Matter of the appeal of
Mollenauer, Oprescu, and Wieczorek
Concerning
Decisions of the IEEE 802.20 Working Group Chair

Date: April 6, 2006
Subject: Appeal panel decision on the appeal of decisions of the IEEE 802.20 Working Group Chair

Appeal hearing date: March 8, 2006
Appeal hearing location: Hyatt Regency Convention Center, Denver, CO
Appellants: James F. Mollenauer, Val Oprescu, and Al Wieczorek
Appellee: Jerry Upton – Chair, IEEE 802.20 Working Group

Appeal Panel members:
Chair: Matthew Sherman
Member: Pat Thaler
Member: Mike Takefman

1 Summary of the findings of the appeal panel

The appeal panel has examined all of the evidence and references in the light of the testimony provided by the appellant and appellees. We find the following:

The presentation by the chair of a new work plan has no bearing in this appeal and no relief is required.

The window for accepting technology proposals was restricted by the adoption of the modified TSP document. The actions of the chair regarding the manner in which the modified document was proposed and accepted were not consistent with open and transparent development of standards for the public good.

The modified TSP document itself was not approved in accordance with 802.20 Policies and Procedures, specifically the requirement that a document be available for 4 WG session hours prior to a motion to approve the document.

The relief requested by the appellants is excessive for the circumstances.

During the IEEE 802 July 2006 Plenary Session (San Diego) the following actions will take place: The WG will vote on a motion to retroactively accept the TSP document; Assuming the motion passes the appellants are granted the right to submit a complete proposal (as defined by the TSP) during the 802.20 session and adopt working group motions to alter the existing draft to include content from such a proposal. All motions made pursuant to this remedy shall be performed as roll call votes. The balloting process for the current IEEE 802.20 draft should continue pending the outcome of any motions pursuant to this remedy.

2 Background information

The appellants submitted an appeal brief dated October 21, 2005 to the IEEE LMSC Executive Committee (EC) which was received by the EC Recording Secretary on October 21, 2005. In the brief the appellants appeal actions taken by the chair of IEEE 802.20 at the September, 2005 interim session of IEEE 802.20. Among other matters, the appellants object to the short time frame set by the chair for submission of proposals to be considered by the working group for creation of a draft IEEE 802.20 standard. Further details are included in the Appellants' brief.

The appellee (Chair of IEEE 802.20) submitted a reply brief dated December 19, 2005 that was received by the EC Recording Secretary on December 19, 2005. In the brief the appellee maintains that all actions taken were proper and according to due process. Specific responses to all the appellants' claims may be found in the appellee's brief.

A hearing was conducted on March 8, 2006 at 4 PM at the Hyatt Regency Convention Center, Denver, CO. The hearing was open to the public and was well attended. The format followed for the hearing was as follows:

- 1) Appellants' statements 15min
- 2) Appellee's statements 15min
- 3) Appellants' summary and responses 5 min
- 4) Appellee's summary and responses 5 min
- 3) Panel Q&A 20 min
- 4) Panel deliberation 60 min (closed to public)

Additional deliberations by the appeal panel have been held privately since the hearing.

3 Appeal panel responsibility

LMSC Policies and Procedures Clause 7.1.6, reproduced below in part, describes the Appeal panel responsibilities

Clause 7.1.6.6 states that "The appeals panel shall render its decision in writing within 30 days of the hearing, stating findings of fact and conclusions, with reasons there for, based on a preponderance of the evidence."

4 Appellant's basis of appeal

The primary objections identified by the Appellants as the basis for their appeal are as follows:

- A. Modifications were made in the Project Development Plan (see proposed changes in PD-07r2) unilaterally without approval by the Working Group.
- B. Time for consideration of proposals was shortened from 6 months to roughly 3 months (limited to November 2006 and January 2006 meetings).
- C. Time for preparation and submission of proposals was shortened from 6 months to a single meeting cycle. The period of time set by the IEEE 802.20 Chair between the Call For Proposals (CFP) and the due date was from September 26, 2005 to October 31, 2005. The length of time set limited the number of parties that could respond and will result in a lower

quality standard (inferring impact to the public good). Proposers aware of the Chair's intent to have a shortened proposal time would have an unfair advantage.

The specific remedial actions requested are as follows:

That the Executive Committee set aside the Work Plan as recently announced by the Chair of 802.20 and direct him to put forward a call for proposals which allows three normally-scheduled meetings (or six months) for the submission of proposals before any elimination is done.

5 Sequence of events

The following events are believed relevant by the appeals panel:

November 2004 Plenary Session of IEEE 802.20

Working Group votes to approve PD-07r1 as the Project Development Plan for 802.20

Thursday September 22, 2005 ~ 1:30 – 5 PM @ September 2005 Plenary Session of IEEE 802.20

CFP reviewed by WG (Edits taken but not voted)

Vote to consider C802.20-05-57.doc (18/2/0)

C802.20-05-57.doc presented on Technology Selection Process

Revisions made on floor by chair for 57r1

C802.20-05-46r1.doc presented on Technology Selection Process

Vote to adopt 57r1 as Technology Selection Process (25/1/0)

Chair informs group that the Call for Proposals is to be sent on Monday 9/26/05

Chair presented an updated Work Plan and Project Development Schedule (PD-07r2)

Never voted. In minutes but never posted as official WG document

October 21, 2005 Appellants file Appeals Brief

December 19, 2005 Appellee files Reply Brief

March 8, 2006 from 4 - 5 PM Appeal Hearing held

6 Appeal Panel Findings of Fact and Conclusions

Three basis of appeal have been identified in the basis of appeal section above. They will each be considered independently in the following subsections.

6.1 Objection A: Project Development Plan modified without WG approval

Findings of fact:

The appellants' brief states that:

The problem exists because the previous work plan (PD-07r1, attached) called for technology presentations, simulations, and combining of proposals over a period of three meetings,

starting with the meeting following the call for proposals. It was reasonably expected that if a call for proposals were made in September '05 (delayed from the previously planned March '05 date) that proposals would be entertained over three meetings, specifically November '05, January '06, and March '06.

We note that the previous schedule was duly agreed to by the Working Group in November '04. No such agreement existed for the new schedule that was listed as PD-07r2 in appendix D of the minutes from the September Meeting, also attached. The Chair responded to us when we raised this issue by saying that there were no objections; nevertheless, if the original schedule was set up by a formal motion, the Chair cannot unilaterally change it. He also indicated that the working group could always extend the period for proposals if it wanted to, but by that point (which might never happen) much damage would have been done by requiring haste in preparation or by causing others to drop out because they lacked the resources to complete a proposal in the unreasonably short time.

The appellee states in his reply brief:

The appellants are correct that the current Project Development Plan, 802.20-PD-07r1 was duly approved by the working group and posted an approved Permanent document. The document referred to as PD-07r2 was not voted by the group nor was it posted an approved Permanent document. It was only included in the minutes for completeness of the minutes as the Chair showed it as a discussion document.

During the hearing none of the facts presented by the appellee above were disputed by the appellants. It is noted by the appeal panel that (based on information presented in the brief and the hearings) that the timeline for selection of a proposal is really governed by the Technology Selection Process (TSP) Document, 802.20-PD-10 rather than the project development plan. By September 2005, the group was not operating according to the schedule in PD-07r1 since they were just completing items scheduled for March 2005. Presentation for discussion of a possible schedule for going forward is an appropriate activity.

Panel Conclusion:

The Appeal Panel unanimously agree that the appeal on the basis of this objection is without merit, as in fact, no modifications were made to the Project Development Plan of record (PD-07r1). No remedy is required.

6.2 Objection B: Time for consideration of proposals was shortened

Findings of fact:

In addition to the statements cited in the prior section, the appellants brief states that:

This situation is made more acute by the unusually-high amount of supporting information that the Technology Selection Process calls for. It requires both simulations and drafts of the

standard as it would be if the proposal were accepted. Elimination of proposals and final selection are now expected to take place by the following meeting in January. In our opinion, this does not give time for adequate consideration of proposals, which are of necessity technically complex. This haste is in complete contrast to the previous experience in the 802.20 WG, where progress has been leisurely at best and all issues have been debated very fully. Even if progress has been slow in the past, it is incorrect to attempt to fix that by imposing a new arbitrary and unrealistic schedule.

The appellee states in his reply brief:

The supporting simulation and other Evaluation Criteria information was split into two reports in the Evaluation Criteria document to allow a proponent more time to run simulations and provide more detailed information. The document was approved unanimously. Neither the Chair nor the working group members set a deadline to have a final technology selection in the January Session. Final selection as stated before requires consensus of 75% and therefore a deadline cannot be set for the selection.

During the hearing none of the facts presented by the appellee above were disputed by the appellants.

It is noted by the appeal panel (based on information presented in the briefs and the hearings) that the timeline for selection of a proposal is really governed by the Technology Selection Process (TSP) Document, 802.20-PD-10, rather than the Project Development Plan (PDP), PD-07r1. As noted by the appellee above, there is no specific deadline called out in the TSP for evaluating the proposals, but rather a process for selecting one. This process could take a month or a year, but in any case is not controlled by the PDP.

Panel Conclusion:

The Appeal Panel unanimously agree that the appeal on the basis of this objection is without merit, as in fact, no specific timeline for evaluating the proposals was in force. The timeline in the PDP is a goal, not a requirement. No remedy is required.

6.3 Objection C: Not enough time between CFP and Proposal due date

Findings of fact:

The appellants brief states that:

We note that the previous schedule was duly agreed to by the Working Group in November '04. No such agreement existed for the new schedule that was listed as PD-07r2 in appendix D of the minutes from the September Meeting, also attached. The Chair responded to us when we raised this issue by saying that there were no objections; nevertheless, if the original schedule was set up by a formal motion, the Chair cannot unilaterally change it. He also indicated that the working group could always extend the period for proposals if it wanted to, but by that point (which might never happen) much damage would have been done by

requiring haste in preparation or by causing others to drop out because they lacked the resources to complete a proposal in the unreasonably short time.

The appellee states in his reply brief:

The appellants are correct that the current Project Development Plan, 802.20-PD-07r1 was duly approved by the working group and posted an approved Permanent document. The document referred to as PD-07r2 was not voted by the group nor was it posted an approved Permanent document. It was only included in the minutes for completeness of the minutes as the Chair showed it as a discussion document. ...

The Technology Selection Process Document, 802.20-PD-10, clearly states that a Call for Proposals will occur after the approval of the document and other prerequisite documents. My response to the appellants in an email did state the working group could change the Technology Selection Process by a vote at the next session.

The appellee was asked during the hearing (paraphrased):

Whether any motion was made that formally set the requirement that all proposals be submitted at the first meeting?

The appellee responded that (paraphrased):

No motion was made to do so. But that a motion to extend proposals was made during the November session and was defeated 18-49.

The appellee was asked during the hearing (paraphrased):

Had the Technology Selection Process (TSP) document undergone any major changes during its development?

The appellee responded that (paraphrased):

He did not believe that it had.

The appellants were asked during the hearing (paraphrased):

Did they believe there had been significant change to the TSP document?

The appellants responded that (paraphrased):

They were not at all of the sessions, but did not believe there was significant change.

The appellee was asked during the hearing (paraphrased):

How was it determined that all proposals had to be available at the first session?

The appellee responded that (paraphrased):

The approved TSP document, Section 3.4.1 paragraph 1. states that: Presenters of each complete proposal shall be given the opportunity to make a final 5 minute statement to the group advocating their proposals just before the down selection voting starts. An elimination vote shall then be taken to remove proposals having little support within the working group. Each voting member shall cast a single written ballot and vote to further consider or not to consider each individual proposal. The working group shall eliminate from consideration all proposals that do not obtain at least 35% support of the ballots cast. Elimination voting shall occur at the first session that proposals are considered. Additional

elimination votes may be taken in the same session or in subsequent sessions until one technology remains for consideration.

It is noted that:

The final TSP was brought in as a late contribution by the chair and posted on the website on September 22nd, 2005 on the final day of the session. The previous versions of the TSP document including contribution 802.20-05/46 did not have any language in section 3.4.1 that imposed a schedule requirement that voting will occur at the first session that proposals are considered. This change in the paragraph appears to be the only manner that a new schedule was effectively put before the group and it is not clear that these changes were in fact significantly highlighted.

Comparison of 802.20-05/57.doc to 802.20-05/46 does not support the appellee's statement regarding the stability of the TSP. There were significant changes between the various versions of the TSP including the change to 3.4.1.

The appellants brief states that:

The requirement to prepare a proposal in a little over one month rather than six imposes a considerable burden on members of the Working Group who were expecting that the approved period would be available following the proposals. Those who may have been aware that the Chair intended to make such a decision clearly had an unfair advantage.

The appellee states in his reply brief:

As stated before, the previous Project Development schedule shows a Call for Proposals immediately following the approval of a Technology Selection Process. The Technology Selection Process document itself states a Call for Proposals will occur after approval. There was never an expectation set or stated that proposals would be due six months after a Call for Proposals. Proposals were always due the session after the Call for Proposals per the approved Project Development Plan.

The previously approved schedule (802.20-PD07r1) states

“Proposal presentations, simulations, mergers May – Sept 2005”

(from an earlier portion of the appellee's response)

The plan did project that it could take three sessions for proposal presentations, simulation results, and mergers to occur. There was no statement or intent that technology proposals would be submitted over three sessions. It is reasonable to expect that all technology proposals would be submitted at the same time. Otherwise the later submitters have an advantage having seen the earlier proposals. ...

The Chair of 802.20 does not know of any 802 precedent/policy/procedure that sets an expectation that initial technology proposals would be taken over multiple sessions.

The Appeal panel notes from their experience that there is precedent for proposals to be taken over multiple sessions. It is noted that the 802.20 TSP is based on the TSP from 802.11n. and that in fact, the Call For Proposals (CFP) in 802.11n was open for almost 90 days before proposals were formally

evaluated. This can be corroborated from document 11-03-0858-06-000n-draft-802-11n-call-proposal.doc. While no ‘proposals’ were presented at the intervening session (prior to the proposal due date) a large number of technical presentations were made that influenced the content of the proposals once presented. It is also common in the 802.3 and 802.17 working groups for projects to accept proposals over a window of multiple sessions. Therefore, the Chair of 802.20 is incorrect in stating that the default assumption is that all proposals will be submitted at the same time. This constraint was imposed by the TSP that was adopted.

There are additional considerations. The following are excerpts taken from 802.20-05-08R1 Sept minutes.doc:

The agenda now moved to Technology Selection Criteria

Contribution by Jim Ragsdale (made in abstentia by a designated attendee) noted without comments.

Chair presented a draft of The Call for Proposals as introduction to his contribution 57. The chair made edits based upon inputs from the group. The edited version is shown in Appendix C.

Chair presented contribution 57 about Technology Selection Process.

Procedural vote on “Will the group accept contribution 57, posted on the website, as a late contribution and consider it?”

18 yes, 2 no. The contribution was considered.

The Chair made revisions based upon comments from the group and created a revised contribution 57r1.

Straw poll on “Evaluation report 2 shall be available at the beginning of January.” 6 yes, 7 no. The decision was to make report 2 optional at the beginning of the November session.

Recess from 330pm to 4pm.

Presentation by Mark Klerer on contribution 46r1 (Technology Selection Process).

Motion to approve contribution 57r1 (as revised during the meeting) as the Technology Selection Process Document.

Moved by Ayman Naguib, seconded by Lynn Dorwood. The motion passes 25 yes, 1 no.

Document 57r1 became the approved TSP (802.20-PD-10). The minutes clearly show that while the document was introduced late, the Working Group had the opportunity to refuse the document, and chose rather to accept it. The Working Group also chose to approve the submitted document as the TSP.

Panel Conclusion:

The panel’s experience in standards development is that there is a wide variety of methods and timeframes over which technologies are proposed and selected in IEEE 802. In some cases, proposals

are required to be submitted in a single session, in other cases proposals are allowed to be submitted over multiple sessions.

The language used in 802.20-PD-07r1 is unclear and can be reasonably interpreted to mean that proposals could be accepted over multiple sessions. The WG Chair acknowledges that no formal vote was taken to amend the 802.20 schedule.

The only Working Group document that indicates any form of firm schedule is the TSP. While the final TSP document contained a clause that effectively changed the approved schedule, the nature in which it was introduced is not consistent with an open and transparent process that serves the public interest. Furthermore, the testimony of the chair with regard to significant changes to the TSP is not consistent with the facts as evidenced by the change in section 3.4.1. (and changes in other sections).

The Working Group had the opportunity to not accept the late contribution or to delay voting on it, and we are reluctant to upset the decision of a majority of the working group in attendance at the meeting. Nonetheless, given the statements made by the Working Group Chair at the hearing, it appears that the chair did not fully and fairly disclose the nature and amount of changed content in the document. Apparently, Mr. Klerer's presentation on a related document (46r1) immediately after the Chair's presentation did not highlight any of the key changes either. The position of Chair produces an aura of authority and trust for the Chair's statements. Ideally, the Working Group members should have verified for themselves what the changes were before they approved the document but that does not override the Chair's duty to state clearly the nature of any material changes that he had made. There is no record indicating that this occurred. The chair's denial at the hearing that the proposal contained a material change convinces us that no full and fair disclosure was made to the Working Group members.

The vote to extend the selection process to allow further submissions failed with 26.8%, it is therefore not clear that an informed vote to adopt the schedule provisions of the TSP would have passed by 75%. Thus, it appears that the Working Group made the decisions to accept and vote on the late contribution based on misleading information. It appears to the majority of the Appeal Panel that a preponderance of evidence exists supporting the fact that the chair did this knowingly.

Accordingly the panel find in favor of the appellants that the schedule was modified inappropriately. This opinion reflects the views of a majority and, therefore, is the decision of the panel.

The availability of the contribution 57 was announced at 12:45pm. The minutes of the meeting do not specify the time of motions (which is extremely troublesome and should be remedied in all future sessions). The closest time-stamp for a later item is 4:50pm. Allowing for 45 minutes for lunch, and 30 minutes for a break the contribution was not available for 4 session hours prior to a vote. Section 2.6 of the Policies and Procedures of 802.20 (IEEE 802.20 PD-05) states that a vote cannot be held on a contribution unless it is available for at least 4 session hours. Section 2.10 specifies the procedure for modification of the WG P&P. The rule in 2.6 cannot be changed by a simple motion at a meeting. Furthermore, such a motion was not made to the WG, the minutes merely reference

“Procedural vote on “Will the group accept contribution 57, posted on the website, as a late contribution and consider it?”

The majority of the panel finds that the vote on accepting the TSP document is invalid.

7 Consideration of a Remedy

Findings of fact:

The appellants brief states that:

To remedy the situation, we request that the Executive Committee set aside the Work Plan as recently announced by the Chair of 802.20 and direct him to put forward a call for proposals which allows three normally-scheduled meetings (or six months) for the submission of proposals before any elimination is done.

The Chair of IEEE 802.20 (appellee) stated during the hearing (paraphrased):

The providing the relief requested by the appellants would be injurious to the parties who did submit proposals by resetting the process and greatly delaying the development of the standard.

The Appellants were asked during the hearing (paraphrased):

Were they in the process of developing a submission for the October deadline?

The Appellants responded that (paraphrased):

They were, but an act of god (hurricane in Florida) prevented the main author from finishing the work.

The Appellants were asked during the hearing (paraphrased):

Did they seek any relief from the chair to submit a late contribution given the nature of the delay?

The Appellants responded that (paraphrased):

They did not contact the chair for an extension or other relief as the chair had clearly stated that no late contributions would be accepted.

The Appellants were asked during the hearing (paraphrased):

Did they continue to work on their proposal so that it would be ready for submission at a subsequent meeting or should the appeal panel render a decision in their favor that they would be ready to submit it?

The Appellants responded that (paraphrased):

A business decision was made not to put resources on the development of a submission in anticipation of a decision in their favor.

Panel Conclusion:

There are two aspects to consider in terms of remedy. A majority of the panel finds that the adoption of the TSP (assuming it had been valid) was not done in a manner consistent with open and fair

IEEE LMSC Appeal Panel Decision

April 7, 2006

development of standards for the public good. A majority of the panel finds that the vote on the TSP was invalid.

The panel finds that an automatic full reset of the process, would be unreasonably injurious to the progress of work in IEEE 802 and participants of IEEE 802.20 that did meet the submission deadline.

The appellants described the pace of development of IEEE 802.20 to be leisurely at best. The appellants did not claim that there were major changes to the TSP. Therefore, it is reasonable to expect that all participants of IEEE 802.20 should have been working towards having submissions ready.

While the appellants might have been caught by the change to the schedule, the appellants have not done a reasonable amount of work between September 2005 and March 2006 to lead the panel to believe that they have tried to mitigate the damage to them and preserve a reasonable schedule for the project.

The following procedure is the remedy of the appeals panel.

1. The balloting process for the current IEEE 802.20 draft may continue pending the outcome of any motions made as a result of this appeal.
2. The motions made as required by this decision, shall be performed as a roll call vote (as the appeal panel is mindful of the possibility of further appeals in this matter).
3. All actions specified in this remedy will take place at the 802.20 plenary session of the July 2006 IEEE 802 Plenary Session in San Diego and all voting members of 802.20 are eligible to vote on these motions.
4. The procedural error on the vote on the TSP will be remedied by a WG motion to retroactively accept the TSP. This motion shall be taken up at the opening plenary meeting of 802.20. If this motion fails, the current draft and ballot will become invalid and the process will reset to September. If this motion passes, the current draft and ballot will progress following the remedy given below. Note: the continuation of the current draft and ballot may change pending the results of other appeals. This decision in no way rules on any other appeals in progress.
5. The appellants will be granted the right to submit a complete proposal (as defined by the TSP) at the 802.20 opening plenary meeting. The complete proposal shall be made available to the chair for posting by July 2, 2006.
6. The appellants are granted the right to make working group motions during the 802.20 plenary session to alter the existing draft to include content from such a proposal. The appellants shall request agenda time for the motions from the chair (in accordance with any 802.20 rules) and the session cannot be adjourned prior to the consideration of these motions.

The appeal panel members are unanimous in their approval of the foregoing findings of fact, conclusions, and remedial actions granted or denied.

Mathew Sherman: Chair, Appeal Panel
Pat Thaler: Member, Appeal Panel
Mike Takefman: Member, Appeal Panel

Re-issued on behalf of the panel by: Matthew Sherman
Dated : 4/7/2006

Appendix C: Interpretation Response

Sherman, Matthew J. (US SSA)

From: Sherman, Matthew J. (US SSA)
Sent: Thursday, April 20, 2006 4:44 AM
To: 'Jim Mollenauer'
Cc: Wieczorek Al-ETMX01; Val Oprescu; 'Jerry1upton@aol.com'; 'Paul Nikolich'; Bob O'Hara (boohara); Pat Thaler; Mike Takefman
Subject: RE: Question on the appeal

Hi Jim,

After consulting with the panel we have unanimously concluded that the vote should be 75% based on the fact that it is the approval of a technical document. We believe that this is supported by the 802.20 minutes given that the practice appears to be marking the required threshold only if it wasn't 75%.

Please let me know if you have further questions.

Thanks,

Mat

Matthew Sherman, Ph.D.
Senior Member Technical Staff
BAE SYSTEMS, CNIR
Office: +1 973.633.6344
email: matthew.sherman@baesystems.com

-----Original Message-----

From: Jim Mollenauer [mailto:jmollenauer@technicalstrategy.com]
Sent: Friday, April 14, 2006 4:31 PM
To: Sherman, Matthew J. (US SSA); Pat Thaler; Mike Takefman
Cc: Wieczorek Al-ETMX01; Val Oprescu
Subject: Question on the appeal

To the appeal panel:

In the decision of the appeal panel, the 802.20 working group is directed to revote on the acceptance of the Technology Selection Process document. (Item 4 on page 11.) However, it is not made clear whether this vote is intended to be one requiring 50% or 75% to pass.

The 802.20 minutes do not specify which type of vote was held originally, and the margin in that vote was sufficient to pass either way.

We would be grateful if you could clarify your intent in this matter.

Thank you very much for your consideration, and for all the work that went into the appeal process.

With best regards,
Jim Mollenauer

Appendix D: 802.20 P&P portion dealing with the 4-hour rule

2.5.4 Timing of Submissions

Documents will be placed on the tentative agenda depending on the time of the submission, the earlier submission getting the higher priority. Documents provided at the session may not get on agenda if no time is available.

2.5.5 Naming conventions

The file name shall be as shown in Table 2.5.5.1. An example of a good filename that conforms to the naming convention is 11-03-0652-00-WG-Motion-to-form-a-study-group.ppt.

Table 2.5.5.1 – File Naming Convention

gg-yy-ssss-rr-GGGG-HumanName.ext	
where	
“gg”	is the 802 group 20
"yy"	is the last 2 digits of the year the document is presented
"ssss"	is the sequence number of the document
“rr”	is the revision number
"GGGG"	is the WG, TG (task group letter), SG (as designated by chair), or SC (as designated by chair) to which the document assigned or presented (see the document list for approved letters)
“HumanName”	The human name should be as short as possible (please use either a dash or underscore for the coupling letter). Try to avoid adding the TG in the name.
ext	Is the commonly used 3 letter file extensions: .doc for Word, .ppt for PowerPoint, .pdf for Adobe Acrobat compatible files.

2.6 Motions

A motion may be made at any time during the meetings. However, a motion that changes a draft shall be presented in a submission that has been;

- Accepted by document control (see 2.5)
- Available electronically (via flash card or on the server).

A motion can only be voted on when its submission has been available to all voters who are participating in the session for a time not less than four WG session hours before the vote. Motions to adjourn a session per the approved agenda are the exception.

2.7 Membership

The rules and procedures governing WG membership including establishment, retention, loss and rights are contained in the Policies and Procedures of IEEE Project 802 (see [ref. \[rules3\]](#), 5.1.3). Additional requirements for WG voting rights are defined in clause 6 later in this document.

2.7.1 Member Recommended Tools

As the 802.20 WG relies exclusively on electronic files, hard copies of submissions, drafts, or presentations are not provided for session attendees. During sessions an IEEE 802.11b WLAN is available for use by attendees to have access to all electronic session documentation. All public documents are archived on the IEEE 802.20 web site soon after each session.

Appendix E: Microsoft Word comparison of TSP documents

Please note that text in black is common, coloured text was added by Mr. Upton. Editing notes along the side show other text that was deleted or otherwise changed.

Project	IEEE 802.20 Working Group on Mobile Broadband Wireless Access < http://grouper.ieee.org/groups/802/20/ >
Title	802.20 Technology Selection Process (TSP)
Date Submitted	
Source(s)	Jerry Upton (Chair 802.20)
Re:	Technology Selection Process Simplification Proposal based upon 46r1
Abstract	A proposal for IEEE 802.20 technology selection process
Purpose	Establish a process and methodology for selection of the best technology proposal based on which the IEEE 802.20 standard should be drafted.
Notice	This document has been prepared to assist the IEEE 802.20 Working Group. 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 802.20.
Patent Policy	The contributor is familiar with IEEE patent policy, as outlined in Section 6.3 of the IEEE-SA Standards Board Operations Manual < http://standards.ieee.org/guides/opman/sect6.html#6.3 > and in <i>Understanding Patent Issues During IEEE Standards Development</i> < http://standards.ieee.org/board/pat/guide.html >.

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1.0 Introduction

This document specifies the IEEE 802.20 technology selection procedure (TSP).

2.0 Definitions

System Requirements – This document establishes the detailed requirements for the IEEE 802.20 Mobile Broadband Wireless Access (MBWA) systems. These requirements are consistent with but extend beyond the 802.20 PAR and 5 Criteria. The 802.20 System Requirements are presented in document IEEE P802.20-PD-06r1.

Evaluation Criteria – This document presents the criteria used for the evaluation of air interface (i.e. combined MAC/PHY) proposals for the future 802.20 standard. It emphasizes the MAC/PHY dependent IP performance of an 802.20 system. This document and the IEEE 802.20 requirements document form the basis for decisions. The Evaluation Criteria are presented in document IEEE P802.20-PD-09.

Channel Models – This document specifies a set of mobile broadband wireless channel models in order to facilitate the simulations of MBWA Air Interface schemes at link level, as well as system level. The Channel Models are presented in document IEEE P802.20-PD-08.

Complete Proposal – A proposal that is within the scope of the PAR and addresses all the System Requirements and is presented in accordance with the evaluation criteria document. A complete proposal shall include a document in Microsoft Word format that contains the specification of the MAC/PHY of the proposal in sufficient detail so that Draft 1.0 can be created from this specification without adding technical features. All complete proposals shall specify how the System Requirements are met.

Partial Proposal – A proposal that is within the scope of the PAR, but is not complete. A Partial Proposal shall disclose what functionality it supports, which System Requirements and Evaluation Criteria apply to that functionality and whether it complies with these requirements.

Compliant Proposal – A Compliant Proposal is a proposal that meets or exceeds all the system, simulation and evaluation requirements (all the “SHALL” entries in the SRD) that are within its declared scope. For a Complete Proposal to be a Compliant Proposal it shall meet all the requirements. A Partial Proposal shall be deemed compliant if it meets all the requirements that apply to the specified functionality of that proposal.

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3.0 Technology Selection Process Rules

3.1 Prerequisites

1. 802.20WG shall approve Channel Models that shall be used for evaluation of proposals.
2. 802.20WG shall approve System Requirements that shall be addressed by all proposals.
3. 802.20WG shall approve Evaluation Criteria that shall be addressed by all proposals.
4. 802.20 WG shall officially approve a Technology Selection Process.
5. 802.20WG shall issue a call for proposals (CFP) following completion of the above.

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3.2 Proposal Package Documentation Requirement

Technology proposals shall be submitted in accordance with the requirements of this document and the instructions of the *802.20 Call for Proposals*.

A Proposal Package is a set of documents and presentations submitted for consideration of the 802.20 Working Group. A proposal package shall contain at minimum, the following:

1. A Summary Classification Statement: This shall state whether the proposal is for a TDD Technology or a FDD Technology or both. The statement shall whether the proposal is Complete or Partial and whether the proposal is Compliant or Not Compliant. Complete, Partial, Compliant and Not Compliant are defined in Section 2.0 of the approved IEEE 802.20 Technology Selection Process document (IEEE P802.20-PD-10.)

2. Technology Overview: The Technology Overview shall consist of a Technology Overview Document, and a Technology Overview Presentation. The Technology Overview Document included with the package shall provide a high-level description of all elements of the submitted design. Format and presentation of the Technology Overview Document should be consistent with a high-quality technical white paper, or a report submitted for publication to an IEEE Journal. The Technology Overview Presentation shall consist of a set of slides, with included speaker's notes describing in detail the salient features of the submitted technology. All slide presentations shall be formatted in accordance with accepted IEEE 802.20 document templates.

3. A proposed Draft Technology Specification: This shall specify the core technology submitted for consideration and shall be written and formatted in a manner consistent with

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- Deleted: Proposals shall be evaluated in accordance with the 802.20 Evaluation Criteria document [3]. ¶
- ¶ Proposals shall comply with the IEEE 802 SA patent policies. ¶
- ¶ Proposals shall be classified along the two dimensions of completeness and compliance. ¶
- ¶ Proposal Classification Matrix ... [1]

Deleted: July 12

1 other IEEE 802 Specifications. The Technology Specification shall contain a detailed
2 description of the proposed specification of physical and medium access layer of an air
3 interface for the 802.20 standard. The detail and style of the text should be consistent with
4 IEEE 802 draft standards documents.

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6 4. A Systems Requirements Compliance Report: The Requirements Compliance Report
7 shall contain a statement of Compliance Status either Compliant, or Not Compliant. The
8 Proposal Compliance Report shall contain a Requirements Compliance Matrix, as defined
9 and shown in Annex 1 of the IEEE 802.20 Technology Section Process document.. A
10 Requirements Compliance Report may also contain textual clarification of the Proposal
11 Type, Compliance Status, or one or more Compliance Matrix Elements. These may be
12 presented as notes for the Requirements Compliance Matrix, or as separate discussion
13 paragraphs, in the case of the Proposal Type, or Compliance Status. A question regarding
14 whether a proposal is Compliant shall be raised by motion. The motion questioning
15 Compliance shall need a simple majority for approval. If the motion questioning
16 Compliance is approved, the working group by a 75% vote shall decide if the proposal is
17 not compliant.

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Part 4:

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19 5. Technology Performance and Evaluation Criteria Report: The Technology Performance
20 Report is a document containing simulation results of performance, consistent with the
21 approved IEEE 802.20 Evaluation Criteria, and Channel Models documents. The
22 Technology Performance Report shall contain separate sections to demonstrate that the
23 technology meets all claimed performance requirements of the approved IEEE 802.20
24 Systems Requirements Document, using the methods specified in the IEEE 802.20
25 Evaluation Criteria Document for the Proposal Package. The Evaluation Criteria
26 document, defines an Evaluation Report 1 and an Evaluation Report 2 that are required for
27 submission. Data may be organized as appendices to validate the results presented.

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¶ The format of the *evaluation report* is specified in Annex 3.¶

<#>Part 5: SRD Compliance Statement¶

Proposals shall include a *compliance statement* linked to a *compliance table* (Annex 3). The purpose of the *compliance statement* is to establish acceptability of a proposal. The purpose of the *compliance table* is to help rank the proposals and identify areas that may need further improvement or consolidation/harmonization with other proposals. ¶

¶ The *compliance statement* shall declare the proposal as either *compliant* or *non-compliant*. Partial proposals must specify which of the requirements not applicable (N/A) are to them.¶

¶ A fragment of the *compliance-table* template is shown in Table-2. For each SRD requirement, the proposal's compliance/non-compliance shall be indicated in the appropriate column. ¶

¶

¶

Table 2: Example SRD Compliance Table (Fragment)¶

¶

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28 Proposals must specify and justify any deviation from the evaluation methodology or any
29 evaluation criteria that are not applicable (N/A) to them.

31 6. Technology Performance Presentation: The Technology Performance Presentation shall
32 consist of a slide set, consistent with the Technology Performance Report that describes in
33 high-level form, the results of the evaluation of the technology. The Technology
34 Performance Presentation slides shall be formatted in accordance with accepted IEEE
35 802.20 document templates.

37 3.3 Proposal submission and presentation

38 3.3.1 Submission

39 (a) Proposals shall be submitted to the working group Chair or the Procedural Vice-chair
40 who, in turn, shall post the proposal documents on the IEEE 802.20 website, within 3
41 business days of the receipt of the Proposal Package. The 802.20 working group shall be
42 alerted to the posting by email.

44 (b) Proposals shall be presented, in either interim or plenary sessions, no earlier than 14

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1 calendar days from their posting date. The Proposal Package and related material as
2 specified in the 802.20WG call for proposals shall be available to the voting members 14
3 days prior to the session at which they will be presented. The Evaluation Report 2 specified
4 in the Evaluation Criteria Document shall be available at the beginning of the session at
5 which it may be presented. Any mergers resulting from initial proposals shall be made
6 available to the voting members at least 7 days prior to the session at which they will be
7 presented. Merged proposals shall meet all the requirements of a Proposal Package.

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9 (c) Partial proposals may be submitted and presented, but must merge with other complete
10 and/or partial proposals in such a way that the resulting proposal is a complete proposal to
11 carry forward during the down selection procedure. If a partial proposal does not merge,
12 then it will not be considered further in the voting.

13

14 **3.3.2 Presentation**

15 (a) Presentation material shall be fully consistent with the submitted proposal. In case of
16 inconsistency or discrepancy between the proposal and the presentation slides, the
17 inconsistency/discrepancy shall be corrected.

18 (b) Revised material shall be submitted, if possible, in the course of the same session in
19 which it was presented.

20 (c) Presentation material shall be documented as regular working group contributions.

21 (d) Presenters shall be allotted adequate time for presentation, discussion and Q&A.
22 Initially complete and partial proposals shall be allocated 90 minutes presentation time
23 including discussion. If necessary, presenters may ask for, and be granted if possible,
24 additional time in the same session. The request for additional time may be made prior to
25 the session or during the session.

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¶
(e) Immediately after the proposals are heard a Panel Discussion with all the presenters shall be held. Questions to the Panel shall be taken from the floor. The 802.20 WG chair may choose, based on the number of proposals submitted, to hold two panels for discussion of FDD and TDD proposals separately.¶
(f) Open questions/issues should be answered/closed in the next working group

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26 **3.3.3 Proposal Revision and Consolidation**

27 (a) After the initial submission and presentation, proposals may be revised and/or
28 consolidated/harmonized with other proposals. If a revised proposal includes technical
29 changes that significantly affect its performance, the applicable parts of the simulations
30 shall be run again and the new results shall be submitted along with the revised proposal.

31 (b) Revised proposals shall be submitted to the working group and posted on the 802.20
32 website at least 7 days before the session they would be presented in. The presentation shall
33 be limited to a description of the changes made in the proposal, an assessment of the impact
34 of the changes on the technology’s performance and presentation of any new simulation
35 results.

36 (c) Partial proposals may merge with other proposals and result in complete proposals. In
37 the event of a merger, presenters of mergers shall be allowed to request additional time to

1 generate the merged proposal and present to the Working Group. The Working Group will
2 approve and/or determine the amount of time allowed prior to presentation of the merged
3 proposals, and the time for presentation shall be fixed in the agenda.

4 (d) Any remaining partial proposals, after the Initial Selection Voting, that are not merged
5 with a complete proposal shall not be considered further during the selection process.

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6 (e) During the selection process mergers will be allowed between remaining proposals, and
7 between remaining proposals and proposals that have been eliminated. Mergers will not be
8 allowed between only eliminated proposals. The 802.20WG chair will provide an
9 opportunity for the working group to decide by simple majority whether proposals that
10 have merged or that have technical changes require normal time for consideration prior to a
11 down-selection vote (4 meeting hours) or require extended time. Time extension beyond
12 24 hours shall require support of 2/3 of the voting members present.

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13 3.4 Selection Process

14 The selection process and voting shall be for a TDD technology selection and a FDD
15 technology selection. Proposals for a TDD technology and a FDD technology shall be
16 considered and voted separately. A proposal containing both technologies shall be
17 voted in each respective selection track.

18 3.4.1 Down-Selection for TDD and FDD

19 Initial Selection Voting

20
21 1. Presenters of each complete proposal shall be given the opportunity to make a final
22 5 minute statement to the group advocating their proposals just before the down
23 selection voting starts. An elimination vote shall then be taken to remove proposals
24 having little support within the working group. Each voting member shall cast a
25 single written ballot and vote to further consider or not to consider each individual
26 proposal. The working group shall eliminate from consideration all proposals that
27 do not obtain at least 35% support of the ballots cast. Elimination voting shall
28 occur at the first session that proposals are considered. Additional elimination votes
29 may be taken in the same session or in subsequent sessions until one technology
30 remains for consideration.

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31 2.
32 In the sample ballot shown below, a single registered voter has voted for Proposals
33 A, B, and C to continue to be under consideration and Proposals D and E to no
34 longer be considered.

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Voting Members Name: John Smith					
VOTE TYPE	PROPOSAL A	PROPOSAL B	PROPOSAL C	PROPOSAL D	PROPOSAL E
CONSIDER	√	√	√		
NOT CONSIDER				√	√

36 Note: One vote per column per voter is required for a valid ballot.

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Elimination Voting

- 3. After any voting that eliminates one or more proposals or after a reset (Step 7), the remaining proposals may undergo technical changes without having to merge with other proposals.
- 4. The remaining candidates, even if no changes have been made to the proposal, will be given 45 minutes to present new data, if they chose.
- 5. In the event that there is only one proposal of a given type (i.e. TDD or FDD) remaining, the procedure for its further consideration shall be advanced to step 7.
- 6. Following the Initial Selection Voting, rounds of voting will be held that successively eliminate one candidate proposal at a time. On each round of voting, the candidate proposal that receives the least number of votes shall be eliminated from consideration. In the event of a tie for the least number of votes, a separate vote shall be held to select which of the candidates receiving the least votes shall be eliminated in the current round. The other candidate(s) shall remain for the next round. Between rounds of voting, presenters will again have the opportunity to merge proposals and/or make technical changes to their proposals. If a merger occurs or if technical changes are made to a proposal, presenters shall have the opportunity to present the details of their proposal again. The rounds of voting will continue until only one candidate proposal remains. The order in which the proposals are eliminated will be recorded in the minutes. This ordering will serve as the ranking of the eliminated proposals needed for the possible reset in step 7. In the event a proposal receives 75% of the votes during elimination voting, a Confirmation Vote will occur

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Deleted: down selection separately for TDD and FDD proposals. Proposals that contain both an FDD and TDD component shall be included in the selection process for both FDD and TDD. **Rounds of**

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Confirmation Voting

- 7. When only one proposal of a given type is left, there shall be confirmation vote either in favor or in opposition of the proposal. The confirmation vote shall occur as soon as possible following the elimination vote resulting in one proposal. Voting members of 802.20 present shall be given written ballots for the confirmation vote. The 802.20 Chair and the Vice Chair or others as appointed by the Chair shall act as the tally takers. The results shall be announced after the vote.
- 8. If the sole remaining proposal fails to receive 75% majority on the first confirmation vote, a second confirmation vote will occur. If the remaining proposal fails to receive 75% of the votes in the second vote, the process shall return to step 5 at the point where there were three proposals remaining or all proposals that initially entered step 5, if there were less than three. If two proposals decide to merge at this point or a proposal withdraws, the next previously eliminated proposal will be added to provide a total of three proposals on the floor unless there were not three proposals that initially entered step 5.

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Approval of Initial Specification Draft

9. Having attained 75% support, the prevailing proposal will be adopted as the initial technical specification of IEEE 802.20 without further vote.

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10. The IEEE 802.20 Editor shall prepare Draft 1.0 from this technical specification. The Draft 1.0 shall be forwarded to the working group for letter ballot.

Deleted: will then be put to a 75% vote in the working group to answer the question: "Is Draft 1.0 technically consistent with the initial technical specification?" EDITOR'S NOTE: Should there be a final check of consistency with the SRD?¶ The editor will rely on technical experts likely to include the authors of the winning proposal to prepare this draft. The winning proposal's technical specification may be in a form that is acceptable (in the view of the editor) as an initial draft, in which case this step will be short. During the preparation of the initial draft, the editor may uncover technical inconsistencies, inaccuracies or omissions in the initial technical specification. The editor will present these technical issues to the working group to be debated and resolved.¶ Once Draft 1.0 has gained 75% support for the question, "Is Draft 1.0 consistent with the initial technical specification?", it will

4.0 Documents Precedence

In case of conflicts, between this TSP and IEEE 802 rules or the IEEE 802.20 Working Group procedures, the latter shall prevail and subsequently the TSP shall be amended to eliminate the conflicts.

5.0 Changes of the Procedure

After an initial adoption by a majority vote, the working group reserves the right to change this selection process and selection criteria as required with a two-thirds approval vote.

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802.20 WG Down Selection Procedure Flow Chart¶
... [3]

6.0 References

1. IEEE P802.11 - Task Group N - Selection Procedure. September 17, 2003
Doc #: IEEE 802.11-03/665r8:
2. IEEE 802.20 – The approved System Requirements Document (SRD), 802.20-PD-06r1.
3. IEEE 802.20 – The adopted Channel Models Document, 802.20-PD-08.
4. IEEE 802.20 – The approved version of the Evaluation Criteria Document (ECD), 802.20-PD-09.

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7.0 Annexes

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Annex 1

System Requirements Document Compliance Table

#	Requirement	SRD Section #	Requirement Type		Compliance Level	
			Shall	Should	Yes	Notes
1	PAR requirements	1.3	●			
2	VoIP Services	2.1	●			
3	Broadcast – Multicast services	2.2	●			
4	non-line of sight outdoor to indoor scenarios and indoor coverage	3.1	●			
5	layered architecture and separation of functionality between user, data and control	3.1	●			
6	Spectral efficiency – DL @ 3 km/hr: 2.0b/s/Hz/sector	4.1.1	●			
7	Spectral efficiency – DL @ 120km/hr: 1.5b/s/Hz/sector	4.1.1	●			
8	Spectral efficiency – UL @ 3km/hr: 1.0b/s/Hz/sector	4.1.1	●			
9	Spectral	4.1.1	●			

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~~Technical Specifications Summary Template~~

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Annex 2:
~~PHY/MAC Specifications, Table of Contents Template~~

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Annex 3:
 Evaluation Criteria

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(Editors Note: Identification of the appropriate Requirements Level is still to be provided.)

Evaluation Criteria Document

Compliance Table ... [4]

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#	Requirement	SRD Section #	Requirement Type		Compliance Level	
			Shall	Should	Yes	Notes
	efficiency – UL @ 120km/hr: .75b/s/Hz/sector					
10	Block assignment support	4.1.2	•			<i>State what sized block assignment supported.</i>
11	Duplexing Scheme	4.1.3	•			<i>State if FDD or TDD scheme is supported.</i>
12	Support for Half Duplex FDD subscriber station.	4.1.3		○		
13	Support for different mobility rates	4.1.4	•			<i>State which mobility rates are supported.</i>
14	Aggregated data rate consistent with item 6	4.1.5	•			
15	Aggregated data rate consistent with item 7	4.1.5	•			
16	Aggregated data rate consistent with item 8	4.1.5	•			
17	Aggregated data rate consistent with item 9	4.1.5	•			
18	Peak User Data Rate (DL) of 4.5 Mbps in 1.5 MHz	4.16	•			
19	Peak User Data Rate (UL) of 2.25 Mbps in 1.25 MHz	4.16	•			

#	Requirement	SRD Section #	Requirement Type		Compliance Level	
			Shall	Should	Yes	Notes
20	Peak User Data Rate (DL) of 18 Mbps in 5.0 MHz	4.16	●			
21	Peak User Data Rate (UL) of 9 Mbps in 5.0 MHz	4.16	●			
22	MAC layer to control >100 simultaneous active sessions per sector. (See section for conditions.)	4.1.7		○		
23	QoS support per requirements in section 4.1.8	4.1.8	●			<i>State any deviations from requirements in 4.1.8.</i>
24	Support the configuration of a flexible set variety of traffic classes (see section 4.1.8.1)	4.1.8.1	●			
25	MAC/PHY features to support multi-antenna capabilities at the BS	4.1.9	●			
26	Base station antenna diversity	4.1.10		○		
27	Support coverage enhancing technologies	4.1.11	●			
28	BS authentication	4.1.12	●			
29	MT authentication	4.1.12	●			

#	Requirement	SRD Section #	Requirement Type		Compliance Level	
			Shall	Should	Yes	Notes
30	Network and mobile terminal perform mutual entity authentication and session key agreement protocol.	4.1.12.1	●			
31	Privacy and message integrity methods	4.1.12.2	●			
32	Support for encryption across the air interface.	4.1.12.2	●			
33	Protection from unauthorized disclosure of the device permanent identity to passive attackers.	4.1.12.3	●			
34	Protection against Denial of Service (DOS) attacks	4.1.12.4	●			
35	AES Support	4.1.12.5	●			<i>State any deviation from requirements in 4.1.12.5.</i>
36	automatic selection of optimized user data rates that are consistent with the RF environment constraints and application requirements	4.2.1	●			

#	Requirement	SRD Section #	Requirement Type		Compliance Level	
			Shall	Should	Yes	Notes
37	Graceful reduction or increase of user data rates, on the downlink and uplink	4.2.1	●			
38	Link adaptation	4.2.1	●			
39	BS and MS transmit power control mechanisms and exchange control and monitoring information	4.2.1		○		
40	Application in dense urban, urban, suburban, rural, outdoor-indoor, pedestrian, and vehicular environments and the relevant channel models.	4.2.2	●			
41	Physical layer Measurements - BS	4.2.4	●			
42	Physical layer Measurements - MS	4.2.4	●			
43	Design extensible to wider channels.	4.3	●			
44	Mechanisms for quality of service (QOS) control and monitoring.	4.4.1	●			

#	Requirement	SRD Section #	Requirement Type		Compliance Level	
			Shall	Should	Yes	Notes
45	Interfaces and procedures that facilitate the configuration, negotiation, and enforcement of QoS policies	4.4.1	•			
46	Support both IPv4 and IPv6.	4.5	•			
47	Handoff methods	4.5.1	•			
48	Allow the use of either MobileIPv4, MobileIPv6 or of SimpleIP	4.5.1.1	•			
49	Mechanism to enable the provisioning and collection of metrics.	4.5.2	•			
50	Not preclude proprietary scheduling algorithms, so long as the standard control messages, data formats, and system constraints are observed.	4.6	•			
51	Power conservation features to improve battery life for idle mobile terminals.	4.7	•			

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IEEE C802.20-05/46r1

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Example SRD Compliance Table (Fragment)

#	Requirement	SRD Section #	Requirement Type		Compliance Level	
			Shall	Should	Yes	Notes
<u>1</u>	<u>PAR requirements</u>	<u>1.3</u>	●		●	
<u>2</u>	<u>VoIP Services</u>	<u>2.1</u>	●		●	
<u>3</u>	<u>Broadcast – Multicast services</u>	<u>2.2</u>	●		●	
<u>4</u>	<u>non-line of sight outdoor to indoor scenarios and indoor coverage</u>	<u>3.1</u>	●		●	
<u>5</u>	<u>layered architecture and separation of functionality between user, data and control</u>	<u>3.1</u>	●		●	
<u>6</u>	<u>Spectral efficiency – DL @ 3 km/hr: 2.0b/s/Hz/sector</u>	<u>4.1.1</u>	●		●	
<u>7</u>	<u>Spectral efficiency – DL @ 120km/hr: 1.5b/s/Hz/sector</u>	<u>4.1.1</u>	●			<u>1.0b/s/Hz/sector</u>
<u>8</u>	<u>Spectral efficiency – UL @ 3km/hr: 1.0b/s/Hz/sector</u>	<u>4.1.1</u>	●		●	
<u>9</u>	<u>Spectral efficiency – UL @ 120km/hr: .75b/s/Hz/sector</u>	<u>4.1.1</u>	●			<u>.5b/s/Hz/sector</u>
<u>10</u>	<u>Block assignment support</u>	<u>4.1.2</u>	●		<u>2.5, 5</u>	<u>State what sized block assignment supported.</u>
<u>11</u>	<u>Duplexing Scheme</u>	<u>4.1.3</u>	●		<u>FDD</u>	<u>State if FDD or TDD scheme is supported.</u>
<u>12</u>	<u>Support for Half Duplex</u>	<u>4.1.3</u>		○		<u>Not supported</u>

Sept. 22, 2005

IEEE C802.20-05/46r1

#	Requirement	SRD Section #	Requirement Type		Compliance Level	
			Shall	Should	Yes	Notes
	<u>FDD subscriber station.</u>					

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Example 1:

The SRD requirement for downlink spectral efficiency, at 120 Km/hr is 0.75 b/s/Hz while the proposal's specification is 0.5 b/s/Hz. In this case, the entry for line item 9 should contain a note indicating that.

Example 2:

The SRD provides a choice of block assignments; this choice is indicated in line 10 of the table.

Example 3:

"Should" type requirement that the proposal does not support are indicated by leaving the entry blank.

Proposals shall be evaluated in accordance with the 802.20 Evaluation Criteria document [3].

Proposals shall comply with the IEEE 802 SA patent policies¹.

Proposals shall be classified along the two dimensions of completeness and compliance

Proposal Classification Matrix		
	Partial Proposal	Complete Proposal
Compliant Proposal		
Non-Compliant Proposal		

Proposals shall include the following five parts:

- Part 1: Technical Specifications Summary (see section 3.2.1).
- Part 2: Technology Description (see section 3.2.2).
- Part 3: PHY/MAC Specifications (see section 3.2.3).
- Part 4: Evaluation Criteria Simulation Results (see section 3.2.4).
- Part 5: Compliance Table and Statement (see section 3.2.5).

Part 1: Technical Specifications Summary

Editor's Note: This section and section 3.2.2 need to be rationalized and harmonized with the revision of Contribution C802.20-05/35 (Technology Description Template for MBWA Proposals; Jim Ragsdale)

Proposals shall include a summary of their technical specifications, itemized in the order of the 802.20 SRD [2] sections. Table-1 is a suggested template.

Table 1: Technical Specifications Summary

item #	SRD Section	SRD Requirement	Proposal Specification
1			
2			
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..			

¹ IEEE patent policy, as outlined in Section 6.3 of the IEEE-SA Standards Board Operations Manual <<http://standards.ieee.org/guides/opman/sect6.html#6.3>> and in *Understanding Patent Issues During IEEE Standards Development* <<http://standards.ieee.org/board/pat/guide.html>>.

Part 2: Technology Description

Editor’s Note: This section and section 3.2.1 need to be rationalized and harmonized with the revision of Contribution C802.20-05/35 (Technology Description Template for MBWA Proposals; Jim Ragsdale)

This part of the proposal shall provide a detailed description of the technology. The style and level of detail should be similar to that of engineering white papers, published in professional publications. The objective of this part is to present the technical capabilities and operation principles of the technology. The proposed technology shall be described in a concise, yet clear, fashion and explain in sufficient detail how the proposal meets (or exceeds) the relevant requirements of the 802.20 SRD [2].

Part 3: PHY/MAC Specifications

The PHY and MAC specifications shall be similar in content and level of detail to current published IEEE 802 wireless standards.

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Author

The format of the *evaluation report* is specified in Annex 3.

Part 5: SRD Compliance Statement

Proposals shall include a *compliance statement* linked to a *compliance table* (Annex 3). The purpose of the *compliance statement* is to establish acceptability of a proposal. The purpose of the *compliance table* is to help rank the proposals and identify areas that may need further improvement or consolidation/harmonization with other proposals.

The *compliance statement* shall declare the proposal as either ***compliant*** or ***non-compliant***. Partial proposals must specify which of the requirements not applicable (N/A) are to them.

A fragment of the compliance-table template is shown in Table-2. For each SRD requirement, the proposal’s compliance/non-compliance shall be indicated in the appropriate column.

Table 2: Example SRD Compliance Table (Fragment)

#	Requirement	SRD Section #	Requirement Type		Compliance Level	
			Shall	Should	Yes	Notes
1	PAR requirements	1.3	●		●	
2	VoIP Services	2.1	●		●	
3	Broadcast – Multicast	2.2	●		●	

#	Requirement	SRD Section #	Requirement Type		Compliance Level	
			Shall	Should	Yes	Notes
	services					
4	non-line of sight outdoor to indoor scenarios and indoor coverage	3.1	●		●	
5	layered architecture and separation of functionality between user, data and control	3.1	●		●	
6	Spectral efficiency – DL @ 3 km/hr: 2.0b/s/Hz/sector	4.1.1	●		●	
7	Spectral efficiency – DL @ 120km/hr: 1.5b/s/Hz/sector	4.1.1	●			1.0b/s/Hz/sector
8	Spectral efficiency – UL @ 3km/hr: 1.0b/s/Hz/sector	4.1.1	●		●	
9	Spectral efficiency – UL @ 120km/hr: .75b/s/Hz/sector	4.1.1	●			.5b/s/Hz/sector
10	Block assignment support	4.1.2	●		2.5, 5	<i>State what sized block assignment supported.</i>
11	Duplexing Scheme	4.1.3	●		FDD	<i>State if FDD or TDD scheme is supported.</i>
12	Support for Half Duplex FDD subscriber station.	4.1.3		○		Not supported

Example 1:

The SRD requirement for downlink spectral efficiency, at 120 Km/hr is 0.75 b/s/Hz while

the proposal's specification is 0.5 b/s/Hz. In this case, the entry for line item 9 should contain a note indicating that.

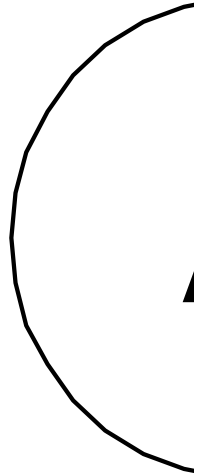
Example 2:

The SRD provides a choice of block assignments; this choice is indicated in line 10 of the table.

Example 3:

“Should” type requirement that the proposal does not support are indicated by leaving the entry blank.

802.20 WG Down Selection Procedure Flow Chart

A large L-shaped graphic consisting of a solid orange fill with a black border. The shape is composed of a vertical bar on the left and a horizontal bar on top, meeting at a right-angled corner. The bottom-right portion of the L-shape is cut off by the page edge.

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(Editors Note: From C802.20-05/19)

(Editors Note: Identification of the appropriate Requirements Level is still to be provided.)

Evaluation Criteria Document Compliance Table					
ECD section #	Item	Requirement Level		Compliance Level	
		Shall	Should	Yes	Notes & Deviations
2	Link level and System Level Analysis				
3	Link level modeling				
3.1	Modeling assumptions				
3.2	Performance metrics				
3.3	Link level simulation model				
4.3	Traffic models				
4.4	Traffic mix				
5	System Level Modeling				
5.1	Cell layout				
5.2	Fading Models				
5.3	Higher Layer Protocol Modeling				
5.4	Backhaul Network Modeling				
5.5	Mobility Modeling				
5.6	Control signaling modeling				
6.1	Channel models for Phase 1 of the simulations				
7	Link-System Interface (LSI)				
8	System Simulation Calibration				
9	Channel Modeling				
9.1	Channel Mix				
9.2	Channel Models				
10	RF Environment				
10.1	Radio Transceiver Characteristics				
11	Link Budget				
12	Equipment				

Evaluation Criteria Document Compliance Table					
ECD section #	Item	Requirement Level		Compliance Level	
		Shall	Should	Yes	Notes & Deviations
	Characteristics				
12.1	Antenna Characteristics				
12.2	Hardware Characteristics				
12.3	Deployment Characteristics				
13	Output Metrics				
13.1	System Capacity Metrics				
14	Payload Based Evaluation				
14.1	Capacity performance evaluation criteria				
14.2	Payload transmission delay evaluation criteria				
15	Fairness Criteria				
16	Simulation and evaluation of various block assignments				
APP. A	19 Cell Wrap-Around Implementation				

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Annex 4

System Requirements Document Compliance Table

(Editors Note: From C802.20-05/19)

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