

IEEE 802

Local and Metropolitan Area Network Standards Committee

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SUBJECT: Response to ISO/IEC JTC 1/SC 06 N13127

DATE: 26 September 2006

Dear Robin,

The attached document "IEEE 802 LMSC recommendation to ISO/IEC JTC1/SC6 for the review of 8802-1 & related documents v11 25SEP2006" is in response to 6N13127 regarding the "Request for Submitting Comments on ISO/IEC JTC 1/ SC 6/ WG 1 and IEEE 802 LMSC Cooperative Working." The documents addressed in the response are:

1. 6N11917: Procedures for ISO/IEC JTC1 SC6 WG1 and IEEE 802 LMSC Cooperative Working
2. TR 8802-1: 2001: Information technology -- Telecommunications and information exchange between systems -- Local and metropolitan area networks -- Specific requirements -- Part 1: Overview of Local Area Network Standards
3. All relevant resolutions including SC 6 Resolution 6.3.1: 1999 Berlin Meeting

Please consider this as initial input from the IEEE 802 LMSC sponsor. It was approved by the LMSC Executive Committee 25SEP2006. LMSC reserves the right to modify its views as this project develops.

Best regards,

/s/ Paul Nikolich

Paul Nikolich

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**IEEE 802 LMSC recommendation
to ISO/IEC JTC1/SC6
for the review of 8802-1 & related documents**

25 September 2006

Version 11

This glossary defines the specific ISO/IEC & IEEE related terminology used in this presentation

ISO/IEC terminology

- JTC1 - ISO/IEC JTC1
- SC6 - ISO/IEC JTC1/SC6
- WG1 - ISO/IEC JTC1/SC6/WG1
- 8802-x - ISO/IEC 8802-x standard
- 8802-1 - ISO/IEC 8802-1:2001 TR
- NB - National Body
- TR - Technical Report

IEEE terminology

- 802 - IEEE 802 LMSC
- 802.x - IEEE 802.x standard
- 802.11i - IEEE 802.11i amendment to IEEE 802.11
- WG - Working Group
- LB - WG Letter Ballot
- SB - Sponsor Ballot
- LoA - Letter of Assurance

This presentation represents 802's input to SC6's review of the cooperation agreement with 802

SC6 has started a review of the cooperation agreement with 802

- Difficult issues related to the approval of WAPI as an amendment to 8802-11 were recently avoided
- The WAPI debate highlighted various issues with the 8802-1 cooperation agreement between SC6 & 802
- The cooperation process defined in 8802-1 has fallen into disuse & has practical implementation issues
- SC6 has started a review with all stakeholders of issues related to cooperation with 802

802 has approved this presentation as input into the SC6 review

- An 802 goal is standards that reflect the needs of all stakeholders & have wide international acceptance
- 8802-1 & related documents provide a good basis for cooperation between 802 & SC6
- Any future agreement should allow the adoption of endorsed standards as 8802-x standards ...
- ... and clarify various guiding principles, processes, responsibilities & authorities
- Paul Nikolich (Chair of 802) should be contacted for any clarification of these comments

Difficult issues related to the approval of WAPI as an amendment to ISO/IEC 8802-11 were recently avoided

Approval of WAPI as an amendment to 8802-11 was problematic

- In 2005, WAPI & 802.11i were both submitted to JTC1 as amendments to 8802-11 using the JTC1 Fast Track ballot procedure
- Approval of both amendments would have been problematic because they contained contradictory editing instructions to the base 8802-11 standard being amended
- Approval of WAPI would have also been problematic because this would have made it difficult for any further amendments to 8802-11 given the differences that would have existed between 802.11 (using 802.11i) & 8802-11 (using WAPI)

The difficult problems were avoided since WAPI was not approved

- Problems related to the approval of WAPI as an amendment to 8802-11 do not need to be addressed because only 802.11i (& not WAPI) was approved by the Fast Track process
- 802.11i has now been approved for publication as an ISO/IEC international standard

The WAPI debate highlighted various issues with the 8802-1 cooperation agreement between SC6 & 802

The 8802-1 agreement was quoted during the WAPI debate

- During the WAPI debate, the existing cooperation agreement between 802 & SC6 (8802-1) was quoted to support positions related to whether or not 802.11i and/or WAPI should be approved
- This document mostly contains a general (& somewhat dated) introduction to 802 & other standards for wired & wireless LANs
- Clause 4 defines a detailed process for cooperation between 802 & SC6 that “records the involvement & endorsement of JTC1/SC6 NBs in the standards making process”

The WAPI debate highlighted many questions about the agreement

- The bulk of the 8802-1 defined cooperation process was not used for WAPI or 802.11i approval
- However, many questions were raised during the debate that should be covered by any future revised cooperation agreement between ISO/IEC & 802
- Some of those questions included:
 - Who owns the copyright of 8802-x standards?
 - Can/should an 8802-x standard be modified by ISO/IEC without 802 permission?
 - Are 8802-x standards covered by patent LoA's made to IEEE-SA?

The cooperation process defined in 8802-1 has fallen into disuse & has practical implementation issues

The ISO/IEC & 802 cooperation agreement defined in 8802-1 is no longer used

- The processes defined in 8802-1 have never been used in full given the catalogue in the annex is empty
- There is no known case where the endorsement process has been used
- This suggests it may have little value in its current form to 802 or ISO/IEC
- In recent times, most (if not all) 802 submissions to ISO/IEC have used the JTC1 Fast Track process

The ISO/IEC & 802 cooperation agreement defined in 8802-1 has practical difficulties

- It is not clear what benefit is gained by maintaining the 8802-1 document & so it has not happened
- Recent attempts to use the endorsement process defined in 8802-1 for 802.11ma approval failed after SC6 NBs did not receive Liaisons from 802.11 WG
- Typically NBs require much longer lead times than typically available (15-30 days) to consider 802 drafts

SC6 has started a review with all stakeholders of issues related to cooperation with 802

SC6 are undertaking a review of issues related to cooperation with 802

- In June 06, SC6 decided unanimously to review the current cooperation agreement & related documents including:
 - ISO/IEC JTC1/SC6 6N11917: Procedures for ISO/IEC JTC1 SC6 WG1 & IEEE 802 LMSC Cooperative Working
 - ISO/IEC TR 8802-1:2001: Overview of Local Area Network Standards
 - Other relevant documents, including motion 6.3.1 from ISO/IEC JTC1/SC6 6N11240
- The review requires input to the 8802-1 project editor by 27 Sept 06

The review will draw on the opinions of all stakeholders

- SC6 have requested input from all stakeholders
- The list of stakeholders includes:
 - SC6 Secretariat & National Bodies
 - JTC1 Secretariat & National Bodies
 - ITTF
 - IEEE SA
 - IEEE 802 LMSC
- This document is the IEEE 802 LMSC's initial input

An 802 goal is standards that reflect the needs of all stakeholders & have wide international acceptance

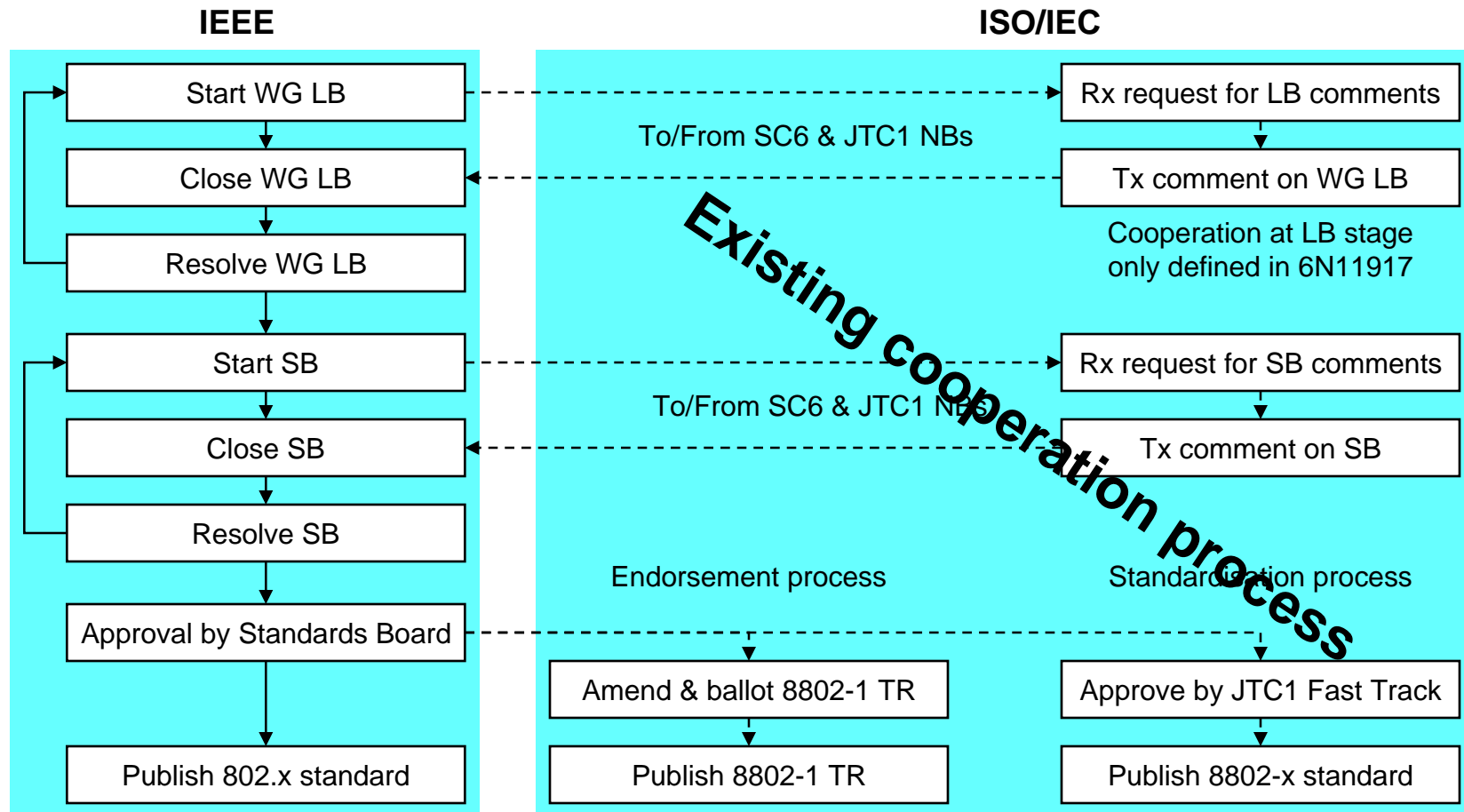
802 wants its standards to reflect the needs of a wide variety of stakeholders

- 802 has developed very successful PAN, LAN, MAN & RAN standards
- This success is partially due to an open standards development process that encourages & enables participation by a wide variety of stakeholders
- A benefit for 802 of a cooperative relationship with ISO/IEC is access to the views & expertise of NBs, which represent another valuable set of stakeholders

802 wants its standards to have the widest possible international acceptance

- The WTO & similar organisations give special status to "international standards" that assists global acceptance
- The definition of an "international standard" is not always clear, however we note that both ITU-R & ITU-T have recognised IEEE as an international SDO by granting IEEE membership in the same category as ISO
- Nevertheless, an ISO/IEC standard may be more acceptable to some stakeholders as an "international standard"
- A potential benefit for 802 of a cooperative relationship with ISO/IEC is that it provides 802 WG's with the option of widening "international standard" recognition for an 802.x standard through ISO/IEC using a simple documented cooperation process

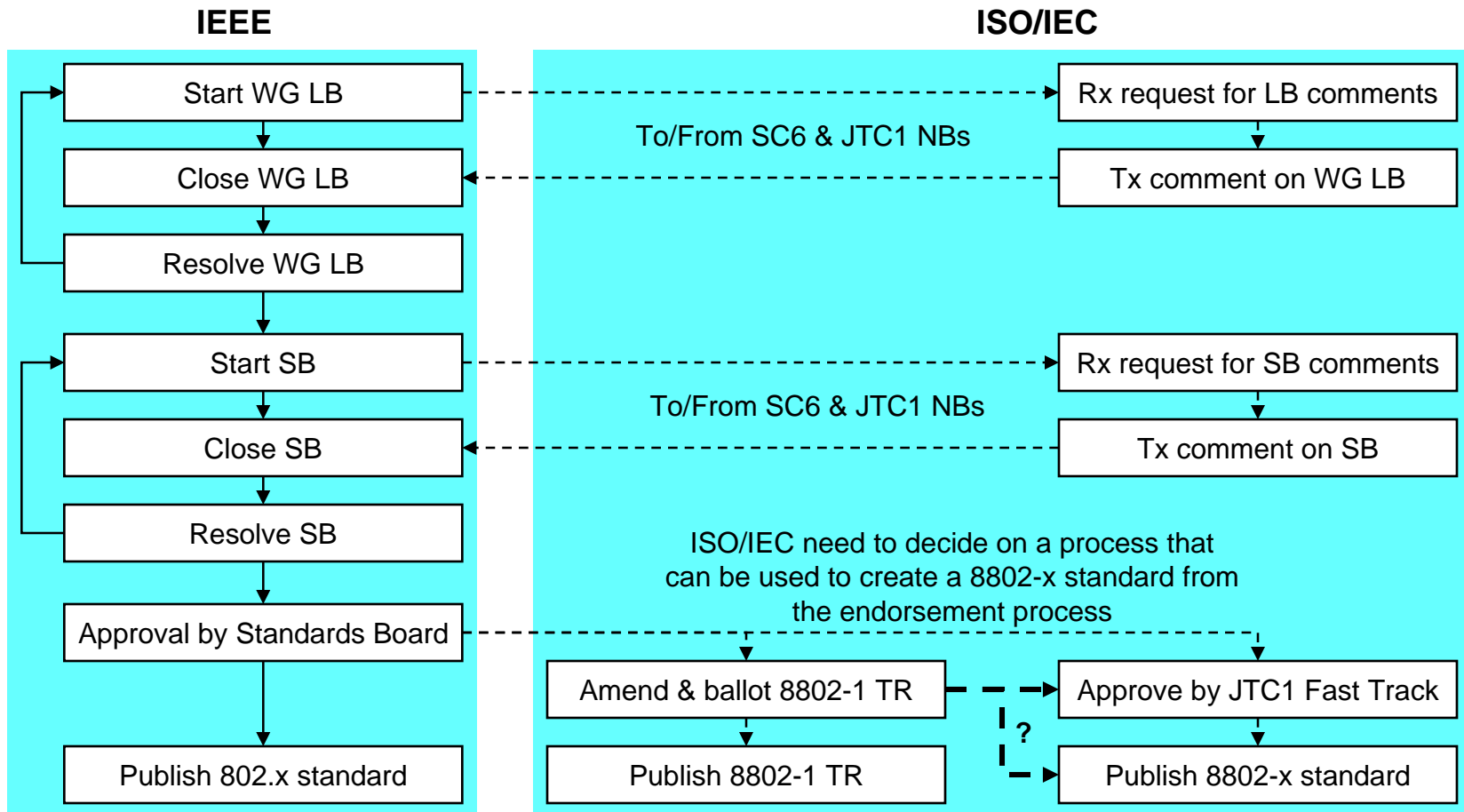
8802-1 & related documents provide a good basis for cooperation between 802 & SC6



Source: diagram in 6N11917, text in 8802-1

Conclusion - 802

Any future agreement should allow the adoption of endorsed standards as 8802-x standards ...



... and clarify various guiding principles, processes, responsibilities & authorities

Any future collaboration agreement between SC6 & 802 should ...

- Specify that changes to the 8802-x versions of 802.x standards require 802 concurrence
- Redefine a review role for NB reps during the development of potential 8802-x standards
- Specify more effective liaison solutions, leveraging technology as appropriate
- Add to “endorsement” by adding a step that results in an 8802-x standard
- Specify both 802 & ISO/IEC are able to veto or withdraw a 8802-x standard at any time
- Make it clear IEEE retains copyright of all material in 8802-x standards
- Clarify the patent situation for 8802-x standards
- Specify that 8802-x standards are not limited to LAN technology
- Not contain any unnecessary technical material

Any agreement should specify that changes to the 8802-x versions of 802.x standards require 802 concurrence

Comment

- There were long discussions during the WAPI debate about whether 8802-11 could be amended without agreement from the IEEE 802.11 WG
- However, allowing any 8802-x standard to be amended independently of 802 is at odds with:
 - 8802-1, which highlights the “... undoubted standing of IEEE 802 as the international body that makes LAN standards ...”
 - 6N11917, which notes that 8802-x standards shouldn't be modified without agreement from IEEE SA
- It is also impractical to allow two organisations to independently modify the same document
 - e.g., WAPI approval would have made it almost impossible for further amendments to 8802-11 based on IEEE 802.11WG work

Proposed resolution

- The overall goal should be that 8802-x standards & the equivalent 802.x standards are the same
- This requires any agreement specifies that 802 must concur with any technical or editorial changes to the 8802-x versions of 802.x standards
 - e.g., the proposed WAPI amendment to 8802-11 from within JTC1 would probably not have been allowed
- It is likely that any problems found by NBs after the 802.x standard has been ratified by IEEE are minor in nature & can be fixed in the 802 maintenance revision process
 - e.g., a number of minor issues identified by the Chinese NB during the 802.11i Fast Track ballot have already been included in 802.11ma

Any agreement should redefine a review role for NB reps during the development of potential 8802-x standards

Comment

- It is vital that the SC6 NBs should have an effective & ongoing ability to contribute to the 802 standards development
- Any SC6 NBs could achieve this goal by participating directly in 802 standards development activities
- However, 8802-1 has not been effective in enabling or promoting formal, direct contributions from SC6 NBs
- This is particularly true during the early stages of development
 - e.g., 8802-1 only provides for NB input during SBs & not during earlier LBs
 - Interestingly, 6 N11917 does provide for participation in LBs
- It is also often difficult for NBs to establish an official NB position in the time scales required for LBs and SBs

Proposed resolution

- Any agreement should allow SC6 & JTC1 NBs to be notified from the earliest stages of development & on an on-going basis of any 802.x standards that may be submitted for ISO/IEC standardisation
- Any agreement should allow multiple NB representatives to comment on behalf of the NB (although this would not be an official NB position)
- Easy access by NB's to drafts, regular liaisons, and the ability for NB representatives to comment should help overcome issues related to relatively short ballot cycles in 802

Any agreement should specify more effective liaison solutions, leveraging technology as appropriate

Comment

- The 802 standards development process can sometimes move very quickly
 - e.g., in the latter stages of balloting 10 or 15 day ballots are possible
- However, these timescales do not leave much time for bureaucratic formal liaison processes, particularly if they involve manual real time secretariat functions

Proposed resolution

- The leadership of 802 & SC6 should explore mechanisms to improve the liaison relationship between SC6 & 802
- New solutions could leverage technology based solutions:
 - e.g., LB & SB notifications could be sent directly & automatically to an e-mail reflector (maintained by SC6) for distribution to SC6 NBs
 - This mechanism was outlined in 6N11917 but apparently never implemented

Any agreement should add to “endorsement” by adding a step that results in an 8802-x standard

Comment

- 8802-1 implies that if the endorsement process is followed then the only result is a TR to record WG1 involvement in the work
- However, this is probably insufficient to achieve 802’s goal for an 8802-x standard
- A JTC1 Fast Track ballot allows 802’s goal for an 8802-x standard to be achieved
- However, the current Fast Track comment process invites detailed comment that cannot practically be acted upon, given the need to keep 8802-x standards synchronised with 802.x standards

Proposed resolution

- JTC1 & SC6 should develop a modified process for any agreement that combines:
 - An endorsement process similar to the one in 8802-1 that enables early & ongoing NB input to 802.x standards development
 - A final approval step that results in a 8802-x standard with no changes from the equivalent 802.x standard
- This step will connect the endorsement process on [the proposed process diagram slide](#) to the publication process
- ISO/IEC must decide on their own internal processes but one potential option is that after using the endorsement process, a JTC1 Fast Track ballot is held that:
 - Results in a “go/no go” decision
 - Resolves any comments by feeding them into the 802 maintenance process

Any agreement should specify both 802 & ISO/IEC are able to veto or withdraw a 8802-x standard at any time

Comment

- The underlying assumption of 8802-1 is that there is value in:
 - 802 submitting 802.x standards to SC6 for international standardisation
 - SC6 reviewing & approving these submissions as 8802-x standards
- While this is generally accepted in 802 & ISO/IEC, it is not true for all 802.x standards & may not remain true over time
 - A situation may arise during the standardisation process such that it no longer makes sense to continue towards publication
 - Even after publication, a situation may arise whereby it makes sense to withdraw a standard

Proposed resolution

- Any agreement should specify that both 802 & ISO/IEC have a veto of any decision to publish an 802.x standard as an 8802-x standard
- Any agreement should also specify both 802 & ISO/IEC have the right to withdraw an 8802-x standard after publication
 - e.g., it might make sense to withdraw a 8802-x standard if an amendment was vetoed, on the basis that 802 would no longer be able to maintain the standard
 - Appropriate notice would be required for any withdrawal to take effect
- It is assumed that these rights would be exercised only after very careful consideration of the circumstances

Any agreement should make it clear IEEE retains copyright of all material in 8802-x standards

Comment

- IEEE owns the copyright of 802.x standards but has allowed ISO/IEC to publish them as 8802-x standards & NBs to publish them as national standards
- However, 8802-1 is unclear about copyright issues because it:
 - Doesn't address copyright if the 8802-1 endorsement process is used
 - Suggests approval using a JTC1 Fast Track ballot might require a copyright release
- This caused some difficulty during the WAPI debate because:
 - Some claimed IEEE retains copyright of 8802.x standards, noting recent 8802-x standards have "Copyright © <year> IEEE" on every page, concluding that JTC1 couldn't amend 8802-11 without permission
 - Others claimed that ISO/IEC owned the copyright & so could amend 8802-11

Proposed resolution

- Any agreement should be modified to make it clear that IEEE owns the copyright for the material in any 8802-x standard based on an 802.x standard
- Assuming 802 has approval authority for all changes to 8802-x standards, there is no need for ISO/IEC to own the copyright for any 8802-x standards

Any agreement should clarify the patent situation for 8802-x standards derived from 802.x standards

Comment

- During the WAPI debate, the issue of patents for an 8802-x standard that is not the same as an 802.x standard was raised
- If an 8802-x standard incorporates an unmodified 802.x standard then implementations built to conform to the 8802-x standard will, by definition, also conform to the 802.x standard
- LoAs submitted with respect to the 802.x can be invoked for this implementation only because of its conformance to 802.x
- If 8802-x incorporates 802.x only in part, or modifies it in any way then an 8802-x implementation will not necessarily conform to 802.x
- LoAs provided to IEEE-SA cannot be invoked for this implementation

Proposed resolution

- The simplest solution is for ISO/IEC to not change any 802.x standards when approving them as 8802-x standards
- If the ISO/IEC did decide to change an 802.x standard (assuming copyright issues were resolved) then any agreement should describe the issues related to a standard for which there are known patent encumbrances
- The IEEE would probably not be able to assist in obtaining LoA's for a modified 8802-x version of an 802.x standard

Any agreement should specify that 8802-x standards are not limited to LAN technology

Comment

- 8802-1 is mostly written under the assumption that 802 only develops LAN standards
 - The title is “Part 1: Overview of Local Area Network Standards”
 - There are some reference to MANs
 - Note: interestingly 802.6 was included as a LAN & yet it was always a MAN
- While this may have been true to some degree at the time, it is no longer the case
- 802 now develops a range of wired & wireless layer 1 & 2 standards for PANs, LANs, MANs, RANs, & WANs

Proposed resolution

- Any agreement should be rewritten to allow 802 to submit any 802.x standard for ISO/IEC standardisation, not just those related to LANs
- Of course, SC6 should have a veto on whether such a submission should be accepted as an 8802-x standard

Any agreement should not contain any unnecessary technical material

Comment

- Much of the technical material in 8802-1 is either incorrect, incomplete or out of date
 - e.g., Figure 1 & §5.2.3 include a reference to 802.6, which is now disbanded
- This will be an on going problem as there is little incentive for anyone to update such material
- Some of the technical material relates to FDDI, which is not an 802 standard & so is not relevant to an agreement between SC6 & 802

Proposed resolution

- Remove all unnecessary technical material from any agreement
- If 8802-1 formed the basis of the agreement the following sections should be deleted:
 - Parts of §1, §3
 - All of §5, §6, §7, §8 & §9