SPECIAL STUDY

Evaluation of Ten Standard Setting Organizations with Regard to Open Standards
Prepared for IT- og Telestyrelsen

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SUMMARY

On 2 June 2006, the Danish parliament (the Folketing) unanimously adopted Parliamentary Resolution B103 on the use of open standards for software in the public sector. The Resolution instructs the Government to ensure that the public sector's use of information technology, including the use of software, should be based on open standards.

Therefore, the Danish National IT and Telecom Agency (IT- og Telestyrelsen) has commissioned to IDC to evaluate the degree of "openness" of the leading standard setting organizations.

Given the definition of "openness" in B103, this project has developed a framework for evaluating the ability of standard setting organizations to define "Open Standards".

Ten standard setting organizations were evaluated and all organizations had the opportunity to review and comment on the evaluation of their organization. The ten organizations are: CEN, Ecma, ETSI, IETF, ISO, ITU, NIST, OASIS, OMG, and W3C.

Looking at the ten organizations researched there are differences in the number of requirements in which they score positive. It is difficult to see any clear patterns in the ratings though. We believe there are a number of reasons for this. Standard organizations are generally aware of the need of openness because they all aim at providing successful, widely accepted standards. However, the concepts of openness and consensus have been implemented using different models that relate to the type of organization, their formal foundation and their degrees of formalization.

We therefore see the apparent differences in openness as a sign of the structure chosen by the organizations.

In conclusion there are, indeed, differences between standard setting organizations in terms of "openness" and certainly in terms of how "openness" is implemented. It can be, however, difficult to make a distinction of which form of "openness" is the most appropriate.

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INTRODUCTION

This document has been prepared by IDC for the Danish National IT and Telecom Agency (NITA). It describes a methodology to evaluate SSOs (standard setting organizations) with regard to the degree of openness of the organization and thereby the degree of openness in their deliverables, i.e. standards. The NITAs assessment of degree of openness is part of an overall assessment of standards where, beside the aspect of openness, public value and market support are also assessed.

The definition of "open standards" has been specified to consist of three criteria:

1) The standard is fully documented and accessible by public (Standarden skal være fuldstændig dokumenteret og offentligt tilgængelig):

☑ Open documentation (Åben dokumentation)

2) The standard should be free to implement without economical, political or legal restictions - now as well as in the future (Standarden skal være frit implementerbar uden økonomiske, politiske eller juridiske begrænsninger på implementering og anvendelse, hverken nu eller i fremtiden):

☑ Open IPR (Åben IPR)

☑ Open access (Åben anvendelse)

☑ Open interoperability (Åben interopabilitet)

3) The standard is managed and maintained in an open forum through an open process (Standarden skal være standardiseret og vedligeholdt i et åbent forum via en åben proces (standardiseringsorganisation)):

☑ Open meeting (Åbent møde)

☑ Consensus (Konsensus)

☑ Due process

☑ Open change (Åben forandring)

☑ Ongoing support (Åbent vedligehold)

In the document, SSO's will generally be referred to as 'organizations'. No formal definition of SSOs is assumed as the work covers 10 already specified organizations.

The following terminology is used in this document:

☑ Free: Without any monetary payment

☑ Fee: Monetary payment

☑ Members: Members of an organization (all levels)

☑ Online: Available through an electronic real-time media such as a public available Web page

☑ Offline: Available through other media than electronic real-time media such as various print media

METHODOLOGY

The steps carried out and the methodologies used in the process are:

☑ The first step was to define and make operational the criteria for evaluating "openness" of standard setting organizations. This work was carried out by IDC and NITA with input from relevant parties. The criteria were defined in the context of the following objectives

- ❑ Must tie into the 3 overall and 9 specific criteria mentioned above

- ❑ Each criteria should be made operational through approx. 1-5 requirements

- ❑ These requirements should be easy to determine based on the documentation of the standard setting organization

☑ Desk research was then carried out by IDC on each of the ten standard setting organizations, primarily through review of publicly available documents describing procedures and guidelines for the organization. A draft profile of each organization in relation to the requirements was developed.

☑ Each organization then had the opportunity of reviewing the draft profile and provide additional information and comments. Most organizations provided comments (see list below). Two types of comments were taken into consideration:

- ❑ Comments on factual information that were backed up by documentation was corrected in the actual profile

- ❑ Comments on factual information but without documentation or other types of comments are quoted directly in the profile under each area under the headline "comments". These comments are furthermore highlighted in italics.

☑ The final and commented profiles are documented in this report.

This is the feedback received by each organization:

☑ CEN: Comments received and provided in the profile

☑ ECMA: Comments received and provided in the profile

☑ ETSI: Contact to ETSI has been established, but ETSI has not found it possible to provide comments to the profile. The profile in this report therefore is the one developed by IDC.

☑ IETF: Comments received and provided in the profile

☑ ISO: Comments received and provided in the profile

☑ ITU: Comments received and provided in the profile

☑ NIST: NIST did not have time to provide written comments. Comments were received by telephone during a teleconference. IDC has formulated the comments into the profile.

- ☑ OASIS: Comments received. They primarily related to the language used and all comments have been incorporated into the profile.

- ☑ OMG: OMG did not provide any comments directly to the profile. However, OMG submitted two additional documents (by-laws and policies on IPR) that are not publicly available. This resulted in changes to the profile implemented by IDC.

- ☑ W3C: Comments received and provided in the profile.

Each organization profile has an introduction with a brief description of the organization. It should be noted that, in order to grant the organization the possibility of presenting itself, the description consists of the organizations own on-line available information. The description therefore is not based on assessments made by neither NITA nor IDC and so is not part of the actual evaluation of the organization.

REQUIREMENTS

1. Open documentation

The openness of an organization is considered closely related to the availability of the documents from the committee working on a standard as well as the availability of the general documentation of the organization (such as procedural documentation).

We consider the definition of "availability of documentation" a function of (a) cost and (b) online availability.

Requirements:

1.1 Access to all preliminary results documentation

    a. Online for free for all

    b. Online for a fee for all

    c. Online for members only

    d. Offline for free for all

    e. Offline for a fee for all

    f. Offline for members only

    g. Not available

1.2 Access to all final results documentation

    a. Online for free for all

    b. Online for a fee for all

    c. Online for members only

    d. Offline for free for all

    e. Offline for a fee for all

    f. Offline for members only

    g. Not available

1.3 Access to committee meeting notes

    a. Online for free for all

    b. Online for a fee for all

    c. Online for members only

    d. Offline for free for all

    e. Offline for a fee for all

    f. Offline for members only

    g. Not available

1.4 Access to documentation of procedures, governance policies, annual reports, etc.

    a. Online for free for all

    b. Online for a fee for all

    c. Online for members only

    d. Offline for free for all

    e. Offline for a fee for all

f. Offline for members only

g. Not available

1.5 Access to documentation of copyright on published documents

    a. Online for free for all

    b. Online for a fee for all

    c. Online for members only

    d. Offline for free for all

    e. Offline for a fee for all

    f. Offline for members only

    g. Not available

2. Open IPR

Regarding open standards the ability for implementers to use the standard in products without legal or financial implications is considered very important. Hence the IPR policy of the organization is evaluated.

The IPR evaluated the most open are the typical open source software licensing models, e.g. BSD and GPL licensing. Generally, the BSD license is considered less restrictive than GPL particularly since there are no requirements of making software using BSD elements available on the same terms [1][2].

RAND (Reasonable and Non Discriminatory License) is based on a "fairness" concept. "Companies agree that if they receive any patents on technologies that become essential to the standard then they agree to allow other groups attempting to implement the standard to use those patents and they agree that the charges for those patents shall be reasonable" [3].

RAND with limited availability is a version of RAND where "reasonable charges" furthermore have an upper limit.

Requirements:

2.1 The IPR or copyright policies of the organization are

    a. Available on-line

    b. Available off-line

    c. Not available

2.2 The organization has governance to disclose any IPR from any contributor

    a. Online for free for all

    b. Online for a fee for all

    c. Online for members only

    d. Offline for free for all

    e. Offline for a fee for all

    f. Offline for members only

    g. Not available

2.3 Level of IPR set mandatory by the organization

    a. BSD/Apache like (no patent)

b. GPL like (no patent)

c. Patent and RAND with limited liability

d. Patent and classic RAND

e. Patent with explicit licensing

f. Patent with defensive licensing

g. None

2.4 Level of IPR recommended by the organization

a. BSD/Apache like (no patent)

b. GPL like (no patent)

c. Patent and RAND with limited liability

d. Patent and classic RAND

e. Patent with explicit licensing

f. Patent with defensive licensing

g. None

3 . Open access

Open access describes the importance of equal and safe accessibility by the users of standard implementations. This aspect can be related to [4]:

☑ Safety (physical safety and conformance safety)

☑ Accessibility of physically impaired people (design for all)

☑ Environmental impact

☑ Consumer involvement in standardization process

In this work we focus particularly on accessibility and conformance safety.

Conformance testing is testing to determine "whether a system meets some specified standard". The result can be derived from a test suite [5].

Conformance validation is when the conformance test uniquely qualifies a given implementation as conformant or not.

Conformance certification is a process that provides a public and easily visible "stamp of approval" that an implementation of a standard is validated as conformant.

Requirements:

3.1 Mechanism exists that ensures disability support by a standard

a. Yes

b. No

c. Unclear

3.2 Conformance governance is always part of a standard

a. Yes

b. No

c. Unclear

3.3 Conformance test is offered to implementers

    a. Online for free for all

    b. Online for a fee for all

    c. Online for members only

    d. Offline for free for all

    e. Offline for a fee for all

    f. Offline for members only

    g. Not available

3.4 Conformance validation available to implementers

    a. Online for free for all

    b. Online for a fee for all

    c. Online for members only

    d. Offline for free for all

    e. Offline for a fee for all

    f. Offline for members only

    g. Not available

3.5 Conformance certification available

    a. Online for free for all

    b. Online for a fee for all

    c. Online for members only

    d. Offline for free for all

    e. Offline for a fee for all

    f. Offline for members only

    g. Not available

4. Open Interoperability

This section is equivalent to "Etiquette" described in [6]. Source for the definition is [7].

Open interoperation is defined as how interoperation is identified and maintained between interoperable standards so that stakeholders have the opportunity to select the most appropriate interoperation.

The design of standards has to reflect three abilities: identification, negotiation and selection. Identification provides a listing of the variation available and/or possible features provided by the standard. Identification may examine the characteristics of a specific variation or feature. Negotiation refers to the process of determining which specific characteristics from the lists of identified variations or features are to be utilized. Selection chooses the desired variation or feature.

In communication this could be described as follows:

Identification provides a listing of the variation available and/or possible at each communicating end to the other end. Identification may examine the parameters of a given spectrum, in time, power, frequency and/or coding and may also identify specific protocols or options (at any communications layer), to determine characteristics of the communications channel. Negotiation refers to the process of

determining which specific characteristics from the lists of identified transmitter and receiver end characteristics are to be utilized for communications. Negotiation implements the logic (which may exist in remote repositories) necessary to identify the most desired variation that is common at each communicating end. Selection chooses the desired common communications mechanisms for data and control information. Selection also refers to the process of installing (if required) and/or initializing the selected characteristics to allow compatible communications to begin.

The requirements of open interoperability are best expressed and evaluated relative to actual standards rather than to the organization. Hence we have chosen to express the requirements in the context of the guidance and governance the organization provides in order to ensure that standards being approved by the organization are interoperable.

Requirements:

4.1 The organization provides governance for open identification in standards

    a. Online for free for all

    b. Online for a fee for all

    c. Online for members only

    d. Offline for free for all

    e. Offline for a fee for all

    f. Offline for members only

    g. Not available

4.2 The organization provides governance for open negotiation in standards

    a. Online for free for all

    b. Online for a fee for all

    c. Online for members only

    d. Offline for free for all

    e. Offline for a fee for all

    f. Offline for members only

    g. Not available

4.3 The organization provides governance for open selection in standards

    a. Online for free for all

    b. Online for a fee for all

    c. Online for members only

    d. Offline for free for all

    e. Offline for a fee for all

    f. Offline for members only

    g. Not available

5. Open Meeting

To be considered an open standard, the process of defining the standard must be open. As standards are normally defined by committees which typically consist of members of the standard organization we emphasize the ability to become a member of the SSO and the financial barriers existing for this.

We also emphasize the ability of non-members to gain influence on the process of defining a standard ("being heard").

Requirements:

5.1 The organization is open to all types of companies and organizations

    a. Free membership

    b. Nominal membership fee

    c. Membership fees relate to size of organization

    e. Flat, significant fees for all

    f. Cannot become members

5.2 The organization is open to individuals

    a. Free membership

    b. Nominal membership fee

    c. Membership fees relate to size of organization

    e. Flat, significant fees for all

    f. Cannot become members

5.3 The standardization process specifically allows participation of members with limited abilities

    a. Yes

    b. No

    c. Unclear

5.4 Meetings are open to all members/all can participate in the standards creation process

    a. Yes

    b. No

    c. Unclear

5.5 Non-members can participate in the standards creation process

    a. Yes

    b. No

    c. Unclear

6. Consensus

"Consensus decision-making is a decision-making process that not only seeks the agreement of most participants, but also to resolve or mitigate the objections of the minority to achieve the most agreeable decision. Consensus is usually defined as meaning both general agreement, and the process of getting to such agreement. Consensus decision-making is thus concerned primarily with that process" [8].

Also, consensus in the context of standard organizations can be defined as the involvement of all relevant interest groups (manufacturers, vendors and users, consumer groups, testing laboratories, governments, engineering professions and research organizations) [9].

In this context we consider consensus decision making primarily with regard to the process of approval of standards and review with interest groups (non-members).

Requirements:

6.1 Does the organization have a stated objective of reaching consensus when making decisions on standards?

    a. Yes

    b. No

    c. Unclear

6.2 If consensus is not reached, can the standard be approved?

    a. Cannot be approved but referred back to working group/committee

    b. Approved with 75% majority

    c. Approved with 66% majority

    d. Approved with 51% majority

    e. Can be decided by a "director" or similar in the organization

6.3. Is there a formal process for external review of standard proposals by interest groups (non-members)?

    a. Yes

    b. No

    c. Unclear

7. Due process

"In United States law, partially inspired by English Law, due process (more fully due process of law) is the principle that the government must respect all of a person's legal rights instead of just some or most of those legal rights when the government deprives a person of life, liberty, or property" [10].

In this context, the relevance of due process is the respect of each member of the organization with regard to its rights. More specifically, it must be assured that if a member believes an error has been made in the process of defining a standard, it must be possible to appeal this to an independent, higher instance.

It can be difficult to determine whether the higher instance is "independent", but as a minimum there should be no overlap in people involved.

Requirements:

7.1 Can a member formally appeal or raise objections to a procedure to an independent, higher instance

    a. Yes

    b. No

    c. Unclear

7.2 Can a member formally appeal or raise objections to a technical specification to an independent, higher instance

    a. Yes

    b. No

c. Unclear

8. Open change

The only way an open standard can remain "open" is if all suggested changes are presented, evaluated and approved in a way similar to (or better than) the process by which the standard was originally conceived.

Requirements:

8.1 All changes to a standard is subject to the criteria 1-7 above

    a. Yes
    b. No
    c. Unclear

9. On-going support

It is critical to an open standard that the organization takes responsibility for the standard throughout the life span of that standard. This can be done in several ways such as regular periodic review of the standard [6, p.28].

Requirements:

9.1 The organization has stated commitment to support the standard throughout its life:

    a. Until removal of the published standard from public domain
    (Including this process)
    b. Making the standard available even when in non-maintenance mode
    c. Adding new features and keeping the standard up-to-date
    d. Rectifies problems identified in initial implementations
    e. Only creates the standard

Relation to Ken Krechmer's Definition On Open Standards

Ken Krechmer, fellow at the International Center for Standards Research, University of Colorado, has developed a methodology for evaluating the "openness" of the organizations defining open standards [6]. His methodology suggests a list of ten criteria of open standards, possibly the most extensive list of criteria available.

The ten open standard criteria are:

1. Open Meeting - all may participate in the standards development process.

2. Consensus - all interests are discussed and agreement found, no domination.

3. Due Process - balloting and an appeals process may be used to find resolution.

4. Open IPR - how holders of IPR related to the standard make available their IPR.

5. One World - same standard for the same capability, world-wide.

6. Open Change - all changes are presented and agreed in a forum supporting the five requirements above.

7. Open documentation - committee drafts and completed standards documents are easily available for implementation and use.

8. Open Interface - supports proprietary advantage (implementation); each interface is not hidden or controlled (implementation); each interface of the implementation supports migration (use).

9. Open Access - objective conformance mechanisms for implementation testing and user evaluation.

10. On-going Support - standards are supported until user interest ceases rather than when implementer interest declines.

For further discussions on alternative definitions and the completeness of the above see [11].

For use in this project NITA decided upon and specified 9 of these 10 criteria. The exclusion of number 5, "Open World" stems from the re-purposing of number 8, "Open Interface". Thus the latter has been extended now covering both 5 and 8 and is accordingly renamed "Open Interoperability".

The correspondence between Kechmer's 10 requirements and the 9 requirements used in this specification is shown below.

TABLE 1

Correspondence to Krechmer

Requirements in this document:	Corresponding requirements in [Krechmer, 2005]
Open documentation	7
Open IPR	4
Open access	9
Open interoperability	5 & 8
Open meeting	1
Consensus	2
Due process	3
Open change	6
On-going support	10

Source: IDC, 2007

R e f e r e n c e s

[1] Open source license, January 16, 2008 (wikipedia.org/wiki/Open-source_license)

[2] BSD licenses, January 16, 2008 (http://en.wikipedia.org/wiki/BSD_License)

[3] Reasonable and Non Discriminatory Licensing, January 18, 2008
(wikipedia.org/wiki/Reasonable_and_Non_ Discriminatory_Licensing)

[4] ANEC, January 16, 2008 (http://www.anec.org/anec.asp?rd=28956&ref=01-01.02-
01&lang=en)

[5] Conformance testing, January 16, 2008
(http://en.wikipedia.org/wiki/Conformance_testing)

[6] Krechmer, Ken: Open Standards Requirements. International Center for
Standards Research, University of Colerado, 2005.

[7] Personal email. IT & Telestyrelsen. October 12, 2007.

[8] Consensus decision-making, January 16, 2008
(wikipedia.org/wiki/Consensus_decision-making).

[9] The GravurExchange Guide to Standards & Reference Workflows, January 16,
2008 (http://www.gravurexchange.com/Standards/standards1.htm).

[10] Due Process, January 16, 2008 (wikipedia.org/wiki/Due_process).

[11] Andersen, Per: The Road to Open Document Standards. IDC, 2006.

EUROPEAN COMMITTEE FOR STANDARDIZATION (CEN)

Introduction

"CEN, the European Committee for Standardization, was founded in 1961 by the national standards bodies in the European Economic Community and EFTA countries. It is the European parallel to ISO and to a large extent is based on the same principles.

Now CEN is contributing to the objectives of the European Union and European Economic Area with voluntary technical standards which promote free trade, the safety of workers and consumers, interoperability of networks, environmental protection, exploitation of research and development programs, and public procurement.

CEN is a non-profit making technical organization set up under Belgian law" [14].

1. Open documentation

CEN does generally not provide (sell) publications. Standards, draft standards, CEN Workshop Agreements and Technical Specifications can be obtained through the national bodies, following the fee principles of CEN [5].

Working documents from Technical Committees and (generally) Workshops are only available to participants [8].

CEN copyright and exploitation right principles apply to the publications of CEN according to Memorandum 8 [10].

CEN Comments:

"Draft European Standards are subject to a national (public) enquiry in CEN Member countries. The drafts are opened by different means for public comments, and all comments are considered by the relevant Technical Committee."

"Draft CEN Workshop Agreements may be placed on the Internet for public comment – this process is mandatory in public interest cases, and advisory in others."

"Certain CEN Workshop Agreements are available for downloading free of charge, either where industrial or other sponsors have compensated CEN for loss of sales revenue, or in the case of Workshops in the ICT area where the European Commission and EFTA are supporting them financially."

Summary:

1.1 Access to all preliminary results documentation

    Online for participants only

1.2 Access to all final results documentation

    Online/offline for a fee for all (through national bodies)

1.3 Access to committee meeting notes

Online for participants only

1.4 Access to documentation of procedures, governance policies, annual reports, etc.

Online for free for all

1.5 Access to documentation of copyright on published documents

Online for free for all

2 . O p e n   I P R

CEN follows the policy of ISO (and IEC, ITU-T and many other bodies) on IPRs in standards. This is documented in CEN/CENELEC Guide No.8 [10].

CEN does not "give authoritative or comprehensive information about evidence, validity and scope of patent and like rights but it is desirable that the fullest available information be disclosed. Therefore, the originator of a proposal of such a kind shall draw attention to any known patent and like rights on a worldwide basis or any known pending applications, although CEN and CENELEC are not in a position to guarantee the authority of any such information" [10].

"If the proposal is accepted on technical grounds, any known patent holder shall be asked for a statement that he would be willing to negotiate licenses under patent and like rights with applicants throughout the world on reasonable terms and conditions. A record on a patent holder's statement shall be placed in the files of CEN (as appropriate) and shall be referred to in the relevant European Standard. If the patent holder does not provide such a statement, the technical body responsible shall not proceed with the inclusion of the patented item" [10].

"Should it be revealed after publication of the European Standard that licenses under a patent and like rights cannot be obtained under reasonable terms and conditions, the European Standard shall be referred back to the technical body responsible for further consideration" [10].

CEN comments:

"IPR policies of CEN are shortly to be adjusted in terms of alignment with the recently amended ISO/IEC/ITU-T policy. These amendments sought to encourage earlier disclosure of essential IPRs, rather than making any fundamental policy change."

Summary:

2.1 The IPR or copyright policies of the organization are

Available on-line

2.2 The organization has governance to disclose any IPR from any contributor

Online for free for all

2.3 Level of IPR set mandatory by the organization

RAND

2.4 Level of IPR recommended by the organization

No patent

3. Open access

CEN technical groups are expected to take account as far as possible of the provisions of CEN/CENELEC Guide No.6: "Guidelines for standards developers to address the needs of older persons and persons with disabilities" [11].

CEN "provides a comprehensive range of European standards and other publications for the implementation and recognition of good conformity assessment practices, suitable for all forms of first, second and third party involvement and evaluation" [7]. "CEN has developed four systems for conformity assessment" [7]:

☑ "The European Mark of Conformity to European Standards, the Keymark" [7]

☑ "The CEN Workshop Agreement certification rules" [7]

☑ "The CENCER mark" [7]

☑ "European Standard Agreement Group" [7]

"The Certification Board of CEN is responsible for the CEN policies on certification and other conformity assessment issues" [7].

CEN does not itself undertake assessment and certification activities, but certification bodies may apply to the national standards bodies to use the Keymark for certification schemes in those countries [IDC].

CEN comments:

"There is a range of specific documents on accessibility-related issues, including a pan-European activity concerning e-accessibility standardization in public procurement."

Summary:

3.1 Mechanism exists that ensures disability support by a standard

Yes

3.2 Conformance governance is always part of a standard

No

3.3 Conformance test is offered to implementers

No, guidelines are offered

3.4 Conformance validation available to implementers

No, guidelines are offered

3.5 Conformance certification available

No, guidelines are offered

4 .   O p e n   I n t e r o p e r a b i l i t y

No information has been found in these questions [IDC].

CEN comments:

"This is an impossible question to answer! Much of CEN's work in the ICT domain concerns specific applications of standards, and a lot of that concerns interoperability issues (eg the current CEN/ISSS WS/BII proposed by the Danish National IT and Telecom Agency!). However, by definition, there can be no "one size fits all" policy.

If you want to encapsulate it, CEN is an open standards body. Our activities are open to any interested party (in the case of a traditional Technical Committee) through national delegations (but the national process is then open). In the case of Workshops, access is directly to any interested party worldwide (albeit on payment of a fee in some cases)."

Summary:

4.1 The organization provides governance for open identification in standards

    Not available

4.2 The organization provides governance for open negotiation in standards

    Not available

4.3 The organization provides governance for open selection in standards

    Not available

5 .   O p e n   M e e t i n g

The members of CEN are the national bodies of the member countries, currently 30, plus associate members (representing certain pan-European associations) and affiliate members (representing certain third countries). Participation can take place through these member bodies [4]. No information on membership fees has been provided [IDC].

All interested parties "may take part in the work; representation is secured primarily through the national standards bodies which send balanced delegations to the policy-making bodies and technical committees" [2].

An alternative path to standards exists through the "CEN Workshop Agreements". Through a Workshop, where all interested parties worldwide can participate, a technical specification or guidance material can be created. This specification etc. is than maintained as a CWA for three years and renewed or transformed into a more formal European or International Standard (ISO, UN/CEFACT, etc) [6].

While the CEN Workshop is open for all, the use of a comment phase for the recommendations of the workshop is an option, although it is recommended to ensure as transparent a process as possible in the development of the CWA. It is, however, obligatory in cases where the Workshop is of public interest [8][10].

CEN comments:

"CEN members may charge a fee for participation at national level."

Summary:

5.1 The organization is open to all types of companies and organizations

   Yes, through the national delegations

5.2 The organization is open to individuals

   Yes, through the national delegations

5.3 The standardization process specifically allows participation of members with limited abilities

   No

5.4 Meetings are open to all members/all can participate in the standards creation process

   Yes, only Workshops (CWA)

5.5 Non-members can participate in the standards creation process

   Yes, through national bodies (standards) and Workshops (CWA)

6. Consensus

CEN emphasizes the fact, that "standards are developed through a consensus process" [1]. "Standards are developed and the basis of voluntary agreement between all parties. Formal adoption of European standards is decided by a weighted vote of the CEN National Members", with 71 per cent weighted majority required (the same as the EU voting rule, but with the addition of weights for EFTA members) "and is binding on all of them" [2].

CEN defines consensus the same way as ISO does: "General agreement characterized by the absence of sustained opposition to substantial issues by any important part of the concerned interests and by a process that involved seeking to take into account the views of all parties concerned and to reconcile any conflicting arguments" [3].

"It is the responsibility of the chairman to judge whether consensus indeed has been reached" [3].

Once a draft of a European standard reaches a mature stage, it is released for public comment, a process known as the CEN Enquiry. Views are collated by the national standards bodies [9].

CEN comments:

"Draft CEN Workshop Agreements may be subject to public comment through internet, as indicated above. The adoption of CEN Workshop Agreements for publication is by the consensus of registered participants."

Summary

6.1 Does the organization have a stated objective of reaching consensus when making decisions on standards

   Yes

6.2 If consensus is not reached, can the standard be approved

   Approved with 71% majority (weighted)

6.3. Is there a formal process for external review of standard proposals by interest groups (non-members)

   Yes

7. Due process

"A CEN member may appeal against any action, or inaction, on the part of a Technical Committee, other body, or officer of CEN" under certain given conditions – this is a formal process [12].

In case of a sustained dispute/disagreement within a CEN Workshop, for example if there is a problem in reaching consensus, the Workshop or a participant may seek advice, for instance by asking the CEN Technical Board (or, by delegation, a sector body or the CEN Management Centre) to act as arbiter for the dispute [3].

Summary

7.1 Can a member formally appeal or raise objections to a procedure to an independent, higher instance

   Yes

7.2 Can a member formally appeal or raise objections to a technical specification to an independent, higher instance

   Yes

8. Open change

No information in this has been found [IDC].

CEN comments:

"Maintenance of all CEN publications follows due process."

Summary

8.1 All changes to a standard is subject to the criteria 1-7 above

   Yes

9. On-going support

"The responsible Technical Committee shall ensure that ENs are periodically reviewed. In CEN the periodical review shall occur at intervals not exceeding five years. If there is no Technical Committee, the responsibility for review shall rest with the Technical Board" [13, 11.2.8].

Summary

9.1 The organization has stated commitment to support the standard throughout its life:

Until removal

References

[1] http://www.cen.eu/cenorm/aboutus/generalities/principles/index.asp. November 7, 2007

[2] http://www.cen.eu/cenorm/aboutus/generalities/how+we+work/index.asp. November 7, 2007

[3] http://www.cen.eu/cenorm/businessdomains/technicalcommitteesworkshops/workshops/ws_consensus.asp. November 7, 2007

[4] http://www.cen.eu/cenorm/aboutus/structure+/index.asp. November 7, 2007

[5] http://www.cen.eu/cenorm/standards_drafts/index.asp. November 7, 2007

[6] http://www.cen.eu/cenorm/sectors/technicalcommitteesworkshops/workshops/guidelines_cen_workshops.asp. January 31, 2008.

[7] http://www.cen.eu/cenorm/conformityassessment/index.asp. November 7, 2007

[8] http://www.cen.eu/cenorm/workarea/managerial+bodies/index.asp. November 7, 2007

[9] Compass – European standardization in a nutshell. CEN.

[10] http://www.cen.eu/boss/supporting/guidance+documents/gd029+-+normative+references/cclcgd008.pdf. January 7, 2008

[11] http://www.cen.eu/boss/supporting/reference+documents/cclcgd006.pdf. November 22, 2007

[12] http://www.cen.eu/boss/supporting/reference+documents/cen-cenelec+internal+regulations+-+part+2/7+-+appeals+policy.asp. November 23, 2007.

[13] http://www.cen.eu/boss/supporting/reference+documents/cen-cenelec+internal+regulations+-+part+2/11+-+cen-cenelec+publications.asp#11_2. November 23, 2007.

[14] http://www.cen.eu/cenorm/aboutus/index.asp. January 31, 2008.

[IDC] IDC comments and evaluations

ECMA INTERNATIONAL

Introduction

"Since 1961 and continuing today, Ecma International (in short Ecma) facilitates the timely creation of a wide range of global Information and Communications Technology (ICT) and Consumer Electronics (CE) standards, currently (the exact topics change) for" [7]:

☑ Scripting and Programming Languages;

☑ Communication Technologies;

☑ Product Safety;

☑ Environmental Design Considerations;

☑ Acoustics and Electromagnetic Compatibility (EMC);

☑ Optical Storage;

☑ Volume and File structure;

☑ Universal 3D open file format;

☑ Holographic Information Storage Systems (HISS)

☑ Office Open XML Formats

☑ XML Paper Specification (XPS)

"Ecma is the proposer and a frequent practitioner of the concept of "fast tracking" of specifications drafted (Ecma Standards) in international standards format through the process in Global Standards Bodies like the ISO and IEC. Since 1986, when fast tracking was introduced to ISO, over 75% of fast-tracked standards have been fast-tracked through Ecma.

Ecma is driven by the industry itself to meet the needs of industry, generating a healthy competitive landscape based on differentiation of products and services, rather than technology models, generating confidence among vendors and users of new technology" [7].

1. Open documentation

With regard to defined standards, "all documents when approved shall be made available to all interested parties without restriction" [4, 9.4].

There are no written specific guidelines for making interim documentation, meeting minutes or similar available for others than the members of the TC, coordinating committee and the General Assembly [3, 6.2.12 & 6.2.16].

The procedure, governance and rules are published in three key documents online: Ecma by-laws [4], the "rules" [3] and the code of conduct in patent matters [6].

There are no written statements about copyright on documents [IDC].

Ecma comments:

"Templates and tools are available for TCs, and Ecma Secretariat attends all TC and some TG meetings to make it sure that due process is obeyed and proper documentation is prepared. Meeting minutes, reports are normally prepared by the Ecma Secretariat".

"Basically all Ecma deliveries are free to use and to copy. Ecma is considering to put a copyright disclaimer with that intention in all of its publications".

"Ecma has a "Visibility Project" that encouraged TCs to make preliminary results public, if from the substance point of view it is practical (e.g. OOXML was done so)".

Summary:

1.1 Access to all preliminary results documentation

   Selectively available

1.2 Access to all final results documentation

   Online for free for all

1.3 Access to committee meeting notes

   Online for members only

1.4 Access to documentation of procedures, governance policies, annual reports, etc.

   Online for free for all

1.5 Access to documentation of copyright on published documents

   Not available

2. Open IPR

Ecma has a dedicated document describing its policies on IPR [6]. This document also specifically requires all members to disclose any IPR claims before the vote in the General Assembly on the standard [6, 2.2].

Generally, the General Assembly of Ecma will "not approve recommendations of standards which are covered by patents when such patents will not be licensed by their owners on a reasonable and non-discriminatory basis" (RAND) [6], although Ecma will not provide any definition of RAND [5].

That Ecma takes the requirement seriously can be seen from the fact that Ecma will go as far as to cancel a standard if IPR claims arise that are not RAND based [6, 1.4].

Summary:

2.1 The IPR or copyright policies of the organization are

   Available on-line

2.2 The organization has governance to disclose any IPR from any contributor

Online for free for all

2.3 Level of IPR set mandatory by the organization

Patent and classic RAND or less restrictive

2.4 Level of IPR recommended by the organization

Patent and classic RAND or less restrictive

3 .   O p e n   a c c e s s

No published information on these points is available [IDC].

Ecma comment:

"According to the SG of Ecma it is very difficult to give general statements on this point as the topics of Ecma Standards are so different. Generally, Ecma does not do conformance certification. That is outside of scope of Ecma, but it is done often by co-operation with relevant other bodies. In certain areas Ecma has testing methodology standards (e.g. on optical storage life-time expectancy), but Ecma never carries out the testing of products itself".

Summary:

3.1 Mechanism exists that ensures disability support by a standard

No

3.2 Conformance governance is always part of a standard

No

3.3 Conformance test is offered to implementers

No

3.4 Conformance validation available to implementers

No

3.5 Conformance certification available

No

4 .   O p e n   I n t e r o p e r a b i l i t y

No information on these points is available [IDC].

Ecma comments:

"It is not really relevant for all Ecma standards, only for a certain class (e.g. sometimes in communication standards, or in character codes standards, Code

extension etc.). We do not think that this is a good point for the definition of Open Standards (I told this to Mr. K. Kretchmer too…)"

Summary:

4.1 The organization provides governance for open identification in standards

    Not available

4.2 The organization provides governance for open negotiation in standards

    Not available

4.3 The organization provides governance for open selection in standards

    Not available

5 . O p e n   M e e t i n g

Ecma defines 5 types of memberships [2]:

- ☒ "Ordinary members are companies which have interest and experience in matters related to one or more Technical Committees of the Association, and which wish to exert the right to vote at the General Assembly and to exert other exclusive rights defined in the By-laws and Rules.

- ☒ Associate members are companies which have interest and experience in matters related to one or more of the Technical Committees of the Association but without the right to vote in the General Assembly.

- ☒ SME members (Small and Medium-sized Enterprise) are companies which have similar interests as an associate member and a global, annual, turnover of less than one hundred million Swiss Francs.

- ☒ SPC members (Small Private Companies) are companies or other legal for-profit organizations with no more than five employees and a global, annual, turnover of less than five million Swiss Francs.

- ☒ NFP members are non-profit-making organizations". [2]

To become a member of Ecma, this must be approved by existing ordinary members with 2/3 majority [4, 4.2].

Membership fees are not easy to determine from publicly available information, but an online presentation states the level of ordinary members to about USD 56,000, associate members about USD 28,000, SME members about USD 14,000 and SPC members about USD 2,800. NFP membership is free [5].

Any member organization has the right to be represented in any of the TCs [3].

"Participation in Ecma groups by experts from non-member companies is available on invitation by the Ecma Secretary General, e.g. to become familiar with the working style. To participate regularly, organizations must join Ecma" [1].

Summary:

5.1 The organization is open to all types of companies and organizations

   Membership fees relate to size of organization

   Membership is dependent on approval of the General Assembly.

5.2 The organization is open to individuals

   No

5.3 The standardization process specifically allows participation of members with limited abilities

   No

5.4 Meetings are open to all members/all can participate in the standards creation process

   Yes

5.5 Non-members can participate in the standards creation process

   No, exception by invitation

6. Consensus

According to the rules of Ecma, "it is recommended that in the course of its ordinary work the TC should not use voting unless it is impossible to make progress without a vote" [3, 6.2.5].

Otherwise "the voting on any matter shall be by simple majority of TC members present at the meeting. Each Ecma member has only one vote" [3, 6.2.3].

For the final approval of a standard, this requires a majority of 2/3 of all ordinary members (other membership classes do not have votes at the General Assembly) [4, 9.1].

Ecma comment:

"Yes, as a result of the Ecma Visibility Project starting from Dec. 2007 there will be a policy decision that up to the decision of the relevant TC standards of interest to the public (e.g. OOXML, XPS, Web standards etc.) should be made available to the public also during the development process, and external feedback is encouraged".

Summary

6.1 Does the organization have a stated objective of reaching consensus when making decisions on standards

   Yes

6.2 If consensus is not reached, can the standard be approved

   Approved with 51% majority (TC)

Approved with 67% majority of ordinary members (final approval of standard)

6.3. Is there a formal process for external review of standard proposals by interest groups (non-members)

No

7. Due process

It is clearly stated that the General Assembly is the highest authority [4, 7.2].

It is stated that any member of a TC can ask for a minority report to be submitted to the coordinating committee if so desired [3, 6.2.17]. The Ecma presentation, however, makes it clear that only objections to technical issues are accepted while non-technical matters must be resolved outside the TC [5].

Ecma comment:

Ecma has changed the answer on 7.1 from "*No*" to "*Yes*", but no reference is given. The comment is *"Appeals can be made to the SG and to the GA".*

Subsequently, Ecma has provided the following comments:

"We are at the moment in the process of reworking out bylaws, rules, ipr policies. Basically everything will be packaged to together in one document (which is at the moment in three different packages). That draft contains already an appeal section, and also section on maintenance. Unfortunately I can not sent it to you yet, because that document is first going to be presented to the Ecma GA in December 2007."

Summary

7.1 Can a member formally appeal or raise objections to a procedure to an independent, higher instance

No

7.2 Can a member formally appeal or raise objections to a technical specification to an independent, higher instance

Yes

8. Open change

There is no specific clarification of the process following the publication of a standard. It seems obvious that any further changes to a standard will go through the same process as the original standard [IDC].

Ecma comment:

"Maintenance of all Ecma standards is an obvious criteria and is a must for all Ecma standards. In fact, in practice Ecma is doing also the maintenance of all of its fast tracked standards to ISO and IEC".

Summary

8.1 All changes to a standard is subject to the criteria 1-7 above

   Yes

9 . On-going support

As stated above, this is not clear from neither the by-laws nor the rules of Ecma. Ecma is focused on the efficiency in setting standards and does not give guidelines for the subsequent life of a standard [IDC].

Ecma comment:

"This has been the long standing goal of Ecma. Ecma is not only focused on the efficiency in setting standards but cares for the subsequent life of a standard".

"The intention is to restrict those written rules to a minimum and not to micromanage everything. We think e.g. that JTC Directives would for our purposes be already too complex. Of course then basic things, such as life-long maintenance of your standards are not included, but we practice it. Actually Ecma often withdraws its standard when we see that it is not used anymore. That also removes the burden of maintenance if you do not have the right people on the board anymore. A recent concrete case was by TC45 on the maintenance proposal to JTC 1 SC34 was how to do the maintenance of the OOXML standard. It will be discussed at the December 2997 meeting."

Summary

9.1 The organization has stated commitment to support the standard throughout its life:

   Until removal

References

[1] http://www.ecma-international.org/memento/join.htm, November 16, 2007.

[2] http://www.ecma-international.org/memento/members.htm, November 16, 2007.

[3] http://www.ecma-international.org/memento/EcmaRules.htm, November 16, 2007.

[4] http://www.ecma-international.org/memento/Ecmabylaws.htm, November 16, 2007

[5] http://www.ecma-international.org/activities/General/presentingecma.ppt, November 16, 2007.

[6] http://www.ecma-international.org/memento/codeofconduct.htm, November 16, 2007

[7] http://www.ecma-international.org/, January 31, 2008

[IDC] IDC comments and evaluations

ETSI

Introduction

ETSI "produces globally applicable standards for Information & Communications Technologies including fixed, mobile, radio, broadcast, internet and several other areas" [9].

"ETSI is recognized as an official European Standards Organization by the European Commission (EC), enabling valuable access to European markets" [9].

ETSI "strive to collaborate with research bodies. They are active in vital surround areas such as interoperability and they offer event services related to standardization including forum hosting" [9]. One of these is ITU.

They stress the "importance of openness, discussion, consensus and direct input from their members" [9].

1. Open documentation

"Working documents are usually available only to members of ETSI, but the technical committee's output of standards and reports, once approved, is made available in the public domain, free of charge" [2].

ETSI has the specific objectives of using IT as much as possible in their work processes [2].

Summary:

1.1 Access to all preliminary results documentation

　　Online for members only

1.2 Access to all final results documentation

　　Online for free for all

1.3 Access to committee meeting notes

　　Online for members only

1.4 Access to documentation of procedures, governance policies, annual reports, etc.

　　Online for free for all

1.5 Access to documentation of copyright on published documents

　　Online for free for all

2. Open IPR

"The ownership of the copyright in standards and technical specifications documentation and reports created by ETSI or any of its committees is vesting in ETSI, but due acknowledgements shall be given to third party copyright owners" [5, p.

30

36]. Members may make copies of standards and technical specifications "for their own use free of charge" [5, p. 37].

ETSI is highlighting the need to disclose any essential IPRs that may impact a standard [5, p. 33].

If an essential IPR relates to a standard, ETSI will request that the owner provides irrevocable licenses on RAND terms [5, p. 33].

ETSI has extensive documentation on the policies around IPR [5, p. 33f][5, p. 40f].

Summary:

2.1 The IPR or copyright policies of the organization are

    Available on-line

2.2 The organization has governance to disclose any IPR from any contributor

    Online for free for all

2.3 Level of IPR set mandatory by the organization

    Patent and classic RAND

2.4 Level of IPR recommended by the organization

    Patent and classic RAND

3. Open access

ETSI has a technical committee (Human Factors, HF) that is "the committee responsible for standards and guidelines dealing with ease of use and accessibility of telecommunication equipment and services, including the requirements of older and disabled people" [8].

"ETSI relies on feedback from validation and testing activities, and from routine use of the standards, to correct and improve the documents" [6]. They separate these activities between "conformance test specifications" and "interoperability test specification" [6].

ETSI supports testing in three ways [7, p. 23]:

- ☑ A technical committee "TC Methods for Testing and Specification" that provides the frameworks and methodologies necessary to enable the other ETSI Technical Committees to develop good standards

- ☑ ETSI Protocol and Testing Competence Center is a unique resource available to technical committees for the application of specification, validation and testing techniques in standards. "A large part of the work is to assist the planning and development of conformance and interoperability test specifications".

- ☑ "ETSI Plugtests Service is a professional unit of ETSI specializing in organizing and running interoperability test events for a wide range of converging standards". "Plugtests events are open to all types of companies".

"ETSI does not perform certification" [7, p. 21].

Summary:

3.1 Mechanism exists that ensures disability support by a standard

Yes

3.2 Conformance governance is always part of a standard

Online for free for all

3.3 Conformance test is offered to implementers

Online for free for all

3.4 Conformance validation available to implementers

Online for free for all

3.5 Conformance certification available

Not available

4 . Open Interoperability

ETSI is giving emphasis to the quality of standards and the interoperability of standards [6].

Summary:

4.1 The organization provides governance for open identification in standards

Online for free for all

4.2 The organization provides governance for open negotiation in standards

Online for free for all

4.3 The organization provides governance for open selection in standards

Online for free for all

5 . Open Meeting

Membership of ETSI is open to any company or organization. Full membership can be obtained by organizations in the geographical area of CEPT. Associate membership is for organizations not fully eligible for full membership. Observership can be obtained for any organization eligible to become a member but wishes not to participate fully in the proceedings of the institute [3][5, p.6].

Members and associate member pay a fee according to size class ranging from Euro 6,000 to 154,720. Universities, public research bodies and not-for-profit user associations pay a flat fee of Euro 2,000. Observers pay a flat fee of Euro 4,000 yearly [4].

All "full and associate members have the right to participate in the work of a technical committee. Others may only participate under exceptional circumstances and by invitation" [2][5, p. 91].

The ETSI web site has accessibility functionality [1]. Apart from this no specific recommendations on accessibility has been found with regard to meetings etc.

Summary:

5.1 The organization is open to all types of companies and organizations

    Membership fees relate to size of organization

5.2 The organization is open to individuals

    Cannot become members

5.3 The standardization process specifically allows participation of members with limited abilities

    Partly

5.4 Meetings are open to all members/all can participate in the standards creation process

    Yes, except observers

5.5 Non-members can participate in the standards creation process

    No

6. Consensus

ETSI highlights the importance of consensus. This is for instance the recommendation for decisions made by the General Assembly [5, p.19].

A technical committee shall "endeavor to reach consensus on all issues", including the approval of draft standards and the adoption of technical specifications and technical reports [5, p. 95].

If no consensus is reached, a technical committee takes its decisions by a weighted vote. "Each member or organization has a voting weight determined by its membership fee, which in turn depends upon the company's financial turnover and other factors" [2].

"A proposition passes if at least 71% of the weighed votes cast are in favor" [2].

Before a standard is submitted for final approval by ETSI, a public review process must be carried out. It is, however, not ETSI who is responsible for this review process but the national bodies that are members of ETSI [5, p.23].

Summary

6.1 Does the organization have a stated objective of reaching consensus when making decisions on standards

Yes

6.2 If consensus is not reached, can the standard be approved

Approved with 71% majority

6.3. Is there a formal process for external review of standard proposals by interest groups (non-members)

Yes

7 . Due process

"In the event of a dispute arising between members, all means shall be used to solve the dispute by internal conciliation". If this is unsuccessful, it should be "dealt with under French law unless the parties agree otherwise" [5, p.25].

If a member of a technical committee has an appeal against the ruling on a vote, this may be submitted to the board of ETSI for decision [5, p.96].

Summary

7.1 Can a member formally appeal or raise objections to a procedure to an independent, higher instance

Yes

7.2 Can a member formally appeal or raise objections to a technical specification to an independent, higher instance

Unavailable

8 . Open change

This must be assumed given the procedures of ETSI [IDC].

Summary

8.1 All changes to a standard is subject to the criteria 1-7 above

Yes

9 . On-going support

Following the development of a standard, the technical committee may decide to terminate. If so, it must first "prepare recommendations concerning the maintenance of its ETSI deliverables" [5, p. 90].

When a need for technical maintenance is identified for a standard that was produced by a committee no longer in existence, the ETSI shall attempt to find an appropriate existing committee to perform the maintenance [5, p. 103].

There are specific procedures for the removal of a standard [5, p. 103].

Summary

9.1 The organization has stated commitment to support the standard throughout its life:

Until removal

R e f e r e n c e s

[1] http://www.etsi.org/website/accessibility.aspx. December 13, 2007.

[2] http://www.etsi.org/WebSite/AboutETSI/HowWeWork/Howwework.aspx.
December 13, 2007.

[3] http://www.etsi.org/WebSite/Membership/eligibility.aspx. December 13, 2007.

[4] http://www.etsi.org/WebSite/Membership/fees.aspx. December 13, 2007.

[5] ETSI Directives, Version 22, July 2007 (collection of Directives and Guidelines).

[6]
http://www.etsi.org/WebSite/AboutETSI/HowWeWork/Testingandinteroperability.aspx.
December 13, 2007.

[7] Achieving Technical Interoperability. ETSI White Paper no. 3. October, 2006.

[8] http://portal.etsi.org/hf/Summary.asp. December 13, 2007.

[9] http://www.etsi.org/WebSite/homepage.aspx. January 31, 2008.

THE INTERNET ENGINEERING TASK FORCE (IETF)

Introduction

"The Internet Engineering Task Force (IETF) is a large open international community of network designers, operators, vendors, and researchers concerned with the evolution of the Internet architecture and the smooth operation of the Internet. It is open to any interested individual" [7].

"The actual technical work of the IETF is done in its working groups, which are organized by topic into several areas (e.g., routing, transport, security, etc.). Much of the work is handled via mailing lists. The IETF holds meetings three times per year" [7].

"The IETF working groups are grouped into areas, and managed by Area Directors, or ADs. The ADs are members of the Internet Engineering Steering Group (IESG). Providing architectural oversight is the Internet Architecture Board, (IAB). The IAB also adjudicates appeals when someone complains that the IESG has failed. The IAB and IESG are chartered by the Internet Society (ISOC) for these purposes. The General Area Director also serves as the chair of the IESG and of the IETF, and is an ex-officio member of the IAB" [7].

1. Open documentation

In IEFT all drafts, mailing lists, final documentation etc. of a standard is freely available to everybody. This is in line with the philosophy of the organization which is "Open process - any interested person can participate in the work, know what is being decided, and make his or her voice heard on the issue. Part of this principle is our commitment to making our documents, our WG mailing lists, our attendance lists, and our meeting minutes publicly available on the Internet" [3, 1].

Also the standard process specifies this access to documentation: "A specification is repeatedly discussed and its merits debated in open meetings and/or public electronic mailing lists, and it is made available for review via world-wide on-line directories". [RFC2026, 1.2 and 2.2].

IETF has a specific document specifying the general policy of copyright of contributions. The policy document states: "In all matters of copyright and document procedures, the intent is to benefit the Internet community and the public at large, while respecting the legitimate rights of others" [4, 3.1].

By submitting contributions to IETF, the contributors accepts to transfer all rights to IETF: "To the extent that a Contribution or any portion thereof is protected by copyright and other rights of authorship, the Contributor, and each named co-Contributor, and the organization he or she represents or is sponsored by (if any) grant a perpetual, irrevocable, non-exclusive, royalty-free, world-wide right and license to the ISOC and the IETF under all intellectual property rights in the Contribution" [4, 3.3].

Summary:

1.1 Access to all preliminary results documentation

Online for free for all

1.2 Access to all final results documentation

Online for free for all

1.3 Access to committee meeting notes

Online for free for all

1.4 Access to documentation of procedures, governance policies, annual reports, etc.

Online for free for all

1.5 Access to documentation of copyright on published documents

Online for free for all

2. Open IPR

IETF has a specific document that describes the policy of the organization towards IPR [5]. This is available online.

This document provides an overall policy: "In all matters of Intellectual Property Rights, the intent is to benefit the Internet community and the public at large, while respecting the legitimate rights of others" [5, 3.1].

IETF has specific focus on making the IPRs that may apply to a standard visible upfront and require that all contributors disclosure any IPR that may apply [5, 6].

Apart from this, IETF does not require any IPR conditions to be met [IDC].

IETF does not make specific recommendations on IPRs. Instead, IETF specifically does not accept any responsibilities in the IPR area: "The IESG will not make any explicit determination that the assurance of reasonable and non-discriminatory terms or any other terms for the use of an Implementing Technology has been fulfilled in practice". [5, 4.1].

All standards must include the following text: "The IETF takes no position regarding the validity or scope of any Intellectual Property Rights or other rights that might be claimed to pertain to the implementation or use of the technology described in this document or the extent to which any license under such rights might or might not be available". [5, 5].

Summary:

2.1 The IPR or copyright policies of the organization are

Available on-line

2.2 The organization has governance to disclose any IPR from any contributor

Online for free for all

2.3 Level of IPR set mandatory by the organization

None

2.4 Level of IPR recommended by the organization

None

3 . Open access

There is no mentioning of impaired people in key IETF documents [1] and [2].

Generally, conformance is not described very extensively in IETF documentation [IDC]. However, IETF works with a specific type of documents - Applicability Statement (AS) - that specifies "how, and under what circumstances, one or more standards may be applied to support a particular Internet capability". As such, it is a guide for implementers. The AS can also include a comprehensive conformance specification. AS documents are optional [1, 3.2].

IETF comment:

"However, there has been no indication that impaired people have any trouble contributing to the work of the IETF. For example, a blind person is currently serving as the Security AD, and a deaf person regularly attends the IETF meetings".

Summary:

3.1 Mechanism exists that ensures disability support by a standard

No

3.2 Conformance governance is always part of a standard

No

3.3 Conformance test is offered to implementers

Not available

3.4 Conformance validation available to implementers

Not available

3.5 Conformance certification available

Not available

4 . Open Interoperability

As mentioned in section 3, IETF works with a specific type of documents - Applicability Statement (AS) – "that specifies how, and under what circumstances, one or more standards may be applied to support a particular Internet capability" [1, 3.2].

An AS identifies the relevant standards and the specific way in which they are to be combined, and may also specify particular values or ranges of standards' parameters or sub-functions of a protocol that must be implemented. An AS also specifies the

circumstances in which the use of a particular standard is required, recommended, or elective. AS documents are optional [1, 3.2].

IETF requires "at least two independent and inter-operable implementations for advancing a protocol specification to Draft Standard" [6]. IETF provides access to these online. "The IETF Secretariat provides the information FYI only and in no way endorses its accuracy" [6].

Summary:

4.1 The organization provides governance for open identification in standards

   Online for free for all

4.2 The organization provides governance for open negotiation in standards

   Online for free for all

4.3 The organization provides governance for open selection in standards

   Unavailable

5. Open Meeting

The policy of IETF is clear when it comes to membership: "There is no formal membership in the IETF. Participation is open to all. This participation may be by on-line contribution, attendance at face-to-face sessions, or both. Anyone from the Internet community who has the time and interest is urged to participate in IETF meetings and any of its on-line working group discussions. Participation is by individual technical contributors, rather than by formal representatives of organizations." [2, 1].

This means a very high degree of openness in memberships. Note, however, that although members are working as individuals, but this does not exclude companies and organizations to have employees active in the standard process [IDC].

IETF comment:

"Again, there are examples of people with disabilities that actually participate. While I cannot think of any documents on the topic, there does not appear to be an issue".

Summary:

5.1 The organization is open to all types of companies and organizations

   Free membership

5.2 The organization is open to individuals

   Free membership

5.3 The standardization process specifically allows participation of members with limited abilities

   Unavailable

5.4 Meetings are open to all members/all can participate in the standards creation process

    Yes

5.5 Non-members can participate in the standards creation process

    Yes

6. Consensus

IETF is working with a concept of "rough consensus" [1, 1.2]. This means there is a stated objective to reach consensus, but also recognizes that this may not always be possible. If just a few participants have concerns it is considered "rough consensus".

The guidance for the chairing persons of the working groups is: "A number of procedural questions and issues will arise over time, and it is the function of the Working Group Chair(s) to manage the group process, keeping in mind that the overall purpose of the group is to make progress towards reaching rough consensus in realizing the working group's goals and objectives." [2, 3].

Still, at the end of the process, an Area Director will be making the final decision of the standard, regardless of consensus has been reached in the working group or not [2, 3.4]. Following this, the IESG (Internet Engineering Steering Group) makes the final approval of a standard [1, 6.1.2].

Before IESG makes the final approval of a standard, "the IESG will send notice to the IETF of the pending IESG consideration of the document(s) to permit a final review by the general Internet community. This "Last-Call" notification shall be via electronic mail to the IETF Announce mailing list. Comments on a Last-Call shall be accepted from anyone, and should be sent as directed in the Last-Call announcement". [1, 6.1.2].

IETF comment:

6.2: "It should be clear that such an action is subject to appeal"

Summary

6.1 Does the organization have a stated objective of reaching consensus when making decisions on standards?

    Yes

6.2 If consensus is not reached, can the standard be approved?

    Can be decided by a "director" or similar in the organization

6.3. Is there a formal process for external review of standard proposals by interest groups (non-members)?

    Yes

7. Due process

In IETF there is a clearly defined escalation process for a dispute on both the process and technical questions to IESG (Internet Engineering Steering Group) and then to IAB (Internet Architecture Board) [IETF 2026, 6.5].

Summary

7.1 Can a member formally appeal or raise objections to a procedure to an independent, higher instance

Yes

7.2 Can a member formally appeal or raise objections to a technical specification to an independent, higher instance

Yes

8. Open change

IETF has a clear policy that all revisions of standards must go through the same process as a new standard [RFC2026, 6.3].

Summary

8.1 All changes to a standard is subject to the criteria 1-7 above

Yes

9. On-going support

"As the technology changes and matures, it is possible for a new Standard specification to be so clearly superior technically that one or more existing standards track specifications for the same function should be retired. In this case, or when it is felt for some other reason that an existing standards track specification should be retired, the IESG shall approve a change of status of the old specification(s) to Historic. This recommendation shall be issued with the same Last-Call and notification procedures used for any other standards action. A request to retire an existing standard can originate from a Working Group, an Area Director or some other interested party" [1, 6.4].

Summary

9.1 The organization has stated commitment to support the standard throughout its life:

Until removal of the published standard from public domain

References

[1] RFC 2026: The Internet Standards Process - Revision 3. IETF, 1996.

[2] RFC 2418: IETF Working Group Guidelines and Procedures. IETF, 1998

[3] RFC 3935: A Mission Statement for the IETF. IETF, 2004.

[4] RFC 3978: IETF Rights in Contributions. IETF, 2005.

[5] RFC 3979: Intellectual Property Rights in IETF Technology. IETF, 2005.

[6] http://www.ietf.org/IESG/implementation.html. November 16, 2007.

[7] http://www.ietf.org/overview.html. January 31, 2008.

[IDC] IDC comments and evaluations

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

Introduction

"ISO (International Organization for Standardization) is the world's largest developer and publisher of International Standards" [10].

"ISO is a network of the national standards institutes of 157 countries, one member per country, with a Central Secretariat in Geneva, Switzerland, that coordinates the system" [9].

"ISO is a non-governmental organization that forms a bridge between the public and private sectors. On the one hand, many of its member institutes are part of the governmental structure of their countries, or are mandated by their government. On the other hand, other members have their roots uniquely in the private sector, having been set up by national partnerships of industry associations" [9].

"Therefore, ISO enables a consensus to be reached on solutions that meet both the requirements of business and the broader needs of society" [9].

1. Open documentation

Generally, working documents except for the final documents are considered internal documents only for the various groups and interest parties working on the standardization process [3, Annex SF].

Documents are increasingly distributed in electronic format [3, Annex SF].

In some cases it is specifically mentioned that documents may not be distributed to others than members [1, 1.13.5].

Standards and other documents are available for sale only [5]. The general directives covering policies and guidelines are, however, available online for free [6].

"Copyright for all drafts and standards as well as other publications belong to ISO". This is evident from the documents and from the ISO Directives [1, 2.13][3, SM]. However, national bodies have the right to re-publish a standard as a national standard [3, SM].

Summary:

1.1 Access to all preliminary results documentation

    Online for members only

1.2 Access to all final results documentation

    Online for a fee for all

1.3 Access to committee meeting notes

    Online for members only

1.4 Access to documentation of procedures, governance policies, annual reports, etc.

    Online for free for all

1.5 Access to documentation of copyright on published documents

    Online for free for all

2. Open IPR

Generally, ISO is aiming for standards where no IPR apply. However, should IPR exist for a standard, ISO makes it mandatory for originators or involved parties should make this known to ISO.

In such cases it is also mandatory that the IPR holder is willing to document RAND terms which has to be made official in a statement that is being hold in a registry of the ISO central repository. If the IPR holder is not willing to adhere to RAND, the item in question is not usually included in a standard [1, 2.14][2, Annex F].

ISO comment:

"There is no recommendation which recommends to not develop standards containing provisions depending on a patent."

Summary:

2.1 The IPR or copyright policies of the organization are

    Available on-line

2.2 The organization has governance to disclose any IPR from any contributor

    Online for free for all

2.3 Level of IPR set mandatory by the organization

    Patent and classic RAND

2.4 Level of IPR recommended by the organization

    Patent and classic RAND

3. Open access

It is a stated requirement for standards that they must be documented so that "conformity can be assessed by the supplier, the user or a third party". However, this should not go beyond testing. With regard to conformity assessment systems, these are not considered part of individual standards but are part of the work of a separate Committee on Conformity Assessment (ISO/CASCO) [2, 6.7].

An optional element in an ISO standard is a section on requirements that could include "the required limiting values of quantifiable characteristics". For each requirement there must be provided a reference to the test method for determining or verifying the values of the characteristics [2, 6.3.3].

A standard may also include the procedure for checking conformity to stated requirements [2, 6.3.5].

As an option, the standard may include a section to "establish a system of classification, designation or coding of products, processes or services that conform to stated requirements" [2, 6.3.6].

Summary:

3.1 Mechanism exists that ensures disability support by a standard

    No

3.2 Conformance governance is always part of a standard

    Yes

3.3 Conformance test is offered to implementers

    Online for a fee for all (guidance, not the test system)

3.4 Conformance validation available to implementers

    Not available

3.5 Conformance certification available

    Not available

4. Open Interoperability

There has not been found any documentation relating to these requirements [IDC].

Summary:

4.1 The organization provides governance for open identification in standards

    Not available

4.2 The organization provides governance for open negotiation in standards

    Not available

4.3 The organization provides governance for open selection in standards

    Not available

5. Open Meeting

ISO has a special structure as members generally are nations that are represented through their own local standard organization.

ISO operates with three types of members [4]:

☑   Member bodies: Countries that are full members and have a vote.

◪ Correspondent members: Countries who can participate as observers but have no voting rights.

◪ Subscriber members: Countries that want to maintain contact with ISO but at a very reduced membership fee.

"All national bodies have the right to participate in the work of the technical committees and subcommittees" [1, 1.7.1].

Individuals or organizations have some opportunities to participate in the work of ISO. Individuals may be selected by national member institutes to serve as experts in the technical committees or they may provide their input through involvement in the national mirror committee to the corresponding ISO technical committee [4].

Furthermore ISO technical committees may establish advisory groups to help the technical committee with specific tasks. The objectives of these groups are to allow representation and participation of interested parties outside the technical committees [1, 1.13.2].

ISO stresses the fact, that many member bodies have a public review process for making draft standards known and available to interested parties and to the general public [7].

Memberships fees cannot be determined from available, on-line information. The fees paid by each member are in proportion to the country's Gross National Income and trade figures [8].

ISO comment:

On criteria 5.5: *"No, international organizations in liason with ISO can participate".* However, IDC maintain the "yes" based on the published material quoted above [IDC].

Summary:

5.1 The organization is open to all types of companies and organizations

Membership fees relate to size of organization

5.2 The organization is open to individuals

No

5.3 The standardization process specifically allows participation of members with limited abilities

No

5.4 Meetings are open to all members/all can participate in the standards creation process

Yes

5.5 Non-members can participate in the standards creation process

Yes, through national bodies and advisory groups

6. Consensus

Consensus is an essential procedural principle for ISO that sees it as a necessary condition for the preparation of standards that will be accepted and widely used [1, foreword].

The considerations of successive drafts for standards must continue until consensus of voting members of the technical committee has been reached – or a decision to abandon or defer the project has been made. ISO defined "consensus" as "general agreement, characterized by the absence of sustained opposition to substantial issues by any important part of the concerned interests and by a process that involves seeking to take into account the views of all parties concerned and to reconcile any conflicting arguments". Consensus does not imply unanimity.

If consensus is not reached or in doubt of consensus the last resort is a vote with two-thirds majority. [1, 2.5.5-2.5.6].

Reviews of standards are done by the national bodies. ISO does not have a review process that goes beyond these [1, 2.6.1].

Summary

6.1 Does the organization have a stated objective of reaching consensus when making decisions on standards

   Yes

6.2 If consensus is not reached, can the standard be approved

   Approved with 66% majority

6.3. Is there a formal process for external review of standard proposals by interest groups (non-members)

   No

7. Due process

ISO has clearly defined and publicly available procedures for appeals. National bodies have the right of appeal to any higher instance up to the council board within 3 months after a decision.

Decisions in technical committees can be appealed to the Chief Executive Officer and it may be decided that a conciliation panel shall be set up to deal with the appeal.

Matters under appeal may be either technical or administrative in nature [1, 5].

Summary

7.1 Can a member formally appeal or raise objections to a procedure to an independent, higher instance

   Yes

7.2 Can a member formally appeal or raise objections to a technical specification to an independent, higher instance

    Yes

8 . Open change

This is not stated directly, but must be assumed given the procedures of ISO [IDC].

Summary

8.1 All changes to a standard is subject to the criteria 1-7 above

    Yes, assumed

9 . On-going support

ISO has specific procedures for the life of a standard. A technical committee should include in their plans an evaluation of revision work that is needed for a standard [1, 2.1.2].

All standards are "subject to systematic review in order to determine whether it should be confirmed, revised, amended, converted to another form of deliverable, or withdrawn". Specific rules apply for the intervals of reviews and requirements for the continuation of standards [3, 2.9].

If a technical committee has "developed a standard that will require frequent modifications, it may decide that a maintenance agency is required" [1, 2.11][1, Annex G].

Summary

9.1 The organization has stated commitment to support the standard throughout its life:

    Until removal of the published standard from public domain

References

[1] ISO/IEC Directives, Part 1, Procedures for the technical work. Fifth edition, 2004.

[2] ISO/IEC Directives, Part 2, Rules for the structure and drafting of International Standards. Fifth edition, 2004.

[3] ISO/IEC Directives. Supplement – Procedures specific to ISO. First edition, 2001.

[4] www.iso.org/iso/about/discover-iso_meet-iso/discover-iso_who-can-join-iso.htm. November 15, 2007.

[5] http://www.iso.org/iso/iso_catalogue.htm. November 15, 2007.

[6] http://www.iso.org/iso/standards_development/processes_and_procedures/iso_iec_directives_and_iso_supplement.htm. February 18, 2008.

[7] http://www.iso.org/iso/about/discover-iso_meet-iso/discover-iso_how-iso-standards-are-developed.htm. October 22, 2007.

[8] http://www.iso.org/iso/about/discover-iso_meet-iso/discover-iso_how-the-iso-system-is-financed.htm. February 18, 2007.

[9] http://www.iso.org/iso/about.htm. January 31, 2008.

[10] http://www.iso.org/iso/about/discover-iso_meet-iso.htm. January 31, 2008.

[IDC] IDC comments and evaluations

INTERNATIONAL TELECOMMUNICATION UNION (ITU)

Introduction

"ITU is United Nations' agency for telecommunications / information and communication technologies. As the global focal point for governments and the private sector, ITU's role in helping the world communicate spans 3 core sectors: radiocommunication, standardization and development. ITU also organizes TELECOM events and was the lead organizing agency of the World Summit on the Information Society" [14].

"ITU is based in Geneva, Switzerland, and its membership includes 191 Member States and more than 700 Sector Members and Associates" [14].

Standards (called recommendations) are either approved through a traditional approval process or the Alternative Approval Process. The latter account for most approvals today [15].

Comment by ITU-T:

"The previous paragraph on AAP and TAP is rather specific. Not sure whether you want to go into this detail here. You may want to consider adding text such as "The main products of ITU-T are Recommendations. Developed in study groups made up of experts from the private and public sectors, ITU-T standards (called Recommendations) define how telecommunication networks operate and interwork, and they help drive the global information society allowing social and economic development worldwide. ITU-T Recommendations are non-binding, however they are generally complied with due to their high quality and because they guarantee the interconnectivity of networks and enable telecommunication services to be provided on a worldwide scale. As of November 2007, there are around 3300 ITU-T Recommendations in force on topics from service definition to network architecture and security, from dial-up modems to Gbit/s optical transmission systems to next-generation networks (NGN) and IP-related issues."

1. Open documentation

Documents related to Study Groups are only available to members [2, p.34][2, p.36f].

Still, the policy is also that study groups should do a promotion plan "whose emphasis is the dissemination of study group information to the telecommunication community. Such material should cover, but is not limited to, new work initiatives and significant accomplishments regarding technologies and technical solutions" [3, 2.1.6].

ITU makes a point in making as much documentation as possible available online [2, p.34][2, p.37].

Standards are made available to the public as soon as possible after it has been approved [5, 2]. Access should be electronically if possible [5, A.1].

ITU-T Standards ("Recommendations" in ITU parlance) are not only available to the public, but they are available online for free. The major change in the information dissemination policy that has occurred in 2007 was the decision by the ITU Council to

make permanent the free-of-charge availability of ITU-T Recommendations online [11].

Material "submitted as a contribution to the work of ITU-T is presumed by ITU to have no restrictions in order to permit normal distribution of this material for discussions within the appropriate groups and possible use, in whole or in part, in any resulting" standard. "Authors acknowledge this condition of submission. In addition, authors may state any specific conditions on other uses of their contribution" [3, 3.1.5]. ITU documents are ITU copyrighted [3].

Comment by ITU-T:

"ITU-T's Telecommunication Standardization Advisory Group (TSAG) ruled that study groups can make their material (e.g., contributions, reports, temporary documents) freely available, if they so desire, for particular groups (e.g., universities) or universally. And a couple of study groups do make their documents available to non-members. See for example the public access documents of ITU-T Study Group 19 (www.itu.int/ITU-T/studygroups/com19/docs/index.html) or the executive summary of the meeting of ITU-T Study Group 16 (http://www.itu.int/ITU-T/studygroups/com16/results.html)."

Summary:

1.1 Access to all preliminary results documentation

Online for members only (a study group may determine to make some of its material available also to the public)

1.2 Access to all final results documentation

Online for free for all

1.3 Access to committee meeting notes

Online for members only (a study group may determine to make committee meeting notes, or parts thereof, available also to the public)

1.4 Access to documentation of procedures, governance policies, annual reports, etc.

Online for free for all

1.5 Access to documentation of copyright on published documents

Online for free for all

2. Open IPR

ITU puts emphasis on the disclosure of patents [6, 3]. Even in the procedures it is mandated that the chairman of a study group meeting "will ask at the beginning of each meeting whether anyone has knowledge of patents or software copyrights, the use of which may be required to implement the recommendation being considered" [3, 1.4.6].

It is mandatory that the IPR holder is willing to document either "free of charge" or RAND terms which has to be made official in a statement that is being hold in a

registry of ITU. If the IPR holder is not willing to adhere to the conditions, the item in question cannot be included in a standard [6, Annex 1].

Copyright and disclaimer for IPR must be added to all standards [4, 6.5].

Summary:

2.1 The IPR or copyright policies of the organization are

   Available on-line

2.2 The organization has governance to disclose any IPR from any contributor

   Online for free for all

2.3 Level of IPR set mandatory by the organization

   Patent and classic RAND or better

2.4 Level of IPR recommended by the organization

   Patent and classic RAND or better

3. Open access

"ITU has taken a lead in ensuring that telecommunication system design accounts for accessibility needs. ITU has produced human factor specifications, and telecommunication accessibility guidelines that provide system designers, service providers and operators with guidelines for providing all-inclusive communications" [1, p. 10] [8].

Some standards have procedures for conformance testing, but "there is no systematic approach to testing implementations of ITU-T recommendations for conformance or interoperability" [9]. Some of the Study Groups have defined conformance testing specifications for some standards [10].

Summary:

3.1 Mechanism exists that ensures disability support by a standard

   Yes

3.2 Conformance governance is always part of a standard

   No

3.3 Conformance test is offered to implementers

   Not available

3.4 Conformance validation available to implementers

   Not available

3.5 Conformance certification available

52

Not available

4 . Open Interoperability

ITU is actively involved in and supports interoperability testing by third parties [7]. This is, however, not a mandatory part of a standard [IDC].

Comment by ITU-T:

"Don't understand your explanation of "identification", "negotiation" and "selection"".

Summary:

4.1 The organization provides governance for open identification in standards

Not available

4.2 The organization provides governance for open negotiation in standards

Not available

4.3 The organization provides governance for open selection in standards

Not available

5 . Open Meeting

ITU has three types of members [2, p.41f]:

☑ Member states that are national government members of UN.

☑ Sector members that primarily companies from the private sector. Minimum contribution is 31,800 Swiss francs per year.

☑ Associates that come from the private sector and are entitled to work in one study group only. Contribution is 10,600 Swiss francs per year.

While Study Groups (work groups) are for members only, ITU is trying "to take into account the needs of all stakeholders in the development of standards" [1, p.15]. Non-members can participate in two ways [1, p.15][2, p. 23]:

☑ Workshops are open to all and free-of-charge and are being held by a number of study groups to seek the views of non-members and other standards developers.

☑ Focus Groups with a higher degree of independence to establish their working methods, types of outputs, membership, financing and administration. They allow the participation of any stakeholder.

☑ Even in study group meetings, non-members may be able to participate by invitation [12, 2.3].

Comment by ITU-T:

"Not sure what you mean by "significant". For 31,800 CHF, members can participate in the entire spectrum of ITU-T's work. At e.g. ETSI, where companies pay according to their telecoms turnover, the fee can be substantially higher. Some forums are much

more expensive than ITU-T. In cases where a forum might charge a lower fee, it has to be kept in mind that a forum works on a specific topic, whereas ITU-T spans a wide range of topics.

Comment on 5.3: Do you mean members with limited financial abilities? If yes, please see the comment above on focus groups and, in the case of study groups, please note that any expert may be invited by the chairman. In both cases, no fees are being charged. Also, workshops are open to non-members without charge."

Summary:

5.1 The organization is open to all types of companies and organizations

   Flat, significant fees for all

5.2 The organization is open to individuals

   Cannot become members

5.3 The standardization process specifically allows participation of members with limited abilities

   No

5.4 Meetings are open to all members/all can participate in the standards creation process

   Yes

5.5 Non-members can participate in the standards creation process

   Yes

6. Consensus

ITU does not have specific statements on consensus [IDC]. However, the procedures of the widely used Alternative Approval Process (AAP) contains a loop by which proposed standards much achieve full support from the Study Group in order to be approved. However, if just one member opposes the proposal, the standard can still be approved [4, 4-5]. This is considered equivalent to a consensus policy [IDC].

The approval process is, however, not very easy to understand (e.g. not very transparent), and the guidelines does not specify what happens if more than one member continuously oppose the proposal [4][IDC].

Comment by ITU-T:

"ITU operates by consensus. Implicitly, ISO's definition of "consensus" is understood: (Begin quote from ISO's definition) "general agreement, characterized by the absence of sustained opposition to substantial issues by any important part of the concerned interests and by a process that involves seeking to take into account the views of all parties concerned and to reconcile any conflicting arguments. NOTE Consensus need not imply unanimity." (end quote).

We would rather say that the approval process is transparent but not easy to understand at first sight. The procedures for approval are outlined for AAP in ITU-T Recommendation A.8 and for TAP (Traditional Approval Process) in Resolution 1. The procedures are very detailed and transparent (although, we admit, not easy to understand at first sight)."

Summary

6.1 Does the organization have a stated objective of reaching consensus when making decisions on standards

    Yes

6.2 If consensus is not reached, can the standard be approved

    Not clear

6.3. Is there a formal process for external review of standard proposals by interest groups (non-members)

    No

7 . Due process

No information has been found on appeals in ITU [IDC].

Comment by ITU-T:

"Study groups can bring an issue they have to TSAG (Telecommunication Standardization Advisory Group) of ITU-T. Member States can bring an issue to the ITU Plenipotentiary Conference or the ITU Council (the ITU Council is a subgroup of the ITU Plenipotentiary Conference and meets annually)."

Summary

7.1 Can a member formally appeal or raise objections to a procedure to an independent, higher instance

    Yes, according to ITU-T

7.2 Can a member formally appeal or raise objections to a technical specification to an independent, higher instance

    Yes, according to ITU-T

8 . Open change

The documentation on defining standards (A-series, in particular [8]) is applicable even for changes to existing standards.

Summary

8.1 All changes to a standard is subject to the criteria 1-7 above

    Yes

9. On-going support

Only one place seems to mention the life cycle of a standard beyond the initial standard [IDC]. A study group may decide to delete a standard if this "has been superseded by another recommendation or it has become obsolete" [4, 8.2.1]. However, it is assume that study groups with permanent existence are supporting the standard throughout its life-time [IDC].

In addition to this, ITU encourages the testing of interoperability of standards and the feedback to the organization of problems [7].

Comment by ITU-T:

"All standards are supported throughout their lifetime. If a study group ceases to exist, the standards that it has been responsible for will be attributed to other study groups. See Annex C of Resolution 2, "List of Recommendations under the responsibility of the respective study groups and TSAG in the post-2004 study period."" [13].

Summary

9.1 The organization has stated commitment to support the standard throughout its life:

   Until removal

References

[1] ITU-T Standardization, Helping the World Communicate. ITU, 2007.

[2] ITU-T Guide for Beginners. ITU, 2005.

[3] Work methods for study groups of the ITU Telecommunication Standardization Sector. A.1. ITU, 2006.

[4] Alternative approval process for new and revised ITU-T Recommendations. A.8. ITU, 2006.

[5] Publication of ITU-T Recommendations and WTSA proceedings. A.11. ITU, 2004.

[6] Guidelines for Implementation of the Common Patent Policy for ITU-T/ITU-R/ISO/IEC. ITU, 2007.

[7] Guidelines on interoperability experiments. A.Supplement 2. ITU, 2000.

[8] http://www.itu.int/ITU-T/studygroups/com16/accessibility/index.html. November 23, 2007.

[9] http://www.itu.int/ITU-T/newslog/Group+To+Examine+Conformance+And+Interoperability+Testing+Needs.aspx. November 23, 2007.

[10] http://www.itu.int/ITU-T/studygroups/com11/area.html. November 23, 2007.

[11] http://www.itu.int/newsroom/press_releases/2007/21.html. November 23, 2007.

[12] Resolution 1 – Rules of procedure of the ITU Telecommunication Standardization Sector (ITU-T). ITU-T, 2004

[13] Resolution 2 – ITU-T study group responsibility and mandates. ITU-T, 2004

[14] http://www.itu.int/net/home/index.aspx. January 31, 2008.

[15] http://www.itu.int/ITU-T/aapinfo/index.html. January 31, 2008.

[IDC] IDC comments and evaluation

NATIONAL INSTITUTE OF TECHNOLOGY AND STANDARDS (NIST)

Note: The comments from NIST were not received in writing but during a phone interview on November 16, 2007.

Introduction

"Founded in 1901, NIST is a non-regulatory federal agency within the U.S. Department of Commerce. NIST's mission is to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life" [3].

NIST carries out its mission in four cooperative programs [3]:

☑ The NIST Laboratories, conducting research

☑ The Baldrige National Quality Program, which promotes performance excellence

☑ The Hollings Manufacturing Extension Partnership, a nationwide network of local centers offering technical and business assistance to smaller manufacturers

☑ The Technology Innovation Program, which is planned to provide cost-shared awards

The Information Technology Laboratory (ITL) has "the broad mission of supporting U.S. industry, government, and academia by promoting U.S. innovation and industrial competitiveness through advancement of information technology measurement science, standards, and technology in ways that enhance economic security and improve our quality of life" [4].

ITL is accredited by ANSI to submit standards to ANSI in the area of "information exchange relating to automatic data processing and related systems." It should be noted, however, that ITL works entirely with one standard which as been updated for 21 years (NIST SP 500-271 American National Standard for Information Systems-Data Format for the Interchange of Fingerprint, Facial and Scar Mark and Tattoo (SMT) Information) [5].

1. Open documentation

Standards must "be published and made available as soon as possible" [2, 4.5].

NIST comment:

"NIST comments that preliminary documents on a standard are available online for free.

There are no workgroup meetings as such.

NIST does not publish any annual reports."

Summary:

1.1 Access to all preliminary results documentation

Online for free for all

1.2 Access to all final results documentation

Online for free for all

1.3 Access to committee meeting notes

NA

1.4 Access to documentation of procedures, governance policies, annual reports, etc.

Online for free for all

1.5 Access to documentation of copyright on published documents

Online for free for all

2 . O p e n I P R

NIST makes it mandatory that documents states that NIST documents are not subject to copyright. "Any organization interested in reproducing is free to do so". [1, 12].

Any organization with IPR related to a standard must sign that they provide the IPR with either no compensation or as minimum RAND conditions [2, 3.1].

However, no responsibility in the disclosure of IPRs is assumed [2, 3.1.4].

NIST comments:

"NIST claims that there are guidelines on disclosure of IPRs. However, they were not sure where it is documented.

NIST comments that the policy is to have no patents included in standards."

In this case IDC gives preference to the documentation referenced rather than verbal statements [IDC].

Summary:

2.1 The IPR or copyright policies of the organization are

Available on-line

2.2 The organization has governance to disclose any IPR from any contributor

Not available

2.3 Level of IPR set mandatory by the organization

RAND or less restrictive

2.4 Level of IPR recommended by the organization

RAND or less restrictive

3. Open access

No information is provided on this subject in the documentation [IDC].

NIST comments:

"As a public organization NIST must adhere to the government Section 508 on disability.

The standard has a conformance clause.

NIST provides software available online for conformance testing and validation.

Conformance certification is for some functionality available from third party (FBI)"

Summary:

3.1 Mechanism exists that ensures disability support by a standard

    Yes

3.2 Conformance governance is always part of a standard

    Yes

3.3 Conformance test is offered to implementers

    Yes

3.4 Conformance validation available to implementers

    Yes

3.5 Conformance certification available

    No (partly available from third party)

4. Open Interoperability

No information is provided on this subject [IDC].

NIST comments:

"The NIST standard focus on the higher levels of data interchange, while for the underlying communication protocol it uses existing standards."

Summary:

4.1 The organization provides governance for open identification in standards

    Not available

4.2 The organization provides governance for open negotiation in standards

    Not available

4.3 The organization provides governance for open selection in standards

    Not available

5. Open Meeting

Standards are defined in NIST through the use of a canvass list or consensus body. This consists of those organizations, companies, government bodies, standards developers, individuals etc. that are interested in participating [1, 3.1-3.2].

Participation "is open to all persons who are directly and materially affected by the activity in question. There shall be no undue financial barriers to participation" [2, 1.1].

NIST comments:

"As a public organization, NIST has to adhere to the government Section 508 requirements on disability support."

Summary:

5.1 The organization is open to all types of companies and organizations

    Free membership

5.2 The organization is open to individuals

    Free membership

5.3 The standardization process specifically allows participation of members with limited abilities

    Yes

5.4 Meetings are open to all members/all can participate in the standards creation process

    Yes

5.5 Non-members can participate in the standards creation process

    Yes

6. Consensus

NIST emphasizes that no interest category, individual or organization must dominate the standards development process so that fair and equitable consideration of other viewpoints are not excluded [1, 9.1]. The "development process must have a balance of interests" [1, 9.2]. This constitutes a consideration for consensus [IDC].

Standards are submitted to ANSI in a format to allow for public comments [1, 2.2].

Public review is then carried out using the Standards Action of ANSI [1, 4.3][1, 5.2].

Standards are approved by a majority of all members of the canvass list and "at least two thirds of those voting, excluding abstentions and invalid responses" [1, 4.5].

Summary

6.1 Does the organization have a stated objective of reaching consensus when making decisions on standards

Yes

6.2 If consensus is not reached, can the standard be approved

Approved with 51% majority (all members)/Approved with 66% majority (of voting)

6.3. Is there a formal process for external review of standard proposals by interest groups (non-members)

Yes

7. Due process

Any person who has directly and materially affected interests in a standard has the right to appeal. NIST will then arrange for an impartial appeals body composed of at least three individuals [1, 7].

Further appeals can be made to ANSI [1, 7.7][2, 2.7].

NIST comments:

"Appeals on technical specifications can only be done until time of formal approval."

Summary

7.1 Can a member formally appeal or raise objections to a procedure to an independent, higher instance

Yes

7.2 Can a member formally appeal or raise objections to a technical specification to an independent, higher instance

Yes

8. Open change

Must be assumed given the structure of the process [IDC].

NIST comments:

"New versions of the standard must go through the whole process."

Summary

8.1 All changes to a standard is subject to the criteria 1-7 above

Yes

9. On-going support

NIST follows ANSI's requirements for periodic maintenance of a standard [1, 14].

NIST follows ANSI's requirements for withdrawal of a standard [1, 15].

Summary

9.1 The organization has stated commitment to support the standard throughout its life:

Until removal

References

[1] NIST/ITL Procedures for the Development of American National Standards. No publication date.

[2] ANSI Essential Requirements: Due process requirements for American National Standards. 2007.

[3] http://www.nist.gov/public_affairs/general2.htm. January 31, 2008.

[4] http://www.itl.nist.gov/itl-what_itl_does.html. January 31, 2008.

[5] Personal correspondence with Elaine Newton, NIST, November 16, 2008

[IDC] IDC comments and evaluations

ORGANIZATION FOR THE ADVANCEMENT OF STRUCTURED INFORMATION STANDARDS (OASIS)

Introduction

"OASIS (Organization for the Advancement of Structured Information Standards) is a not-for-profit consortium that drives the development, convergence and adoption of open standards for the global information society. The consortium produces more Web services standards than any other organization along with standards for security, e-business, and standardization efforts in the public sector and for application-specific markets. Founded in 1993, OASIS has more than 5,000 participants representing over 600 organizations and individual members in 100 countries.

OASIS is distinguished by its transparent governance and operating procedures. Members themselves set the OASIS technical agenda, using a lightweight process expressly designed to promote industry consensus and unite disparate efforts. Completed work is ratified by open ballot. Governance is accountable and unrestricted. Officers of both the OASIS Board of Directors and Technical Advisory Board are chosen by democratic election to serve two-year terms. Consortium leadership is based on individual merit and is not tied to financial contribution, corporate standing, or special appointment" [18].

"OASIS was founded in 1993 under the name SGML Open as a consortium of vendors and users devoted to developing guidelines for interoperability among products that support the Standard Generalized Markup Language (SGML). OASIS changed its name in 1998 to reflect an expanded scope of technical work, including the Extensible Markup Language (XML) and other related standards" [18].

1. Open documentation

OASIS offers full transparency of all documents and emails created in the standard process. "All web pages, documents, ballot results and email archives of all TCs and SCs shall be publicly visible" [15].

All standard documents can be downloaded for free from the Web site [14].

OASIS requests that all contributions to the work is transferred to OASIS with regard to the copyright. "To the extent that a Contributor holds a copyright interest in its Contribution, such Contributor grants to OASIS a perpetual, irrevocable, non-exclusive, royalty-free, worldwide copyright license, with the right to directly and indirectly sublicense, to copy, publish, and distribute the Contribution in any way" [16].

As for copyright on all standard documents, OASIS grant permission to free use of the standards specification with the following rule: "This document and translations of it may be copied and furnished to others, and derivative works that comment on or otherwise explain it or assist in its implementation may be prepared, copied, published and distributed, in whole or in part, without restriction of any kind, provided that the above copyright notice and this paragraph are included on all such copies and derivative works." [17].

Summary:

1.1 Access to all preliminary results documentation

Online for free for all

1.2 Access to all final results documentation

Online for free for all

1.3 Access to committee meeting notes

Online for free for all

1.4 Access to documentation of procedures, governance policies, annual reports, etc.

Online for free for all

1.5 Access to documentation of copyright on published documents

Online for free for all

2 . Open IPR

OASIS has clearly defined policies on how to treat IPR [10].

These policies also require that any contributor or party must disclose to OASIS in writing the existence of all patents and/or patent applications owned or claimed by them [10].

"OASIS supports this diversity by permitting each Committee to choose for itself, in its charter, one of three IPR modes under which it will operate. Each mode governs what licensing terms must be granted to an implementer upon request" [11]:

☑ "Reasonable And Non-Discriminatory (RAND) defines a basic set of minimal terms a patent holder is obliged to offer (such as granting a license that is worldwide, non-exclusive, perpetual, reasonable, and non-discriminatory, etc.) and leaves all other non-specified terms to negotiations between the patent holder and the implementer seeking a license.

☑ Royalty-Free (RF) on RAND Terms operates in the same manner as RAND, however, it does not permit the patent holder to charge fees or royalties for the license.

☑ RF on Limited Terms specifies the exact Royalty Free licensing terms and conditions that may be included in a patent holder's license and that must be granted upon request without further negotiations" [11].

TABLE 2			
Overview of IPR [11]			
Feature	License	Fee	Other terms
RAND	Available to all	Negotiable	Negotiable
RF or RAND terms	Available to all	Not allowed	Negotiable
RF on Limited terms	Available to all	Not allowed	Fixed options

Source: IDC, 2007

Summary:

2.1 The IPR or copyright policies of the organization are

   Available on-line

2.2 The organization has governance to disclose any IPR from any contributor

   Online for free for all

2.3 Level of IPR set mandatory by the organization

   Patent and classic RAND, or less restrictive

2.4 Level of IPR recommended by the organization

   Patent and classic RAND, or less restrictive

3. Open access

OASIS does not specifically mention support for disabilities in their standards [IDC].

Conformance and testing is specifically referred to third party companies. "OASIS Adoption Services are a group of services which help drive global adoption of OASIS Standards via various service offerings". However, "OASIS does not guarantee the content and accuracy of the Referral Service Provider's service" [12].

Summary:

3.1 Mechanism exists that ensures disability support by a standard

   No

3.2 Conformance governance is always part of a standard

   No

3.3 Conformance test is offered to implementers

   Available from 3rd party

66

3.4 Conformance validation available to implementers

    Available from 3rd party

3.5 Conformance certification available

    Available from 3rd party

4 . Open Interoperability

We have not been able to locate any governance for the requirements 4.1 to 4.3 [IDC].

Summary:

4.1 The organization provides governance for open identification in standards

    Not clear

4.2 The organization provides governance for open negotiation in standards

    Not clear

4.3 The organization provides governance for open selection in standards

    Not clear

5 . Open Meeting

"OASIS offers membership options and dues designed to ensure that all those affected by open standards have a voice in their creation" [1].

- ☑ "Foundational Sponsor-level membership offers the highest visibility and participation benefits.

- ☑ Sponsor-level membership enables organizations to fully participate in advancing open standards and be recognized for their contributions.

- ☑ Contributor-level membership accommodates organizations that wish to advance and track open standards without receiving promotional benefits.

- ☑ Individual and Associate-level membership allows participation in Committee work by those who are self-employed or whose employers are unable to join on their own behalf" [1].

It should be noted that individual members have limited influence. They participate at the Committee level; they can chair Committees and vote on Committee specifications. Individuals cannot vote on OASIS Standards and elections for Board of Directors; in those ballots, each member organization casts a single vote [1].

There are fees for becoming a member that varies from USD 44,000-50,000 for foundational sponsors to USD 1,100 to 8,000 for contributor level membership. These fees are graduated according to size of organization [1].

Individual membership fee is USD 300 [1].

Any member can sign up for participation in a standard committee, either as member or observer [2].

Summary:

5.1 The organization is open to all types of companies and organizations

Membership fees relate to size of organization

5.2 The organization is open to individuals

Nominal membership fee (limited privileges)

5.3 The standardization process specifically allows participation of members with limited abilities

Unavailable

5.4 Meetings are open to all members/all can participate in the standards creation process

Yes

5.5 Non-members can participate in the standards creation process

No

6. Consensus

According to OASIS, the committee "meeting discussions should be carried on in a friendly, professional manner, and consensus should be achieved whenever possible". [3]. Also, the Robert's Rule of Order is applied in the committee work, and these are particularly relevant when there are disputes. This means that in such cases normal parliamentary rules will apply (simple majority is the standard, in some cases among all qualified voters) [3].

"Before the technical committee can approve its Committee Draft as a Committee Specification, the TC must conduct a public review of the work. The public review must be announced by the TC Administrator to the OASIS Membership list and optionally on other public mail lists; the TC Administrator shall at the same time issue a call for IPR disclosure. Comments from non-TC Members must be collected via the TC's archived public comment facility; comments made through any other means shall not be accepted. The TC must acknowledge the receipt of each comment, track the comments received, and publish to its primary e-mail list the disposition of each comment at the end of the review period" [4].

The proposed standard is then voted upon by the organizational members (and these only) and approved if less than 25% of the votes are "no". If there are more than 25% votes against, the TC gets another chance to resolve the issues [5].

Summary

6.1 Does the organization have a stated objective of reaching consensus when making decisions on standards

Yes

6.2 If consensus is not reached, can the standard be approved

Approved with 51% majority in TC and 75% majority among organizational members.

6.3. Is there a formal process for external review of standard proposals by interest groups (non-members)

Yes

7. Due process

OASIS has clearly defined appeal possibilities related to procedural matters. Appeals regarding actions of a TC must be made to the TC Administrator. Appeals regarding actions of the TC Administrator must be made to the Chairman of the OASIS Board of Directors. "The OASIS Board of Directors has the authority to effect such remedial action as may be necessary to remedy a complaint brought under this TC Process" [6].

Summary

7.1 Can a member formally appeal or raise objections to a procedure to an independent, higher instance

Yes

7.2 Can a member formally appeal or raise objections to a technical specification to an independent, higher instance

No

8. Open change

OASIS is not very clear on the process following the definition of a new standard. The TC guidelines do not contain any information on the subsequent procedures [IDC]. Recommendations are: "A Technical Committee may choose in its charter (and by its actions) to continue to develop future versions, additional profiles or extensions or supplemental materials beyond its initially issued final specification. See [to come]." [7]. We must assume, however, that for changes to a standard all the rules apply that is specified in the work of the TC in the initial definition of the standard [IDC].

Summary

8.1 All changes to a standard is subject to the criteria 1-7 above

Yes, assumed

9. On-going support

As stated under point 8, OASIS does not specify explicitly what happens with a standard following the initial approval. There are no specific requirements for a TC to continue the work on a standard, once it is approved [IDC].

However, "to promote the adoption of OASIS Standards and specifications, OASIS publishes case studies that document meaningful implementation experiences. OASIS case studies are a) authored by OASIS staff or staff-authorized contractors and/or b) initiated, reviewed, and approved as a deliverable of one or more OASIS Committees". [8].

OASIS also has "Interoperability Demonstrations (InterOps), that are public interoperability demonstrations that showcase multi-vendor implementations of approved OASIS work. Usually hosted in connection with a conference or trade show, OASIS InterOps are official Consortium activities, endorsed by one or more OASIS Technical Committees (TCs), and mutually supported by OASIS staff and InterOp Participants" [9].

Summary

9.1 The organization has stated commitment to support the standard throughout its life:

   Rectifies problems identified in initial implementations

R e f e r e n c e s

[1] http://www.oasis-open.org/join/categories.php, November 16, 2007

[2] http://www.oasis-open.org/committees/join.php, November 16, 2007

[3] http://wiki.oasis-open.org/staff-stds-wiki/OrganizingAndConductingMeetings?highlight=%28consensus%29, November 16, 2007

[4] http://www.oasis-open.org/committees/process.php#s3.2, November 16, 2007

[5] http://www.oasis-open.org/committees/process.php#s3.4, November 16, 2007

[6] http://www.oasis-open.org/committees/process.php#s4.2, November 16, 2007

[7] http://wiki.oasis-open.org/staff-stds-wiki/TechnicalCommitteeLifecycle?highlight=%28revision%29%7C%28of%29%7C%28standard%29, November 16, 2007

[8] http://www.oasis-open.org/casestudies/guidelines.php, November 16, 2007

[9] http://www.oasis-open.org/who/interop_demo_policy.php, November 16, 2007

[10] http://www.oasis-open.org/who/intellectualproperty.php, November 16, 2007

[11] http://www.oasis-open.org/who/ipr/ipr_faq.php#1.2, November 16, 2007

[12] http://www.oasis-open.org/who/adoption_services.php, November 16, 2007

[13] http://www.oasis-open.org/committees/process.php, November 16, 2007

[14] http://www.oasis-open.org/specs/index.php#ebxmlrimv2.0, November 16, 2007

[15] http://www.oasis-open.org/committees/process.php#s2.8, November 16, 2007

[16] http://www.oasis-open.org/who/intellectualproperty.php, November 16, 2007

[17] http://www.oasis-open.org/committees/download.php/12572/OpenDocument-v1.0-os.pdf, November 16, 2007

[18] http://www.oasis-open.org/who/, January 31, 2008

[IDC] IDC comments and evaluations

THE OBJECT MANAGEMENT GROUP (OMG)

Note: OMG has provided copies of additional documentation, not available online. They have not commented on the actual text in this profile.

Introduction

"OMG is an international, open membership, not-for-profit computer industry consortium. OMG Task Forces develop enterprise integration standards for a wide range of technologies, and an even wider range of industries. OMG's modeling standards enable powerful visual design, execution and maintenance of software and other processes. OMG's middleware standards and profiles are based on the Common Object Request Broker Architecture (CORBA) and support a wide variety of industries. All of our specifications may be downloaded without charge from our website" [7].

1. Open documentation

"Requirement documents that initiates each OMG standard-setting activity" …"and other key documents are available for viewing by anyone, member or not. Email discussions, meeting attendance, and voting are restricted to members" [1].

"All documents generated during the deliberations of the technical plenaries and their subgroups shall be made available to OMG staff in machine-readable form" [3, 3.8].

Copyright of OMG specifications are "held jointly by each contributor and OMG". This is specified in a document, that is only available offline with restrictions [6, 4].

Summary:

1.1 Access to all preliminary results documentation

    Online for members only

1.2 Access to all final results documentation

    Online for free for all

1.3 Access to committee meeting notes

    Online for members only

1.4 Access to documentation of procedures, governance policies, annual reports, etc.

    Online for free for all

1.5 Access to documentation of copyright on published documents

    Offline for members only

2. Open IPR

"OMG will not adopt a specification for support measure if OMG is aware of any patent, copyright or other intellectual property right that might be infringed by

implementation of such specification, unless OMG believes that the owner of such IPR will grant a license to all persons that wish to make use of the specification on either royalty-free terms or reasonable and non-discriminatory terms" [6, 2.1].

"All OMG members who are listed as submitters of a proposed technology to become a new or revised OMG specification are required to state whether, to their knowledge, there are any patent, copyright, trademark or other intellectual property rights, owned by the submitter or others, that are required in order to implement or use the specification" [6, 3.3]

Summary:

2.1 The IPR or copyright policies of the organization are

   Available off-line (with restrictions)

2.2 The organization has governance to disclose any IPR from any contributor

   Offline for members only

2.3 Level of IPR set mandatory by the organization

   RAND or no patent

2.4 Level of IPR recommended by the organization

   RAND or no patent

3 . O p e n   a c c e s s

OMG has a procedure to certify test suites to test compliance of individual implementations to a formal standard [3, 5].

Summary:

3.1 Mechanism exists that ensures disability support by a standard

   No

3.2 Conformance governance is always part of a standard

   No

3.3 Conformance test is offered to implementers

   Indirectly through certification of test suites

3.4 Conformance validation available to implementers

   Not available

3.5 Conformance certification available

   Not available

4 . Open Interoperability

No information has been found [IDC].

Summary:

4.1 The organization provides governance for open identification in standards

   Not available

4.2 The organization provides governance for open negotiation in standards

   Not available

4.3 The organization provides governance for open selection in standards

   Not available

5 . Open Meeting

Any organization may join OMG and participate in the standards-setting process [1].

Type of members are as follows [2]:

☑ Contribution member. Fee from USD 10,000 to USD 70,000 dependent on size.

☑ Domain member. Fee from USD 5,000 to USD 35,000 dependent on size.

☑ Platform member. Fee from USD 5,000 to USD 35,000 dependent on size.

☑ Influencing member (limited participation). Fee from USD 20,000 to 2,500 dependent on size.

☑ Government member. Fee flat USD 12,000.

☑ Trial member (no voting rights). Fee USD 2,000.

☑ Analyst member (no voting rights). Fee USD 1,500.

☑ University member. Fee USD 500.

The technical plenaries are designed to ensure that all OMG members may participate in the process [3, 1].

Only member representatives and invited guests may attend meetings of the technical plenaries [3, 3.3]. The Board of Directors may appoint industry experts to committees and subcommittees [5, 6.4].

Summary:

5.1 The organization is open to all types of companies and organizations

   Membership fees relate to size of organization

5.2 The organization is open to individuals

74

No

5.3 The standardization process specifically allows participation of members with limited abilities

No

5.4 Meetings are open to all members/all can participate in the standards creation process

Yes

5.5 Non-members can participate in the standards creation process

Yes, by invitation

6. Consensus

Technical plenaries are governed by the so-called Robert's Rules of Order, that prescribes parliamentary conduct for voting etc [3, 3.2].

Decisions are generally made using "simple majority of the non-abstaining votes cast" [3, 3.5.2]. However, voting upon an adoption of recommendations of a submission to the board of directors needs ¾ majority of members present.

The OMG Board of Directors is making all final decisions on standards. The Technical Plenaries are only consulting bodies [3, 1].

Anybody can comments on standards before being submitted for approval. This applies only to standards being defined through the "request for comments" path, which is used for members who have a specification in place already and would suggest to have it formalized as a standard [3, 4.3].

In general, there is a comment phase before a standard is finalized (in the beta specification phase) where comments are gathered from the larger community [3, 4.4.2].

Summary

6.1 Does the organization have a stated objective of reaching consensus when making decisions on standards

No

6.2 If consensus is not reached, can the standard be approved

Approved with 75% majority

6.3. Is there a formal process for external review of standard proposals by interest groups (non-members)

Yes

7. Due process

No information on appeals has been found [IDC].

Summary

7.1 Can a member formally appeal or raise objections to a procedure to an independent, higher instance

   Unavailable

7.2 Can a member formally appeal or raise objections to a technical specification to an independent, higher instance

   Unavailable

8. Open change

It is stated that all minor revisions may be carried out by a Revision Task Force while all enhancements must go through the same process as adoption of a new standard [3, 4.4].

Summary

8.1 All changes to a standard is subject to the criteria 1-7 above

   Yes

9. On-going support

Formal standards may be retired by specified means of the specifications retirement procedure [3, 4.5].

OMG has a clear procedure of enhancements to a standard [3, 4.4].

Summary

9.1 The organization has stated commitment to support the standard throughout its life:

   Until removal

References

[1] http://www.omg.org/gettingstarted/gettingstartedindex.htm. October 30, 2007.

[2] http://www.omg.org/memberservices/feestructure.htm. October 30, 2007.

[3] Policies and Procedures of the OMG Technical Process. Version 2.6. 2007.

[5] Amended and Restated By-Laws of Object Management Group, version 22. 2004.

[6] OMG Policy statement Intellectual Property Rights. 2005.

[7] http://www.omg.org. February 6, 2008.

[IDC] IDC comments and evaluation

WORLD WIDE WEB CONSORTIUM (W3C)

Introduction

"W3C primarily pursues its mission through the creation of Web standards and guidelines. Since 1994, W3C has published more than 110 such standards, called W3C Recommendations. W3C also engages in education and outreach, develops software, and serves as an open forum for discussion about the Web" [12]. "Tim Berners-Lee and others created W3C as an industry consortium dedicated to building consensus around Web technologies" [12].

1. Open documentation

"It is important that a working group keep the membership and public informed of its activity and progress. To this end, each working group should publish a new, public draft of each active technical report at least once every three months" [3, 6.2.7].

As part of advancing a draft to a standard, the working group must provide "public documentation of all changes" [3, 7.2].

"Every document published as part of the development process must be a public document" [3, 7.8].

"While much information made available by W3C is public, "Member-only" information is available to authorized parties only, including representatives of member organizations" [3, 4.1].

Public documents on the W3C site are provided by the copyright holders under specified license rules [8].

W3C comments:

"In fact, the level of confidentiality of a Working Group (WG) is up to them. Some WGs are public for all their work all the time, like the recent new HTML5 group, or all the WAI guidelines WGs, and we also have a mechanism, called Invited Expert, by which any individual with expertise in one W3C area can gain this confidentiality level, and retroactively look at all the member private discussions.

Also note that people can participate by sending review comments and that groups are required to respond to those comments, and that non-Members may be invited to participate directly in a group's regular meetings."

Summary:

1.1 Access to all preliminary results documentation

    Online for free for all

1.2 Access to all final results documentation

    Online for free for all

1.3 Access to committee meeting notes

Online for members only (default), unless a group decides otherwise

1.4 Access to documentation of procedures, governance policies, annual reports, etc.

Online for free for all

1.5 Access to documentation of copyright on published documents

Online for free for all

2. Open IPR

W3C has a clearly stated strategy and objective of making all IPRs in standards available on royalty-free terms [2, 2]. Members of a working group must agree to make any essential claims available on royalty-free terms [2, 3.1].

Anyone in a member organization must on request disclose any IPR related to the work of a working group [2, 6.1].

In case an IPR is not made available on royalty-free terms, a Patent Advisory Group is launched to resolve the conflict [2, 7.1]. Only if any effort has been made to resolve the conflict, the Patent Advisory Group may propose to include IPR on alternative terms [2, 7.5.3].

Summary:

2.1 The IPR or copyright policies of the organization are

Available on-line

2.2 The organization has governance to disclose any IPR from any contributor

Online for free for all

2.3 Level of IPR set mandatory by the organization

Royalty-free

2.4 Level of IPR recommended by the organization

Royalty-free

3. Open access

W3C has a specific Web Accessibility initiative to ensure that the Web is made available to people with disabilities, regardless of any physical or mental ability [1][7].

Some test suites are offered, such as for the XML [9] and also some conformance guidance is given [10]. A validation suite is provided online for free for HTML and CSS [11]. However, this is not a formalized part of the standard definition process [IDC].

W3C comments:

"On the topic of QA, it is worth mentioning our QA activity at w3.org/qa, which has produced guidelines for use across our technical WG specification development.

But it is true we don't do certification and that testing is on a voluntary basis.

However, as mentioned below, a mandatory step in the W3C Standard track is called the Candidate Recommendation, or CR, where the WG has to prove a certain level of interoperability and implementation experience.

Also note that we run our own public validation services for HTML and CSS, and other, i.e. http://validator.w3.org, of the most accessed site on the internet."

Summary:

3.1 Mechanism exists that ensures disability support by a standard

Yes

3.2 Conformance governance is always part of a standard

Not available

3.3 Conformance test is offered to implementers

For some

3.4 Conformance validation available to implementers

For some

3.5 Conformance certification available

Not available

4. Open Interoperability

During the process of advancing a draft standard to a final standard, the "report should include a statement about how the technology relates to existing international standards and to related work outside of W3C" [3, 7.4.2].

"A phase during the process is also requesting for interoperable implementations. The working group is not required to show that a technical report has two independent and interoperable implementations" ... "However, the working group should include a report of present and expected implementations as part of the request" [3, 7.4.3].

W3C comments:

"The relevant discussion here I think is the way we manage references to normative spec outside and inside W3C from within our specs. Please have a look at W3C pubrules."

Summary:

4.1 The organization provides governance for open identification in standards

Online for free for all

4.2 The organization provides governance for open negotiation in standards

Online for free for all

4.3 The organization provides governance for open selection in standards

Not available

5. Open Meeting

W3C is open to any organization [1][3, 2.1]. The fee is dependent on the country (developing countries have lower fees) and the size of the organization. In developed countries the fee typically ranges from USD 6,500 to USD 65,000 for very large organizations [4].

"W3C does not have a class of membership tailored to, or priced for individuals. However, an individual may join W3C as an Affiliate Member" [3, 2.1]. No detail is given for fees for an Affiliate Member [IDC].

A working group "may invite an individual with a particular expertise to attend a meeting on an exceptional basis". This person is a meeting guest that does not have voting rights [6, 3.2].

Non-members can also participate in other ways such as participation in discussions on one of the public mailing lists, participation in workshops or review standards in the public review phase [1].

W3C comments:

"We also have a ratio applied for developing country fees, e.g. 15% of the regular price in Mali". Already stated above [IDC].

"Invited expert participate for free."

"On 5.3: I don't understand the question. If it is about having people with disabilities working in our WG or in our staff, this is unclear what should be in any process besides a pointer to the human rights declaration. If it is about helping people with limited finance participate, yes, we do that, e.g. paying for telephone cost, flights and hotel, for some of our invited experts."

Summary:

5.1 The organization is open to all types of companies and organizations

Membership fees relate to size of organization

5.2 The organization is open to individuals

Fee unknown

5.3 The standardization process specifically allows participation of members with limited abilities

No

5.4 Meetings are open to all members/all can participate in the standards creation process

Yes

5.5 Non-members can participate in the standards creation process

Yes

6 . Consensus

"Consensus is a core value of W3C" [6, 3.3]. To promote consensus, the process requires working groups to ensure that all legitimate views and objections are considered, and endeavor to resolve them. Consensus is defined as "a substantial number of individuals in the set support the decision and nobody in the set registers a formal objection" [6, 3.3].

The "record of each formal objection must be publicly available" [6, 3.3.2].

A working group should only conduct a vote to resolve a substantive issue after all means of reaching consensus have failed. In this case the vote seems to be by simple majority [6, 3.4].

To advance a draft to a standard, the working group must document evidence of wide, public review and document responses that formally address issues raised by reviewers [3, 7.2]. Public reviews are carried out for the "first public working draft" and the "last call review" [3, 7.3].

W3C comments:

"W3C invites public review at _all_ phases, not just those two (CR and PR phase as well) and the final docs are public and the status sections welcome public feedback.

On 6.2: That's not strictly true. How a group makes decisions beyond consensus is not universally defined. A group charter might say "66% majority," although I don't know if any do today. I believe that the answer here is "e": approval by Director since that's required in all cases. The Director is extremely unlikely to approve anything that does not have significant support. I do not read 6.2 to mean "Can the WG still move forward if there is no consensus?" but rather "Can the organization still advance the document to standard?""

Summary

6.1 Does the organization have a stated objective of reaching consensus when making decisions on standards

Yes

6.2 If consensus is not reached, can the standard be approved

Can be decided by a "director" or similar in the organization

6.3. Is there a formal process for external review of standard proposals by interest groups (non-members)

Yes

7 . Due process

Individuals in a working group that "disagree strongly with a decision should register with the chair of the group any formal objections" and this goes to the Advisory committee. They may also ask the director to confirm or deny a decision in the group [6, 3.5].

"Advisory committee representatives may appeal certain decisions, though appeals are only expected to occur in extraordinary circumstances" [3, 8.2].

In a public review of a standard, any reviewer "may register a formal objection any time they are dissatisfied with how a working group has handled an issue" [3, 7.3].

Summary

7.1 Can a member formally appeal or raise objections to a procedure to an independent, higher instance

    Yes

7.2 Can a member formally appeal or raise objections to a technical specification to an independent, higher instance

    Yes

8 . Open change

W3C defines different classes of changes to a standard. If the changes do not affect conformance or do not add new features, a short process is defined for carrying out such changes. Only in the case of new features, the full process of defining a standard is followed [3, 7.6.2].

Summary

8.1 All changes to a standard is subject to the criteria 1-7 above

    No

9 . On-going support

"Work on a technical report may cease at any time. When a working group completes its work on a technical report, it publishes it either as a recommendation [standard] or a working group note" [3, 7.5].

A process to rescind a standard is well defined and includes a review by the public and other W3C groups [3, 7.7.1].

Summary

9.1 The organization has stated commitment to support the standard throughout its life:

    Until removal

R e f e r e n c e s

[1] http://www.w3.org/Consortium/about-w3c.html. November 7, 2007

[2] http://www.w3.org/Consortium/Patent-Policy-20040205/. November 15, 2007

[3] http://www.w3.org/2005/10/Process-20051014/process.html. November 7, 2007

[4] http://www.w3.org/Consortium/fees. February 6, 2008

[5] Not used

[6] W3C Process Document. November 7, 2007.

[7] http://www.w3.org/WAI/. November 7, 2007

[8] http://www.w3.org/Consortium/Legal/copyright-documents-19990405. November 15, 2007

[9] http://www.w3.org/XML/Test/. November 15, 2007

[10] http://www.w3.org/TR/html401/conform.html. November 15, 2007

[11] http://validator.w3.org/. November 23, 2007

[12] http://www.w3.org/Consortium. February 6, 2008

[IDC] IDC comments and evaluations

CONCLUDING REMARKS

During the process we have come to realize that the concept of "open standards" is complex and difficult to evaluate. There are a number of reasons for this – of which the following are the most important ones:

☑ Standard organizations are generally aware of the need of openness because they all aim at providing successful, widely accepted standards. Accordingly, being open to influence, being consensus driven and limiting IPRs is generally part of the organizations objectives or charters.

☑ The organizational culture has impact on the evaluation as well. Openness of an organization is not always clear from the documentation, and can very well be embedded in attitude, behavior and undocumented practices of the organization. An example is IETF. This organization does not have a formalized strategy of involving impaired people – still, a blind person is the Security AD and a deaf person regularly attends IETF meetings.

☑ Related to the above is the fact that the degrees of formalization vary from organization to organization – which entails that the level of documentation varies as well. In other words, some organizations are more inclined to rely on best practices over formal guidelines and procedures. This means – in the context of this study – that the access to documented information has been easier for some organization than others.

As a result, while the concept of "openness" is central in the development of standards, this concept has been implemented in different ways in different standard setting organizations which renders comparisons difficult. None the less, it seems to be a general tendency that compliance with openness in one area results in more control in other areas, e.g. it very often involves trade-offs

Here are two common trade-offs that is discovered through the research:

☑ Some organizations have front-end openness in terms of allowing wide and free participation in the process of defining a standard (for example W3C and IETF). These organizations then balance this by supplementing their democratic voting process with a back-end control in terms of a director being able to say "yes" or "no" to a standard. Other organizations are more restricted in the front-end participation (OMG, ITU, ISO), but the decision on standards are then made exclusively through a formal voting process.

☑ Some organizations have free membership or low membership fees (for example IETF) and therefore limited funding abilities. This means fewer activities in cost intensive areas like interoperability testing and conformance. Other organizations have a strong funding foundation from members (OMG, ISO) and can therefore engage in more supporting activities such as interoperability testing.

Looking at the ten organizations researched in this project there are differences in the number of requirements in which they score positive. It is difficult to see any clear patterns in the ratings though, as they all meet their own disjoint subset of requirements.

In conclusion there are both similarities and differences between standard setting organizations. They all have high scores in the questions about consensus and open change and they all have focus on "openness" in their strategies. However, there are differences between standard setting organizations in terms of "openness" and certainly in terms of how "openness" is implemented. It can be difficult to make a distinction of which form of "openness" is the most appropriate.