

Principles to Live By

The Guiding Principles for a Successful Standards Technical Process



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Summary

This white paper discusses a number of general principles upon which the technical process of a standards-setting organization should be based. These principles are defined in three related documents, the U.S. Standards Strategy, the ANSI Essential Requirements, and the World Trade Organization's Agreement on Technical Barriers to Trade. By taking into account the principles and best practices of Openness, Balance, Transparency, Coherence, Effectiveness, Relevance, Performance, Consensus, Due Process, Appeals, and Procedure Publication as related to the technical process, a standards-setting organization will produce higher quality specifications that meet market and industry needs and are more likely to be adopted and implemented.

Introduction

Standards setting organizations generally follow similar development and approval processes. Over time, a set of generally accepted principles have evolved for the “best” way to conduct a standards process, and these principles have codified by a number of *de jure* organizations. These principles can thus be considered as “standards for standards” or at the very least as best practices for how a standards setting organization should conduct its work.

When a standards setting organization gains accreditation by a *de jure* organization, these principles may become normative rather than mere recommendations. Non-accredited organizations such as industry consortia should also follow the principles because they are designed to increase the quality and adoptability of standards produced by any standards setting organization.

Following these general principles will give the organization more credibility, and make the organization's standards process more attractive to participants; people are more likely to participate if they see that they will have equal representation and that their views will be considered. The work product created by an organization following these principles is more likely to be broadly adopted because it will be more representative of user requirements and market/industry needs. And finally, basing a standards process on these principles will qualify the organization's work for *de jure* approval, which also leads to adoption.

This white paper will focus on the principles and requirements as defined by three documents:

- The *ANSI Essential Requirements* document specifies principles and procedures that must be present in a standard setting organization's technical process for that organization to receive and maintain accreditation with ANSI. As such, all Accredited Standards Developers must follow these principles and procedures.
- The *U.S. Standards Strategy* was developed by stakeholders in government, industry, standards developing organizations, consortia, consumer groups, and academia, and under leadership of ANSI, to provide a strategy for standards development in the U.S. and how U.S. standards setting interests can participate at the international level.
- *WTO Technical Barriers to Trade* is an agreement between WTO member nations to prevent the use of standards to restrict trade. The principles discussed in this white paper are found in Annex 3 of the document, titled “Code of Good Practice for the Preparation, Adoption, and Application of Standards.”

These three documents propose very similar principles, as shown in the following table.

USSS	ANSI ER	WTO
Transparency	Notification	Publish status of work; publish results
Openness	Openness	60 day review by interested parties
Impartiality; Balanced	Lack of Dominance; Balance	
Effectiveness and Relevance		
Consensus	Consensus	
Performance Based		
Coherence		Use existing work; avoid duplication
Due Process	Appeals; Consideration of Views	Take into account comments
	Written Procedures	

These same general principles are also reflected in the documents of other international organizations, for example by ISO in its *Code of Ethics*.

Openness

Openness is the aspect of a technical development and approval process requiring that all affected interests and all interested parties be allowed to participate. It should go without saying, but Openness is what make a standards process, well, open. With an open process you are more likely to create work that meets the needs of all interested and affected parties, which leads to increased adoption. Without Openness you have a process that is likely to be dominated by special interests and create a work product that benefits a very narrow set of interests or perhaps even a single party. Such closed standards have less chance of meeting broad industry needs.

There are, of course, various degrees of Openness, and different ways to allow interested parties to participate. A perfectly open process would allow anyone, members and non-members alike, to have the same rights for participating in the discussion, contributing to the work, and voting on the results; there would essentially be no distinction between members of the standards setting organization and non-members.

But standards developing organizations usually rely on membership dues to support the work of the organization, and there are IPR issues to be considered when a person participates and contributes to the work without signing an agreement granting rights to his or her contributions. So instead of being perfectly open, most standards setting organizations will position themselves somewhere along the spectrum from closed to open, taking into account the needs of the organization and its membership. For example:

- Recognizing that the development of a specification comprises multiple steps (definition, discussion, development, contribution, comment, approval, etc.) an organization could open some of these steps to all interested or affected parties regardless of membership status, but restrict others to members only. The organization must, of course, strike a balance between being open enough to meet the needs of all interested and affected parties, while retaining a sufficient number of benefits and/or privileges for members to make it worth their while to pay for those membership benefits. The organization should also take care that both development and approval take place under an open process to avoid approving a “closed” specification.

- Most organizations will require membership in order to participate in the development of, make contributions to, and vote on the approval of the work, but will also allow the general public to review the progress of the work and submit comments either continually or during specified public comment periods. Specifically, the WTO's *Technical Barriers to Trade* document specifies (in Annex 3, paragraph L) "Before adopting a standard, the standardizing body shall allow a period of at least 60 days for the submission of comments on the draft standard by interested parties..." The disposition of comments should also be tracked to ensure that comments are being addressed.
- ANSI's *Essential Requirements* specifies that voting rights "shall not be conditional upon membership..." But ANSI recognizes that organizations need members and the revenue from members and participants, so allows an accredited standards developer to charge a "participation fee" for those parties who would like to participate but cannot join as a member for political or other reasons; the participation fee can be equivalent to what would otherwise be paid to become a member. Requiring some investment in the process reduces the likelihood of non-serious or nuisance participation.

Balance

Balance in a technical process means that no one interested party or category of interests dominates the process or has more "say" in what happens than any other interest. Openness and Balance go hand-in-hand; it is difficult to have one without the other.

Balance may be achieved in some aspects of the process, perhaps in the right to contribute or comment, but not in others, perhaps the right to govern the process. To be truly balanced the process must be balanced in all stages of the process and in all aspects such as authority, influence, and leadership.

How do you define Balance? How do you define what the interests are in order to ensure that they are all equally represented? In the *Essential Requirements*, ANSI requires that accredited standards developers define the Interest Categories that are applicable to that organization, and track participation and voting results by these categories. The categories could be such things as vendor/manufacturer/user, or commercial/academic/government, or any other set of categories that the organizations deems useful and meaningful. Every organization will be different, but the key is to come up with a set of differentiators for the various interests represented by the membership – and to include parties who would be interested or affected by the work being done by the organization but may not be currently represented by the membership.

Once balance for the organization is defined, the next issue is how to achieve and enforce it. A passive, organic approach would be to make the process open enough so that all interested and affected parties will participate on their own; if certain interested and affected parties do not participate it is their own fault. But ANSI suggests a more proactive approach; the *Essential Requirements* specifies that "Participants from diverse interest categories shall be sought..."

The organization should not only make a proactive approach for achieving balance, but should also consider whether to enforce balance through some quantitative measure. This could be done by allowing no more than some percentage of any working group's membership to come from any particular category of interest; requiring that each category, as a group, give approval for technical work; or requiring equal representation from among the categories for leadership positions.

Transparency

Transparency in a technical process requires that essential information about the work is available to all affected and interested parties. Transparency is very closely related to both Openness and Balance, and will have a great effect on promoting adoption of the work. By publishing the nature and status of the work, the organization can realize benefits such as

- increased participation as potentially interested parties can see what work is being done and decide if this is something with which they want to get involved;
- increased adoption as parties with specific needs can see what solutions have been developed; and
- reduced duplication of work as other organizations contemplating new work projects can see what is already being done.

The easiest means of making information about an organization's technical work available to the public is to publish it on the organization's web page. The organization should make an effort to make this information accessible; after all, if you really want to let potential participants and adopters know what you're developing, why hide the information several layers deep in the web site? Consistency of presentation will also improve the ability of people to find and understand the information; you should provide the same information about each of your work projects in a similar manner, and make it easy to understand. And remember to keep the information current!

But unless a person knows that your organization is doing work in a particular topic area, how will they know to go to your web site to find out about it? Certainly various internet search engines such as Google are useful for finding this information, but an even better strategy for publishing information about your work is to add entries to the NSSN database at www.nssn.org, hosted by ANSI.

Coherence

The requirement of Coherence means that the organization shall make best efforts to avoid overlapping or conflicting work. Duplication of work is not an efficient way of using finite volunteer resources, and having multiple standard solutions for the same problem causes confusion in the marketplace. The WTO's *Technical Barriers to Trade* document specifies (in Annex 3, paragraph H) that "The standardizing body... shall make every effort to avoid duplication of, or overlap with, the work of other standardizing bodies... or with the work of relevant international or regional standardizing bodies."

Coherence depends on Transparency so that other organizations can know what work is being done and thus avoid creating overlapping work. While an organization may have a different solution to a problem or need than that created by a different organization, attempts should be made to at least liaise with the other organization in order to coordinate efforts. Perhaps there is a common solution that could be developed, or perhaps the two specifications can be developed in a way to avoid overlap or conflict.

Effectiveness, Relevance, and Performance

The *U.S. Standards Strategy* recommends that standards organizations develop standards that are "relevant and effectively respond to regulatory and market needs, as well as scientific and technological developments." Given the finite volunteer resources of any standards developing organization, it would

be a waste of effort to develop a specification that will not be adopted, and those specifications that do not answer a specific need or problem are nothing more than solutions looking for problems.

Further, standards should be “performance based (specifying essential characteristics rather than detailed designs) where possible.” Doing so allows any number of implementations or products to be built based upon the specification, where a specification incorporating a specific, detailed design would be very limited in the number of different implementations that could be built.

Consensus

A standards organization’s technical process will define how committees are formed and membership determined, how specifications are developed, and finally how they are approved. The approval process should be based on Consensus, which is defined by Webster’s as a “general agreement”. The technical process should specify in detail how decisions are reached to avoid later conflict. Consensus may be defined as a lack of objection after all views and objections have been considered. Or it may be seen by some as a majority, super majority, or even unanimity. Best would be to strive for general agreement but fall back on one of these more quantifiable measures only if necessary. In any event, it is important (with respect to Balance) that any minority, regardless of how loud or how important, not be allowed to make a decision on behalf of the rest of the participants.

Further, the U.S. Standards Strategy recommends that consensus be “among those affected” which implies both the level of agreement as well as the Openness of the process, i.e. those who affected are allowed to participate in the decision.

Due Process and Appeals

The requirement for Due Process and Appeals is included in all three of the documents discussed here, the *US Standards Strategy*, the *ANSI Essential Requirements*, and the *WTO Barriers to Trade*. The combination of Due Process and Appeals is the means by which the other principles discussed in this paper are enforced. Due Process requires that any interested party have the ability to have their comments or suggestions considered, and that that party have the right to appeal if their interests are not taken into consideration.

A formal appeals process should exist where any party, member or not, can request an examination of how a comment was resolved or not resolved. Appeals are also used by members, participants, or other interested parties when there is the possibility that the organization has violated its own rules. For example: multiple levels of appeal would allow for actions by a workgroup chair to be appealed to the process administrator, or actions of the process administrator to be appealed to the board or other governing body of the organization. An appeal regarding the proper enforcement or administration of a policy or process assumes that the organization’s policies and procedures are written and published.

Publication of Procedures

Just as with any law or the rules of any game to be played, it is important that the standards organization’s technical process be codified in a written and published form for all participants and interested parties to see and refer to. Potential participants will want to know under what policies and procedures they will be working, and current participants need to be able to consult the “rule book” during the development and approval of work. The development of standards is at times an activity where the participants are competitors with each vying for control of a market with millions of dollars at stake. In such a case it is

important to define the rules of the game before starting work. Further, both due process and the right to appeal require and assume that the rules of the game have been codified and published in advance.

As a further means of providing proof of the organization's activities, the organization must ensure the long-term archiving of documents, email threads, comments, and other information created by the organization and its committees during their activities over time.

Additional Resources

Various online resources are available which provide additional information for organizational management considering these issues. The web sites at www.kavi.com and at www.consortiuminfo.org both contain excellent information.

Kavi Corporation, the industry leader in tools and infrastructure for standards setting organizations and industry consortia, also offers Strategic Best Practices Consulting for organizations seeking to improve their policies and processes in the areas of organizational structure, membership policies, technical process, adoption activities, etc.

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