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# Consortium Standards Bulletin

A ConsortiumInfo.org publication

OCTOBER 2006

Vol V, No. 9

## FEATURE ARTICLE

### PARTICIPATING IN STANDARD SETTING ORGANIZATIONS: VALUE PROPOSITIONS, ROLES AND STRATEGIES

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**Abstract:** *Today there are more information and communications technology standard setting organizations (SSOs) than even the largest corporations could afford to join. The effectiveness, speed, stability and reputation of these organizations vary widely, as does their suitability for a given purpose. Any prospective member of an SSO therefore needs to make intelligent choices as among the various SSOs that are relevant to its business, in order to spend its resources wisely in pursuit of the achievement of its goals. In this article I provide a framework within which such an entity can define its goals, and offer guidelines to be used in evaluating whether a given SSO is appropriate to join, with a special emphasis on those SSOs that serve the needs of the ICT industry.*

**Introduction.** Today, there are hundreds of standard setting organizations (SSOs) maintaining hundreds of thousands of standards. In addition to organizations primarily concerned with standard setting, there are many whose mission is to promote the acceptance or proliferation of new standards-based technologies, products or services, either in conjunction with standard setting activities or as their sole reason for being.

As a result, it would be a rare vendor or service provider that could not find anywhere from several dozen to literally hundreds of accredited standards development organizations (SDOs) and, in the information technology and communications (ICT) sector, unaccredited SSOs (commonly referred to as consortia) whose goals were germane to its own success. But for all but the largest global corporations (some of which are active members of hundreds of SDOs and consortia), participation in all relevant SSOs would not be practical from either a financial or a human resources point of view.

There are other reasons for exercising selectivity as well, including the fact that not all SSOs are equally effective, respected, efficient or neutral. For all these reasons, it is only prudent for any organization to properly investigate a prospective organization before applying for membership, whether its interest and budget extend to a single SSO membership or to hundreds.

At the same time, it is important to recognize that those that participate in standards development and related activities have different motivations for doing so, and look to gain benefits that vary as well. This differentiation in position may make one SSO more attractive to a given potential member than another, and if one type of participant is better represented in one SSO rather than the other, the dynamics and outcomes of those two SSOs may differ as well.

In this article, I will describe the different types of participants that are active in standard setting, the goals that are common to each category, and the SSO benefits that are likely to be of greatest interest to each. I will then lay out guidelines intended to assist anyone evaluating whether a given SSO is appropriate to join, with a special emphasis on those that are interested in joining SSOs that set standards for the ICT industry.

## I The Generic SSO Value Proposition

A reasonable threshold question to ask is why anyone should join an SSO at all? Given that participation can be expensive and time consuming, why not simply utilize the standards that others develop and that the market has already begun adopting?

In point of fact, playing a passive role is what many choose to do, thereby saving on time and expense, as well as avoiding the risk of early-adopting a standard that may ultimately fail in the marketplace. The fact that so many tens of thousands of universities, government agencies, individuals and companies do choose to participate actively in voluntary, consensus-based standard setting activities, however, offers clear proof that significant benefits may be gained from diving into the standard setting process rather than standing aside.

**Benefits of participation.** Those benefits include the following, among others:

- **Strategic Influence.** Those that participate in the governing bodies of SSOs decide which standards will be created, and in what order, and to serve what purposes.
- **Technical influence.** After a working group has been chartered, there are still many decisions to be made among technical details, architectural approaches and final results. The members that join the working group make these decisions, subject only to such level of oversight, if any, as the given SSO may provide or require. A member that successfully nominates the Chair of such a working group gains additional influence over the result.
- **Early access.** While many SSOs (and especially SDOs) allow some degree of public access to the ongoing work of a working group, others do not allow the public to review a specification until it is in final draft form, or has been actually adopted. Members have early access to information relating to an evolving standard, and can use that knowledge contemporaneously to formulate and implement their own design and product strategies based on their knowledge of where a draft specification is heading, while those on the outside must wait until a public draft is released to make the same decisions. As a result, SSO members that can make use of early information enjoy a strategic advantage that non-members do not share.
- **Training.** The representatives of vendors and others that participate in a design process frequently gain valuable experience in the process. Many SSOs also conduct training seminars, produce white papers, and offer other benefits that provide useful information and training opportunities for member employees.
- **Messaging.** Corporations often signal their commitment to markets, technologies or architectures by joining the SSOs that are creating the standards that are essential to the strategic direction being emphasized. When vendors do so, they typically join the SSO at the highest (and most expensive) available level of membership, to underline their point.
- **Joint marketing.** Many consortia engage in marketing as well as technical activities. While consortium budgets are virtually never sufficient to perform marketing on a corporate scale, consortia do provide a venue within which marketing messages and strategies can be agreed upon and coordinated, within which collateral materials can be created, and whereby related costs can be shared.
- **Certification and branding.** SSOs can also provide a venue for other supporting activities, such as "plugfests" that permit implementers to determine whether their standards-compliant products do in fact interoperate, and branding programs under which compliance can be certified, using trademarks created and owned by the SSO, and licensed to those that successfully pass the required tests.<sup>1</sup>

SSOs are sensitive to the fact that no one can be compelled to become a member, and therefore structure themselves and operate in such a way as to provide an attractive value proposition for all

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<sup>1</sup> For more on certification and branding, see the July, 2006 issue of the Consortium Standards Bulletin, and particularly the Feature Article in that issue: Updegrove, Andrew, [Standards Certification and Branding in the Information and Communications Technology Sector](http://205.134.252.89/bulletins/july06.php#feature), ConsortiumInfo.org, Consortium Standards Bulletin, Vol. V, No. 7 (January 2005), at < <http://205.134.252.89/bulletins/july06.php#feature>>, and October 27 – 29, 2006.

constituencies that are needed to create effective standards, and to provide enough early adopters to convince non-members that adopting the standards of the SSO is a sensible thing to do.

## II. Personalizing the Value Proposition

While SSOs offer a broad range of benefits, those benefits are not uniformly attractive to all types of members with an interest in standards. As a result, it is helpful for anyone considering participation in the standard setting process to identify where they fit into the standards ecosystem in order to identify those benefits that are likely to be important to them in accomplishing their goals. Otherwise, the process of identifying which SSO to join, and what category of membership to seek, becomes an inexact exercise that may result in overpayment, or failure to achieve desired results.

Placing oneself in the standards ecosystem involves determining a number of factors, including *relationship to standards*, *industry identity*, and desired *role* in the standard setting process, each of which is addressed in detail below.

***Relationship to Standards.*** Broadly speaking, there are two primary relationships that anyone can have to a given standard: as a *proponent*, and as a *consumer*.<sup>2</sup> Both proponents and consumers participate in standards development, but these two categories of participants do not share all of the same concerns and goals. As a result, the decisions that each may make in relation to a given SSO are likely to be in some respects different.<sup>3</sup>

Standards proponents hope to reap benefits from bringing specific standards into being, and (usually) from those standards being developed to meet specific criteria. Those benefits include the development of new markets for goods and services, maintaining or attacking the advantages enjoyed by existing market incumbents, and the more profitable extension of existing capabilities and revenue sources into the future (all of which will be discussed in greater detail below). As a result, proponents are likely to play more active roles in SSOs, and are invariably the founders of new consortia.

Consumers as a generality have less interest in which specific standards development efforts are launched, but are interested in whether and how they can employ those standards in their businesses or other affairs.<sup>4</sup> As a result, they tend to be less concerned with the future activities of an SSO, and more interested in aspects such as early access to information and training opportunities. Of course,<sup>5</sup> a given SSO will often be relevant to a given entity in its capacity as both a proponent and as a consumer.

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2 The terminology used to describe the relationship of standards to standards implementers differs by discipline. For example, to an economist, someone using a standardized product is a "consumer," while to those actually developing an ICT standard, the same person is referred to as an "end-user." Both camps are likely to refer to those that create a standard as a "developer," but as noted in this article, some developers have purely utilitarian goals, while others have strategic intentions that are better indicated by the word I have chosen to use in this article: proponents. Moreover, dividing discussion between "developers" and "consumers" obscures the fact that (not surprisingly) the developers of standards are often those that use them as well.

3 To give a single example, an SSO's reputation for neutrality is usually a positive to a consumer, but may be a negative to a proponent that hopes to create a standard. All else being equal, as between two SSOs that could each serve as capably as the host for a new standards project, the proponent of that project will likely choose the SSO in which it enjoys the greater degree of influence.

4 There are many exceptions to the generality of this statement, and particularly so in the area of information technology, where the availability and nature of appropriate standards can be essential to the effective operation of a company. Although SSOs are more commonly created by proponents, there are exceptions to this statement as well. For example, the CAD Framework Initiative (no longer active) was created by large corporate end-users of CAD software in an effort to influence the behavior of CAD suppliers. More recently, the Jericho Forum was formed by standards consumers who desired better security solutions, and the Coalition for eHealth Standards (CHeS) was formed by hospitals to set common product identification codes and other standards that their suppliers would be required to adopt in order to lower costs and increase efficiencies in hospital supply purchasing.

5 The decision of a large company to join an SSO is usually made at a divisional or other operating unit level, based upon the needs of the unit that processed the application, rather than at the enterprise level, based on all of the needs of the applicant. As a result, such a member often uses its membership in only one capacity (proponent or consumer) as a result of poor internal communication, thereby obtaining less benefit from its membership fee than need be the case.

This distinction between proponents and consumers is fundamental to almost everything that follows below, and will dictate in large measure not only which SSOs will be attractive to a given potential member, but also what membership level it will select, and in which activities it will participate.

**Identity.** SSO participants also fall into constituencies defined by their identity, with certain categories of participant predominating. Not surprisingly, the interests and goals of these discrete groups will differ to varying degrees one from the other. The groups that most frequently participate in SSOs (in rough order of numbers of participants) are: *vendors and other commercial entities, universities and colleges, governmental bodies* of all levels, *individuals, and consumer groups and other non-profits.*

While the goals of a potential member may be obvious to it, the goals of other types of members may be less so. If a given SSO is dominated by members of an identity other than that of the potential member evaluating that SSO, then the SSO in question may prove to be a less fruitful venue for participation. Understanding where all types of participants in the standard setting process are coming from is therefore an important aspect of choosing an SSO, and in knowing what to expect after joining.

**Vendors and other commercial entities.** This category almost always forms the largest and most economically influential category of members in most SSOs. It also usually includes both the highest percentage, as well as the largest number, of proponents. This is especially true in the ICT sector, where standards are particularly pervasive and essential, and where new products, markets and services emerge and grow obsolete more quickly than in traditional industry. As a result, standards tend to more frequently have strategic interest, leading to a particularly high degree of participation by standards proponents, as compared to standards consumers.<sup>6</sup>

In consequence, it is easier to recruit proponents (and especially so in the early days of a consortium), and SSOs often have to work hard to attract consumers as members, sometimes creating different classes of membership, or even lower dues within the same class of members, for non-vendor members.<sup>7</sup>

**Universities.** University and college budgets for professorial participation in SSOs are limited (and SSOs often provide discounted rates to encourage academic participation in consequence), both in respect of membership fees as well as attendant costs, such as travel. While academic representatives do not often have direct economic stakes in the outcome of standards development efforts, they do have professional interests in what standards are set, and how they are structured. Where this occurs, they become non-commercial proponents.

Universities and colleges are standards consumers as well, and some institutions (such as most state and some private universities) are very substantial enterprises in their own right. As a result, two different constituencies exist within such institutions, and each can have different evaluation and approval processes, depending upon the participating group (academic department, administration, IT services, etc.), goals for participation, and its sources of revenue.

For academic staff, standards development may be related to, or an extension of, research. In this case, staff may wish to participate to observe, to influence, or to discuss the development of the standards at hand, and participation would focus on those organizations that are active in disciplines of academic interest, such as computer science and geospatial information. The costs of participation may be funded by the general departmental budget, or derive from grants or other external funding.

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<sup>6</sup> Moreover, the participation by ICT standards proponents is often steroidal in contrast to that of proponents in more traditional industries, where the progress of standards development activities can often be more relaxed, collegial and consensual.

<sup>7</sup> The high strategic value of ICT standards is one of the major reasons for the emergence and predominance of consortia in this sector. When consortia first began to proliferate in the 1980s, SDOs were commonly perceived by ICT vendors to be too slow moving, and too subject to influence by non-vendors. The solution was to simply create new, more easily controlled, and more flexibly structured entities to set ICT standards. With time, many consortia have become as well-established, open and respected as their accredited brethren. For more on the rise of consortia and the continuing process of process evolution in standard setting, see: Updegrove, Andrew, *Standards, Cycles and Evolution: Learning from the Past in a New Era of Change*, ConsortiumInfo.org, Consortium Standards Bulletin, Vol. IV, No. 5 (May 2005), at <<http://www.consortiuminfo.org/bulletins/aug05.php#feature>>, and sources cited therein.

For infrastructural staff, goals will be similar to those of other standards consumers, and costs will be allocated from the general operating budget. As a generality, the larger the institution, the more complex the infrastructure it will have, the better-paid its senior staff will be, and the more likely it will be that individual employees (e.g., IT staff) will wish to have the same opportunities to participate in SSOs as they would enjoy in the commercial sector.

**Government.** Governmental entities have the unique role of being not only standards consumers and proponents, but also standards developers in their own right, through the adoption of laws and regulations that function as standards. Moreover, they enjoy a symbiotic relationship with SSOs, in that they also adopt SSOs standards into regulations by referencing and requiring compliance with those standards. Governments therefore participate in SSOs at every level, from legislators and staff that liaise with SSOs, to federal agencies that are required to utilize SSO standards,<sup>8</sup> to state agencies, to cities, towns and counties. Such participation is particularly common in the ITC sector.

When government entities participate in SSOs as consumers, they rarely join at levels that would entitle them to act on Boards of Directors or in other control functions, due to the relationship of government with the private sector. However, government agencies sometimes fund testbed projects or other standards-related activities, thereby providing a level of funding not often available through any other means.<sup>9</sup>

**Individuals.** While the majority of consortia either do not permit individuals to become members, or do not make it economically attractive to do so, many SDOs offer memberships with meaningful participation rights in exchange for modest membership fees. This is due in part to the accreditation rules under which SDOs operate (which stress openness of access), and in part because some SDOs (such as the IEEE) are also professional associations.

Individuals may participate in SSOs at the behest of their employers, with the knowledge and cooperation of their employers, or completely independent of their "day jobs." Their conduct in standard setting may therefore be independent, or very much at the direction of their employers.

In the latter case, there may be little difference in the behavior of a nominally individual member and a representative of a commercial member. In the former case, however, the motivations (and the voting) of the individual may vary widely.

Individuals that participate in standard setting other than in the scope of their employment do so for a variety of reasons, including education, the ability to make a difference within their areas of expertise, to network, and out of pure professional interest. However, their ability to participate in face-to-face activities is likely to be less than that of individuals whose time is released and whose expenses are paid by their employers. Nonetheless, where individuals participate in SSOs that have a "one member, one vote," rule, their individuals over outcomes can be real.

**Consumer groups and other non-profits.** Not surprisingly, it is a challenge to attract non-commercial consumers, or their representatives, to become members of SSOs, even where they set standards that impact such end-users. Individuals are rarely interested in such activities in their capacity as standards consumers, and consumer groups do not have the resources to participate in the many SSOs that do have such an impact. Nevertheless, there is participation by such groups in some SSOs (often SDOs, which are more interested in attracting them), and particularly where the standards being

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<sup>8</sup>In the United States, the Technology Transfer and Advancement Act of 1995 and the related Office of Management and Budget Circular A119 require the Federal Agencies to utilize private sector, as compared to "government unique," standards wherever possible, as well as to participate in their development. For more on the relationship of the U.S. Federal government to standard setting, see: Updegrove, Andrew, [A Work in Progress: Government Support for Standard Setting in the United States: 1990 – 2004](#), ConsortiumInfo.org, Consortium Standards Bulletin, Vol. IV, No. 1 (January 2005), at <<http://www.consortiuminfo.org/bulletins/jan05.php#feature>>, and sources cited therein.

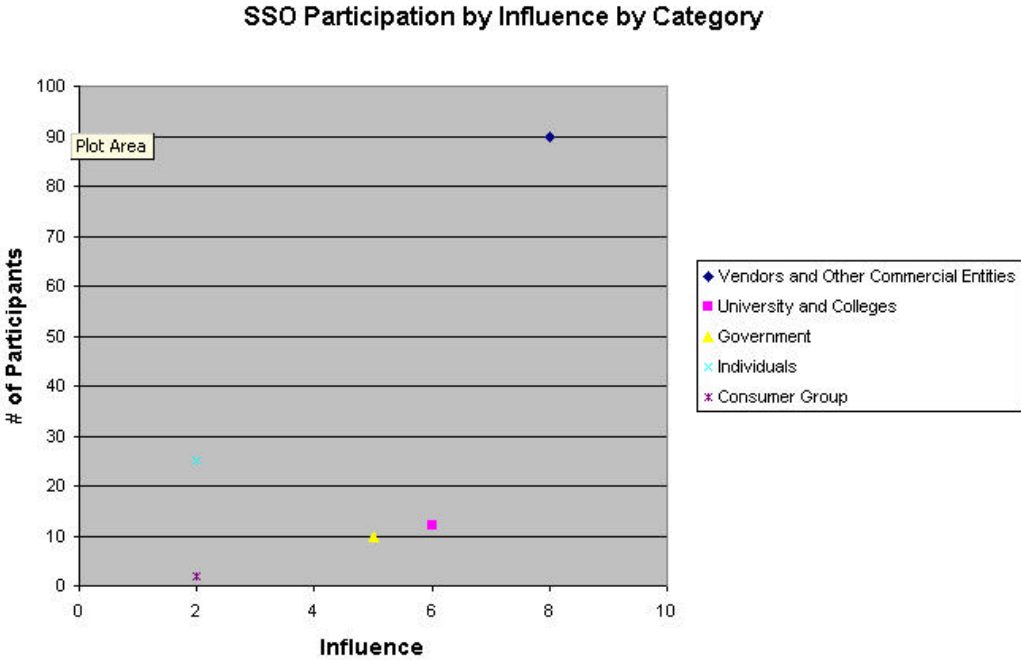
<sup>9</sup> For more on the interaction between government and SSOs, see: Updegrove, Andrew, [Understanding the Roles and Optimizing the Relationships of Governments and SSOs](#), ConsortiumInfo.org, Consortium Standards Bulletin, Vol. IV, No. 8 (August 2005), at <<http://www.consortiuminfo.org/bulletins/aug05.php#feature>>, and sources cited therein.



created are intended to support (or, if deficient, could have a negative impact) on health, safety, the environment, or other core areas of consumer concern.

A variety of other non-profit groups may participate in SSOs as well. These organizations may be research groups, trade associations, and (most frequently) other SSOs, which sometimes trade memberships on a no-fee basis, and often maintain less formal liaison relationships under simple memoranda of understanding.

**Influence and representation:** The exact mix of member identities will vary from SSO to SSO, depending in particular upon the domain addressed by an SSO (e.g., education vs. office productivity software) they address. That being said, the number and influence of participants, by type, in a typical ITC SSO might be graphically represented as follows:



**SSO participation roles.** A potential SSO member that has determined its relationship to standards and its identity will be able to put this data to work by deciding what type of *role* in the standard setting process it should seek in order to make participation worthwhile.

Like Caesar's Gaul, the universe of standard setting participants can be divided into three parts: those for whom SSO participation is highly important (or even essential) to their business (or other) success, those for whom SSO participation is a logical extension of their technical, promotional, research or other activities, and those for whom participation is elective.

These three groups may be referred to as the *Leaders*, the *Followers*, and the *Spectators*. Each role suggests the goals that would be common to its group, and therefore the types of activities and opportunities that it will look to find in a given SSO.

**The Leaders.** Leaders may be thought of as those members for whom participation is most critical, based upon a desire to accomplish one or more of the following:

- **Market creation:** This is the most critical strategic role that a standard can play: to create a new market which would not exist "but for" broad industry agreement on a new standard (e.g., to enable high definition television, or to make wireless networks possible).
- **Market conditioning:** Few single companies have the resources required to condition a market to demand a new product (WiFi chips and routers), service (WiMax) or computing model (service

oriented architecture). Combining the marketing resources of multiple companies to promote any of these – or simply announcing that the majority of the big players in an industry have committed to the new offering – can achieve that goal more reliably and at a far lower per-company cost.

- **Collaborative R&D:** In some cases, using a consortium as an extension of the members' own research and development efforts can create high-quality technology at a far lower per-member cost. Examples of such organizations and their work product include the original Sematech (which developed semiconductor technology), the X Consortium (which developed the X Windows system), and the many open source projects in existence today).
- **Displacing an incumbent:** Standards efforts have frequently been developed and promoted in an effort to displace a powerful incumbent that has succeeded in creating a monopoly, or near-monopoly, position in a product area based upon a "de facto" standard controlled by it alone.<sup>10</sup>

Not surprisingly, companies that find themselves faced with such challenges are often willing to form a new consortium to accomplish the task at hand if they conclude that no existing SDO or consortium exists that would be adequate or appropriate to the task.<sup>11</sup> Companies that reach such a conclusion are often willing to make a larger investment in the creation of a new organization than is borne by those that join the same organization at a later date, and also assume a greater risk that their investment will not prove to be rewarded. Other companies with the same needs typically are the first to join such a consortium after it has been announced by its founders.

Some of the world's largest technology companies (e.g., IBM, Hewlett-Packard, Intel and Motorola) have been particularly active in forming consortia, as so many aspects of their businesses are dependent on the predictable adoption of new standards and business models. However, many consortia have been launched by groups of smaller companies as well, particularly where a technology is very new, or is relevant to a smaller market niche. These founders have usually concluded that such a strategy provided the only way in which their meager resources could be deployed to reach an ambitious and essential goal.<sup>12</sup>

While participating in the formation of a new consortium can be time consuming and expensive, the strategic price of not creating a particular standard when it is needed can be far higher. Costs of non-participation can include missing the opportunity to steer a standard in the manner most compatible with a company's product offerings, falling behind competitors, or failing to head off broad adoption of a second standard that is less compatible with a company's legacy offerings.

For better or worse, Leader companies in this category sometimes expect to control the strategy and direction of a new consortium for some period of time, rather than to merely participate in its activities. Typically, Leaders are willing to pay the highest fees in order to do so, and most consortia rely disproportionately on such companies for their operating budgets, particularly in their early years of operation.<sup>13</sup>

Not surprisingly, in most SSOs the majority of the Leader members are vendors. Where this is not the case, it is often the case that the SSO in question has few vendors to begin with (as was true until

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<sup>10</sup> In fact, far more efforts to unseat incumbents through the use of standards have failed than succeeded, and particularly where the target of the initiative was Microsoft. Currently, the OpenDocument Format, which enjoys the strong support of IBM and Sun, among others, is showing surprising momentum in its effort to provide an alternative to Microsoft document formats.

<sup>11</sup> There are many variations on this theme besides forming a new standard setting organization. For example, IEEE does not currently include promotional or certification activities within its mandate. However, instead of forming a new consortium to both develop standards as well as perform these additional services, the corporate members of several IEEE 802 wireless standard working groups have formed and funded a series of external organizations (e.g., the [WiFi Alliance](#), [WiMedia Alliance](#) and the [WiMax Forum](#)) to take up these supporting tasks.

<sup>12</sup> For more on when and how to create a consortium, see the ConsortiumInfo.org Essential Guide to Standard Setting and Consortia section entitled [Forming a Consortium](#), at <<http://www.consortiuminfo.org/forming/>>.

<sup>13</sup> Whether or not the founders of a consortium seek to exercise disproportionate control varies greatly, depending on whether they have specific ideas about the standards to be created, as compared to the generic need for such standards, their level of sophistication and experience, and other factors. As a practical matter, any such control tends to dissipate quickly (as to a given company or companies) as membership increases, unless the consortium has been overtly structured to avoid that result.

recently in SSOs setting IT distance learning and other educational standards), that the SSO admits individuals to voting membership at low cost (such as the IEEE), or that the SSO was founded, and remains dominated, by individuals (such as the Internet Engineering Task Force, or IETF).

***The Followers.*** Most SSO members (Leaders included) hope to enjoy some subset of the following types of benefits:

- influencing the direction in which a given standard or group of standards may evolve
- receiving advance knowledge of the direction in which standard setting efforts are heading, and thus being able to launch new compliant products before non-participants
- gaining access to test suite software and certification testing of compliant products
- collaborating on creating "white papers", commissioning analysis, agreeing upon joint marketing programs, creating consortium presence at trade shows, and other cooperative efforts
- sending staff to consortium meetings to receive training and stay abreast of new techniques and technology
- publicly demonstrating commitment to specific new markets and technologies
- influencing others in the industry
- meeting other interested players in a given niche and forming partnerships with other companies

Companies in this group usually wish to have full rights of participation in all activities, but may be less interested in influencing the strategic direction of the efforts and goals of the organization.

Follower members that wish to exercise voting rights most typically are vendors and other commercial entities, governmental entities, universities and colleges, with government and academic members often receiving the same benefits for lower fees. Where memberships are inexpensive, individuals may be found in this category as well

Not all of the benefits listed above are of interest to companies that are more interested in participation than influence. And, of course, university, college, government and other non-commercial members will have no interest in marketing, certification, or branding programs. Most consortia therefore offer a less expensive class of membership that permits attendance and participation in all activities, but not the right to vote.

Follower companies that do not care about voting can be of any type, as well as non-profit groups and individuals.

***The Spectators.*** Many companies and individuals have a desire to know what a given consortium is doing or producing, but little need to dedicate any significant degree of resources to the effort. This group includes academics and commercial entities of any type (e.g., developers, consultants, integrators, etc.). Such members look for an inexpensive category of membership that provides knowledge of:

- new standards initiatives as they are launched
- new standards as they are released
- who has joined a given standards or promotional effort
- the nature of evolving "best practices"
- which standards are likely to be adopted and which not

Many SSOs create an inexpensive class of membership to satisfy such needs. The rights of such a class are typically limited receiving information (increasingly in electronic information only). In some cases, this distribution is in advance of public disclosure.

### **III Evaluating a Specific Consortium**

Prior to joining an SSO, it is helpful to define the goals of participation with respect to a given area of standardization in order to generate a list of what is important to find in an SSO, and what is not. Where



an important goal is to have influence over which standards efforts are launched, choosing among available options is particularly important. In some cases, this exercise can lead to a conclusion that no existing SSO is appropriate for the task at hand, and that the only alternative is to consider whether forming a new organization is necessary. Where this is the conclusion, the next step is to determine whether such a project would be feasible, taking into account whether there would be sufficient interest among other potential members, and the time, costs and effort required relative to the anticipated benefits of the exercise.

**Defining Goals** Only after a participant's goals have been outlined can the adequacy of a given SSO be determined to meet a current need. Often (for example) an SSO may be primarily technical in focus, while a prospective member's needs may be entirely promotional. In such a case, the value of participation may be insufficient to justify the costs, particularly if no lower cost membership levels are offered. Where two alternatives exist, one SSO may be primarily promotional in nature, while the other may focus principally on standard setting. Depending on a member's specific needs, it may suffice to join one or the other, or on occasion it may be advisable to commit to both.<sup>14</sup>

It is especially important to determine what role will need to be assumed in an SSO in order to achieve the goals of joining. If being a Spectator is sufficient, then many more SSOs will meet minimum standards for participation. However, if being a Leader is essential, then some criteria will become important in evaluating an SSO, such as effectiveness and speed of the technical process, whether it would be easy to gain support for launching a standards development project of particular interest, and whether the SSO includes promotion as well as development of standards in its mission.

Similarly, while it may be that an SSO exists in the desired technical area, its current strategic direction may not be compatible with the prospective member's own strategic goals. In such a case, it may not be worth joining any organization at all, or it may be wise to join at the highest (and most expensive) level with one or more marketing partners, in an effort to persuade the existing members of the desirability of steering the organization in a different direction.<sup>15</sup>

**SSO characteristics:** Once armed with a list of goals, it might be assumed that determining which SSO to join would be an easy task. Unfortunately, there are many differences between SSOs, most of which are meaningful. Some of these differences are easy to find (e.g., costs of participation) simply by reviewing the SSO's Website, while others are more difficult investigation (e.g., how "open" is the process of the SSO, and is that process dominated by a group of companies?). Some of the more important questions to ask are explored below.

**What is the fully burdened cost of membership?** Membership fees for SSOs range from the trivial to the breathtaking, with the highest and most influential level of corporate membership level in a consortium typically costing from \$10,000 to \$60,000. A modest number of consortia have dues ranging up to \$200,000, and a few require the payment of dues of \$1 million or more. However, as discussed below, almost all consortia, and many SDOs, have multiple membership classes, and the differences in costs between classes of membership can be very great. As a result, meaningful participation is often possible even in an expensive SSO for a price that is far less than is required to join at the highest membership level.

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<sup>14</sup> Recall the example in note 11 above of the separate entities that have grown up around various IEEE 802 wireless standard working groups. Members of most identities discussed above would be interested solely in the IEEE working group, while vendors would be very interested in participating in the related alliances or forums that create and promote certification testing and brands.

<sup>15</sup> It is an unfortunate reality of standard setting that not all participants join SSOs with the intention of furthering the standards development and promotional effort. When a given standard can threaten the status quo, those with a vested interest in the current state of affairs have been known to join SSOs solely for the purpose for blocking or delaying the release of the standard in question. Others may join simply to keep an eye on what is happening in an SSO that they believe to be setting standards that may threaten them. Typically, this last group joins at a lower class of membership that provides information, but not meaningful participation.

But dues may represent only a part of the total economic commitment required to meet a member's objectives. For example, if full participation requires regular in-person attendance at meetings, travel expenses can become substantial. Members may sometimes have little choice but to incur such expenses if they wish to make their involvement worthwhile, because some SSOs limit voting and speaking privileges at meetings to those that have good attendance records (e.g., attendance at three out of the four prior meetings) in order to ensure continuity and avoid confusion and repetition. Some SSOs also require the dedication of the part or full time services of one or more employees as a requirement of the highest class(es) of membership.

In the case of a small company, the requirement to "second" one or more valued technical employees can be more burdensome than the dues obligations of membership. On the other hand, some companies would regard the same requirement as a perk, as the employee involved might exercise greater influence over the technical result, as well as become intimately familiar with the optimal way of utilizing the standards that result from participation.<sup>16</sup>

In recent years, the costs of participating in many SSOs, and particularly consortia in the ITC sector, has become less expensive, due to the development and deployment of sophisticated Web-based platforms that enable collaborative efforts to be conducted remotely, list serves for communication, archives for document access, and electronic platforms for voting. As a result, much can be accomplished on-line and more quickly than was the case when such activities could only occur through face-to-face meetings, through conference calls, and via the mails.<sup>17</sup>

Regardless of such new efficiencies, a prudent decision to participate in a given consortium cannot be made until all aspects of productive participation have been identified, and the real cost of that participation weighed against the prospective benefits.

***How open is the SSO?*** While there are variations in specific practices among SDOs, their processes and rules of admission are reasonably uniform, due to the requirements for accreditation that must be observed.<sup>18</sup>

Consortia, on the other hand, are free to set their own rules, and those rules can vary considerably. Increasingly, most consortia operate on a basis that is very similar to SDOs, accepting any qualified entity or individual as a member, and operating under rules that do not give disproportionate influence to any class or type of member. As a result, the most noticeable difference between well-respected consortia such as the W3C and OASIS is that consortia are almost always global in membership, while SDOs have traditionally been national in scope.<sup>19</sup>

On the other hand, there remain many non-accredited organizations that are far less open.<sup>20</sup> One popular non-incorporated model for such an entity employs what is usually called a "promoter agreement," which may be entered into by invitation only. The promoter agreement provides a cross license among all adopters as to any patent claims that may be infringed by the implementation of the standards created by the group, and each promoter is permitted in turn to sublicense those rights to implementers under an "adopter agreement." While this mechanism provides an effective and efficient

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<sup>16</sup> The track record of SSOs that have required seconding of employees is at best mixed, with many members not following through on their obligations. Often, these requirements are dropped after reality sets in. As a result, when evaluating a new SSO, it is wise to consider whether the organization is likely to be successful in achieving its goals if the seconded employees do not materialize as required.

<sup>17</sup> The current market leader in developing and hosting SSO Websites appears to be Kavi, Inc. A [list of the SSOs](#) that it currently serves can be found at <<http://www.kavi.com/clients/>>.

<sup>18</sup> In the United States, the accrediting body of SDOs is the American National Standards Institute, or ANSI, which both sets the criteria for accreditation as well as conducts audits to confirm compliance. An [overview](#) of ANSI's accreditation services, with links to more specific information, can be found at

<[http://www.ansi.org/conformity\\_assessment/overview/overview.aspx?menuid=4](http://www.ansi.org/conformity_assessment/overview/overview.aspx?menuid=4)>

<sup>19</sup> Even this distinction is becoming increasingly blurred, as SDOs such as the IEEE and ASTM have become global in their memberships.

<sup>20</sup> Historically, such organizations were often named Special Interest Groups (SIGs), Alliances or Forums. However, these names are often now adopted by consortia with very open policies, and therefore no conclusions should be drawn from the particular name adopted by any non-accredited organization.

means for addressing intellectual property rights (IPR) issues, the invitation-only foundation upon which such organizations are built does not lead to what would be considered to be "open standards."

Between these two extremes there are many gradations of influence to be found, including organizations with membership criteria that may be more restrictive than necessary, that have boards of directors that are not as accessible to later-joining members, that are not representative of all relevant constituencies, or that have other flaws that make them less conducive to creating "open standards."<sup>21</sup>

**Will the SSO (or the standard of interest) be successful?** It is of course important to evaluate whether a consortium which otherwise appears appropriate is likely to be able to deliver on its promises. As with any other type of non-profit or for-profit enterprise, some SSOs are better structured, governed, managed, effective, and stable than others. Where an SSO has earned respect and enjoys a solid reputation for producing standards that are become widely adopted, it can be assumed that participation is more likely to be rewarding without spending a great deal of time investigating such questions. Obviously, where the reputation of an SSO is just the opposite, it is likely that it would be a waste of time to join. However, such a conclusion should not be reached lightly, since SSOs are just as likely to be misrepresented or criticized unfairly as are the commercial entities that join them.

Joining a new or recently-formed consortium that has not yet earned a reputation necessarily requires more innovative diligence. The level of investigation will vary, depending on the goals of the consortium. For example, if the mission of the consortium is primarily to promote an existing technology, its success will largely be a product of whether it is well run and can attract a sufficient number of members to fund its programs and cooperate on its initiatives. The goals of the prospective member will also factor into the evaluation: if those goals are primarily educational and independent of whether or not the primary goals of the consortium are achieved, then the ultimate success or failure of the consortium may be irrelevant, so long as the quality of the current programming is high.

Conversely, a company faced with the necessity of adopting one competing standard over another can ill afford to back the wrong technological horse. In short, the degree of diligence to perform in investigating a given SSO will generally be proportional to whether the applicant wishes to be a Spectator, Follower or Leader. The choice becomes particularly acute where there is already a determined standards war in process, because the consequences of backing the wrong technology can be severe.<sup>22</sup>

Trying to decide whether a given SSO that has yet to establish a reputation is likely to launch successful standards can be informed by looking into the following factors:

- **Positive support:** Which vendors have already aligned themselves with a given standard or SSO? If the most significant players in the industry are backers, then, all other things being equal, the likelihood of the SSO's or standard's ultimate success is high, as potential implementers will be likely to believe that wide adoption is a foregone conclusion.
- **Non-support:** as significantly, which companies are not backing the standard? At times, the bulk of the market may be expected to align itself against a given company, or group of companies. Whether or not the challengers will succeed in displacing a powerful incumbent is particularly hard to predict.

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<sup>21</sup> I have worked with over 75 consortia, and helped to form most of them. In my experience, while some founders of consortia are initially concerned with ensuring that control of the new organization stays in the hands of those that are likely to pursue the path the founders have in mind, these restrictions are almost always eased (often quite quickly) when the need for such concerns proves to be unfounded, and as the benefits of openness (including as regards recruitment) become more evident.

<sup>22</sup> The classic example of the type of situation that a standards effort (and everyone else) hopes to avoid is the battle that raged for years between the proponents of the Betamax and VHS video formats. Until that struggle was resolved in favor of VHS, vendors and consumers alike were trapped in a confusing and expensive limbo of duplicative inventories, more meager selections, and higher costs of doing business. Many of the same companies are now engaging in a replay of the same debacle, this time lining up behind two competing DVD standards: HD-DVD and Blu-Ray. For more on the nature and consequences of standards wars, see: the [March 2006](#) issue of the Consortium Standards Bulletin at <http://www.consortiuminfo.org/bulletins/mar06.php>, and particularly Updegrave, Andrew, [Standards Wars: Situations, Strategies and Outcomes](#), ConsortiumInfo.org, Consortium Standards Bulletin, Vol. V, No. 3 (March 2006), at <http://www.consortiuminfo.org/bulletins/mar06.php#feature> and sources cited therein.

- **How open is the SSO?** If a small number of allied companies has gained undue influence over an SSO, then there is the potential for the standards generated by the organization to be perpetually slanted in favor of the control group. Whether or not this skewing of result in fact occurs, the consortium's standards may be regarded with suspicion, and may not be widely adopted in consequence.
- **Staff resources:** How well is the SSO funded and staffed? While there are examples of all-volunteer consortia that have been quite successful, this type of organization requires greater commitment by both members as well as their representatives. If a consortium that lacks paid staff also lacks a culture of strong committee chairs, timely process and continuity of membership, its efforts are vulnerable to failure.
- **Member resources:** While SSO staff support the standards development process, standards are developed by SSO member representatives. If existing member participation in the technical process is not robust, then the standards that the SSO creates may not only be of poor quality, but they will be very unlikely to be widely adopted as well.
- **Funding:** How adequate and realistic is the SSO's budget? While standards development can be a very low budget operation, certain actions essential to success do require funding.<sup>23</sup>
- **Leadership:** How strong and committed are the SSOs leaders? The most successful SSOs often have well-recognized, trusted and inspirational leaders (Tim Berners-Lee, of the World Wide Web Consortium and Jim Thomas, of ASTM, an SDO, are current examples, while Robert Scheifler, of the former X Consortium, was instrumental to the success of that SSO). In the often rough and tumble world of technology, a leader whose authority is respected is vital to promoting the vision of the SSO and to maintaining strong recruitment.
- **Technical process:** Is the process efficient and rapid? Are the working group chairs fair, respected and effective?
- **Strategy:** How appropriate are the consortium's strategy and plan of execution? Are they adequate to achieve its goals? Are they likely to gather wide support, or to function as a lightning rod for opposition?
- **IPR policy:** How mainstream is the intellectual property rights policy of the organization? If it veers too far towards stringency, many companies important to success may refuse to join. If it steers too far in the other direction, the standards developed will be more vulnerable to "submarine" patents. If open source implementations of the standards are important, is the IPR policy conducive to such implementations?
- **Stability:** Some consortia are formed to create a single specification, and then hand that it off to another SSO for long-term maintenance, while others are formed, like most SDOs, to provide a long-term venue for developing and maintaining many standards within a certain domain. Often, a standards-related goal may only be achieved through creating multiple related standards, together with certification tests and a branding program, all of which will require long-term maintenance. In such cases, it is important to compare long-term goals with the capabilities of a given SSO, to determine whether it is likely to have the degree of longevity of existence that is needed to justify the investment of participation.

Unfortunately, there is no single source of information to consult for answers to most of these questions. Moreover, internal and external information about SSOs is as prone to be inflated or misrepresented as any other information that arises in the technology industry. Fortunately, the larger consortia attract sufficient attention from the press and analysts that at least some reasonably informed third party verification can be found for the contentions of one camp or the other. With a smaller SSO, a dialogue directly with the Executive Director or another member of the organization may be the most productive way to gain a sense of the strength and prospects of the effort.

Where information gathering about an SSO proves inconclusive and upper level memberships are expensive, a useful strategy can be to join the organization at a lower membership level, and subsequently upgrade (even before the initial membership year is completed) to a higher level, if expectations are met.

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<sup>23</sup> Standards development in consortia is a surprisingly lean enterprise. The vast majority of the successful consortia with which I have worked have had budgets of well under \$1 million a year, and large budgets have not correlated highly with success, in comparison to factors such as member commitment and the existence of a non-participating incumbent(s).

## IV Joining an SSO

When all the information has been gathered, a final question remains: what class of membership in a given SSO is most likely to lead to the satisfaction of the applicant's goals?

While the range of SSO structures is broad, the good news is that most organizations have multiple membership classes offering a broad array of rights on a sliding cost scale. For organizations with high membership fees, these fees are often scaled proportionately to the revenues of corporate members, and/or discounted for government and non-profit members.

Consortia are particularly likely to offer multiple membership classes, in order to provide a class of membership with a value proposition that is commensurate with the economic realities of as large and diverse a pool of potential members as possible. A typical range of membership classes to be found in such an organization, and the principal benefits and obligations of each class, would often be similar to the following

- **Strategic Member:** Guaranteed board seat, or reasonable likelihood of eventually gaining one (total board seats for this class: 9); can nominate officers and committee chairs; and all privileges of lower categories of membership (other than the right to vote for additional directors)
- **Appeals to:** Companies (usually vendors) that wish to set the strategic objectives of the consortium
- **Cost:** \$25,000 - \$50,000, depending on revenues of member
  
- **Technical Committee Member:** Full, voting participation in all technical and marketing processes; as a class, can elect three board representatives (perhaps with the type of member specified, to ensure diversity of representation); may be invited to provide a committee chair; all privileges of lower categories of membership
- **Appeals to:** Companies, universities, colleges, and government agencies wishing to influence the standards that are developed
- **Cost:** \$15,000 - \$25,000, depending on revenues or type of member
  
- **Advisory Member:** Full non-voting participation in all technical and marketing processes; all privileges of lower categories of membership
- **Appeals to:** All types of members that wish to participate in, but do not need to influence, the technical process, and that wish to have the most timely information regarding technical direction and results
- **Cost:** \$10,000 (regardless of revenues)
  
- **Informational Member:** Receives periodic information regarding technical and other programs, as well as standards as they are made public
- **Appeals to:** Academics, consultants, analysts, individuals
- **Cost:** \$250 (regardless of revenues)

Each of the classes described above is crafted to appeal to potential members with a particular focus. Using the categories referred to in Section II above, Leaders will always join at the Strategic or Technical Committee membership levels, Followers will usually join at the Technical Committee or Advisory Member levels, and Spectators will join as Advisory or Informational Members.

In addition to differentiating by revenues in order to broaden participation, consortia will at times provide the same benefits to different types of companies for radically different prices. This occurs where the participation of a particular type of company is essential, but the motivation to participate for that type of company is low. Several examples of this practice occurred in the late 1980s, when a number of consortia (88open Consortium Ltd., PowerOpen Consortium, and SPARC International) were all formed with the object of challenging Microsoft's increasing dominance in operating systems. Each consortium sought to promote a new operating system based upon the family of RISC microprocessors after which it was named (the Motorola 88000, the Sun SPARC, and Motorola/IBM/Apple PowerPC). Because a computer without application software would be useless, each organization provided incentives for



independent software vendors (ISVs) to preferentially "port" their software to the platform being promoted. In each case, the hardware vendors paid very large dues, while the ISVs were invited to become members at low, or no cost.<sup>24</sup>

A final aspect to consider is the "bundled" value of benefits at a given level of membership, as compared to the per-service cost of the various activities that a prospective member may be interested in pursuing. For example, the top level of membership may entitle a member to:

- send multiple representatives to meetings without payment of attendance fees
- receive free delivery of test suites to achieve compliance with consortium standards
- free use of consortium logos and trademarks in connection with certified products
- free receipt of consortium-commissioned analysis, whitepapers and the like
- listing of compliant products at no charge at the consortium Website and elsewhere

The next lowest class may provide all or some of the same services at a discount, and so on. On occasion, and particularly where the prospective member intends to participate fully, such additional benefits may lead to a decision to join at a higher class. They may also lead adopters of the standards to become members, as it may be cheaper to become a member than to buy the same services "ala carte" as non-members.

## **V Institutionalizing the Evaluation Process**

As noted at the beginning of this article, there are many corporations today that are members of from 100 to more than 300 SDS and consortia around the world. Given the magnitude of such a commitment, it would be wise for them to institutionalize the process of both evaluating SSOs before joining them, as well as monitoring the continuing value of participation in such organizations at the time of renewal.

Perhaps surprisingly, it does not appear that many companies have adopted this practice.<sup>25</sup> One reason is that the decision to join an SSO is often made at the "local" level (i.e., by a business unit rather than at the enterprise level), and those that wish to join an SSO would be resistant to adding another level of delay and bureaucracy to the process of joining an SSO. Beyond such motivations, simply knowing what is happening within a multinational corporation is an enormous challenge that is never completely realized.

Be that as it may, it should nonetheless be possible to lay out a methodology for evaluating SSOs that could be distributed internally to provide guidance for those managers that are engaged in standards-related activities.

Assuming that a given company has concluded that SSO participation is appropriate to its strategic direction, a prudent initial and ongoing program for managing that participation could proceed as follows:

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<sup>24</sup> None of these efforts could be considered to have achieved any great success in achieving its goals, although all three processor families enjoyed some degree of success in the marketplace in situations not dependent on the efforts of these consortia. The 88000 processors were most successful in areas such as embedded systems, but Motorola's hopes to challenge the "Wintel" system on the desktop with that architecture were seriously undercut by the announcement of its own PowerPC processor. Most SPARC chips were installed in Sun servers, although some found homes installed in computers of Japanese manufacturers. The PowerPC's success on the desktop was limited to its use in Apple computers (Apple eventually switched to Intel microprocessors). The PowerPC continues to be used in other applications today, and not long ago, its architecture became the subject of a new consortium launched by IBM.

<sup>25</sup> An exception to this statement relates to IPR. Some companies require (or at least try to require) that no SSO membership may be entered into until the legal department has had an opportunity to evaluate the IPR policy of the SSO in question to determine whether it might provide unwanted opportunities to commit IPR without proper prior review. On one occasion when I have asked a standards director why her department has not sought to further institutionalize the process, I received the interesting response that it might make the full costs of standards participation more visible, and therefore more susceptible to budget cuts.

**Stage One (implementation of program)**

- Establish budgetary parameters for SSO participation
- Define internal approval requirements and process for joining and renewal

**Stage Two (selection of individual SSOs)**

- Create business case for participation in a given area of standardization including role (Leader/Follower/Spectator). If Leader, define specific key objectives to be pursued
- Agree upon technical/marketing areas of interest
- Define any other goals within each area
- Identify existing potential SSO alternatives
- Evaluate each existing organization for appropriateness, likelihood of success, reputation, etc.
- Examine intellectual property and other policies for acceptability
- Determine fully-burdened cost of participation at level necessary to achieve goals
- If no existing consortium seems appropriate, consider whether founding a consortium is justified

**Stage Three (joining and participating in a specific consortium)**

- Define specific goals to guide member representatives (e.g., participate only, or seek approval of specific new standard working groups)
- Commit to appropriate membership level to meet goals
- Make appropriate staff assignments
- Obtain final internal budget approval
- Evaluate success of participation after ten months (i.e., before renewal invoice arrives)
- Review and approve/disapprove renewal

While the above level of bureaucratization may be excessive for a small company, for a larger organization with a need for broad SSO participation, the effort to establish such a program should be amply repaid in less haphazard participation, lower over-all expenditures and greater rewards.

In either case, the following table could be used in support of such an SSO participation program.

<b>SSO PARTICIPATION ASSESSMENT FORM</b>		
<b>Step 1: Relationship Assessment (Proponent or Consumer):</b>		
<b>Step 2: Goal Assessment</b>		
<i>Goal</i>	<i>Importance (1 – 10)</i>	<i>Desired Role (Leader, Follower, Spectator)</i>
Strategic Influence		
Technical Influence		
Early Access		
Training		
Messaging		
Joint Marketing		
Certification		
Branding		
Joint R&D		
Other (describe)		
<b>Step 3: Ranking of Alternatives</b>		
SSO	<i>Composite Score (1-10)</i>	<i>Comments</i>
<b>SSO 1</b>		
Reputation		
Industry Support		
Staff Support Required		

Cost (dues)	\$	
Cost (fully burdened)	\$	
Technical Process		
Marketing Process		
Stability		
Other (describe)		
<i>Total Score:</i>		
<b>SSO 2:</b>		
Reputation		
[etc.]		
<b>Form new SSO?</b>		
<b>RECOMMENDATION:</b>		

## VI Summary

In the modern technology-based world, the range of for-profit, non-profit and governmental organizations that should actively consider participating in SSOs continues to increase. And, in fact, the number of SSOs in existence and the number of participants in the standards development progress in the ICT sector is increasing. For some organizations, and particularly for some vendors, the costs of such participation are therefore becoming very great. Exercising due care in pre-screening SSOs should therefore be very beneficial.

Based on the author's experience, however, it appears that few companies are engaging in an enterprise-wide evaluation of SSOs before joining them, and even fewer pay close attention to renewals. In theory, bringing an appropriate level of order to this process need not be a daunting task. Moreover, the process laid out in this article for evaluating an SSO prior to making a decision to participate should not only result in more cost-effective participation in standards-related activities, but more successful participation as well, through greater identification of goals, better selection of venues to pursue those goals, and closer attention to whether those goals have been achieved.

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