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# Consortium Standards Bulletin

A ConsortiumInfo.org publication

May 2003

Vol I, No. 5

## TRENDS

### NEW WINE – OLD BOTTLES: WS-I BRINGS A NEW DIMENSION TO THE ART OF MAKING STANDARDS SUCCEED

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**Abstract:** *The increasing proliferation - and therefore visibility - of consortia has helped legitimate this model for collaboration. At the same time, the flexibility of the approach permits consortium founders to employ the model for diverse purposes. As a result, when new and complex interoperability opportunities evolve, the availability of the consortium process permits rapid, responsive and creative adaptation by the marketplace to meet the challenge of these new opportunities. WS-I provides an example of this dynamic in action.*

**Introduction:** When one thinks of the favorable attributes of consortia, many people think first of speed. Certainly, the consortium approach has the potential for producing rapid results (even if not all organizations actually achieve that benefit). A less often appreciated characteristic of the consortium approach is its inherent flexibility. Flexibility of approach can be essential to enable swift adaptations to new market conditions and the generation of effective institutional responses.

The advent of web services -- and the founding of the Web Services Interoperability Organization (WS-I) - present an excellent example of how the flexibility of the consortium approach can help the potential beneficiaries of a new business model gain rapid credibility and traction for that model.

**The Bottle:** There have long been promotional as well as standard setting consortia - as well as consortia that fulfill both functions (see [www.consortiuminfo.org/links/promotional/](http://www.consortiuminfo.org/links/promotional/)). Some promotional consortia support standards work done by other consortia, while others promote the takeup of standards developed by ANSI accredited organizations (e.g., the 1335 Association, which supports the IEEE 1335 standard: [www.consortiuminfo.org/links/1355.php](http://www.consortiuminfo.org/links/1355.php)). Other consortia have been formed to develop and promote "best practices" and educate the marketplace about new standards-based processes, products or services.

**The Wine:** In the case of web services, a group of vendor companies identified a new set of tasks that needed attention in order to facilitate the launch of the web services model, including the development of deliverables such as profiles of web services standards suites, the use of which could facilitate the rapid deployment of web services.

Rather than approach an existing standard setting organization and attempting to interest it in meeting needs that extend beyond its normal purview, a founding group of companies (Accenture, BEA Systems, Fujitsu, HP, IBM, Intel, Microsoft, Oracle and SAP) announced in February of 2002 that they would launch a new consortium for the express purpose of creating such profiles and related tools, and otherwise promoting and facilitating the pervasive implementation of web services. The presumed beneficiaries of its work would be producers of web services products (ISVs), consumers of web services (user companies), and various standards organizations.

The organization they formed was named the "Web Services Interoperability Organization" (or more familiarly, "WS-I"). Fifteen months after the announcement of the new collaboration, 170 companies have rallied to the call, valuable work product is already nearing completion, and WS-I has become an acknowledged player in the network of consortia that are helping make web services a reality.

The mission of WS-I, as articulated by its founders, was "to deliver clear and consistent recommendations for ensuring interoperability between web services across platforms, applications, and programming languages." It also seeks to promote the appeal of web services by: making their implementation more commercially attractive through lowering technical obstacles to adoption; reducing complexity and efforts needed to integrate separately-developed web services; and ensuring the continued evolution of web services technologies via clear and implementable processes and confirmable interoperability test suites.

The specific deliverables of WS-I are interesting in their own right, and a reflection of the broad range of work products upon which a group of companies can agree to collaborate, using the consortium process. As described at the WS-I website:

"[WS-I's] deliverables are targeted at proving resources for any Web services developer to create interoperable Web services, and verify that their results are compliant with both industry standards and WS-I recommended guidelines. The most important resources that will be provided are tools we refer to as a 'sniffer' and an 'analyzer.' The process used to develop these tools generates other useful implementation resources along the way.

- Profiles: Sets of Web services specifications that work together to support specific types of solutions
- Sample Implementations: With the context of a profile, teams work to define a set of Web services that are implemented by multiple team members to identify where interoperability issues are present.
- Implementation Guidelines: Recommendations for use of specifications in ways that have been proven to be most interoperable. These guidelines also provide the set of test cases that the sniffer and analyzer tools detect for compliance verification.
- Sniffer: Tools to monitor and log interactions with a Web service. This tool generates a file that can later be processed by the analyzer.
- Analyzer: Tools that process sniffer logs to verify that a Web service implementation is free from errors."

Understanding what WS-I means by "profiles" is at the heart of understanding what WS-I is all about. WS-I does not itself set standards (in fact, one of its greatest frustrations is marketplace confusion on that point). In its own words, WS-I "sits downstream" from those who do set standards. What it does do is to review the standards of other organizations, and then encourage the adoption and implementation of what it considers to be the "Baseline" Web services standards available today (XML, SOAP, WSDL, UDDI). As Andy Astor, a WS-I board member and the Vice President for Enterprise Web Services of member webMethods, Inc., puts it, "WS-I acts as a standards integrator, a role that is beyond the scope of any single standards organization. The organization's founding is a response to the need to make standards even more relevant, even more quickly."

By assembling collections of key web services standards into meaningful groupings, WS-I seeks to simplify implementation and promote interoperability. And having created these profiles, it can then embark on the creation of the other deliverables that make it more attractive for businesses to adopt these profiles. The desired end result: faster deployment of web services.

**All in the Family:** Since WS-I does not set standards, maintaining effective relationships with relevant standard setting organizations is important. WS-I believes that it complements the work of standards organizations like W3C, Oasis, IETF and others. Necessarily, of course, there is the reality that if one assumes the right to anoint one specification over another, there is the potential for friction or conflict. Interestingly, while it maintains informal liaison relationships with many organizations, WS-I does not have formal relationships with any standard setting body.

But in fact the multiple organizations involved in setting web services (and other web) standards must also work together cooperatively for the common good in order for web services standards to be useful

and adopted. Adding an organization like WS-I into the mix simply adds a new dimension to a traditional and existing challenge. The substantial overlap in memberships (including at the Board level) between WS-I and the standard setting bodies most involved in setting web services standards provides the greatest force motivating productive collaboration. (For the results of interviews with WS-I, W3C and OASIS on how they fit together, see "[The Role of Web Services Standards Bodies: In Their Own Words](#)")

**Challenges:** Unlike many new models of achieving interoperability, the web services concept has achieved buy-in from major vendors fairly quickly. With that success has come a different set of challenges. When asked what important forces are acting on WS-I today, Astor replied: "The key force impacting WS-I today is that Web services are becoming mainstream, and their usage more common. As a result, the market is demanding technical standards and guidelines of increased depth (e.g., security, orchestration, and management), and to look for these items to be completed quickly. While WS-I is not a standards body, and does not invent new standards, it has needed to address these issues."

One response to this challenge was the chartering in April of a Basic Security Profile Working Group. The BSPWG is charged with developing an interoperability profile involving transport security, SOAP messaging security and other security considerations implicated by the WS-I Basic Profile. The Basic Security Profile is intended to be an extension of the WS-I Basic Profile 1.0 and will reference existing specifications used to provide security, clarifications and guidance designed to promote interoperability of those specifications.

Astor identifies the following as the other major challenges facing the organization today:

- Improving the membership balance between ISVs and end user organizations. Currently, vendors make up the majority of the membership, and more end user companies are needed to provide real-world examples of how web services are being used today.
- Communicating to the market the value delivered by the adoption of the web services model of interoperability.
- Timely delivery of WS-I's work product, since the organization must wait until standards are complete before it can produce its guidelines and recommendations.

At the same time, WS-I points with pride to a strong start, with a number of key deliverables already nearing completion, including working draft versions of the Basic Profile 1.0, Sample Applications and Testing Tools. It expects to make the final versions of these deliverables available this summer.

**Summary:** Dynamic markets require creative solutions. The increasing legitimacy of the consortium model, conjoined with its flexibility, lends itself to increasingly varied types of collaboration among both vertically and horizontally integrated collections of companies. As the varied use of the consortium model becomes ever more visible, it also becomes more frequently employed to solve problems that only a short time ago would have proven to be intractable. The business model for WS-I, and its rapid success in membership recruitment, provides an excellent example of how the consortium model is capable of playing a unique and important role in enabling the swift adoption of useful new business models.

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**WS-I at a glance:**

Date of formation	February 2002
Number of Current members	170
Number of classes of membership	3: Founding member, Elected board member, Contributing member
Number of countries represented by current members	18
Number of Technical Committees	4 technical working groups, including:  Basic Profile · Basic Security Profile · Sample Applications · Test Tools and Materials  1 non-technical working group · Associate membership  7 committees and/or special interest groups (SIGs), including:  · Finance · Recruiting · Evangelism SIG · Marketing Communications · Liaison · Technical Coordination Group · Japan SIG
Number of issued standards or specifications	N/A
Other Significant Relationships	Liaison efforts and informal relationships with key standards-setting organizations including W3C, Oasis and IETF
Number of current initiatives	· Basic Profile 1.0, including profile, sample applications, use cases, usage scenarios and testing tools · Basic Profile 1.1, covering SOAP with Attachments · Basic Security Profile 1.0
Other types of work product	Multiple documents including whitepapers, profile overviews, testing tools, etc.
Website address	<a href="http://www.ws-i.org">www.ws-i.org</a>
Companies currently represented on the Executive Board	Accenture, BEA Systems, Fujitsu, HP, IBM, Intel, Microsoft, Oracle, SAP, Sun and webMethods
Officers	WS-I Board of Directors includes: · Tom Glover, Chairman (IBM) · Chris Kurt, Secretary (Microsoft)

	<ul style="list-style-type: none"><li>· Jim Hughes, Treasurer (HP)</li><li>· Mike De Nicola (Fujitsu)</li><li>· Tony Roby (Accenture)</li><li>· Don Deutsch (Oracle)</li><li>· Norbert Mikula (Intel)</li><li>· Franz-Josef Fritz (SAP)</li><li>· Mark Hapner (Sun)</li><li>· Andy Astor (webMethods)</li><li>· Ed Cobb (BEA Systems)</li></ul>
Staffing	N/A