

Draft Business Plan for a CEN/ISSS – OASIS Workshop on Semantic Interoperability Business Implementation Guidelines (SIBIG)

Background

XML has clearly proven itself as a standard that enables *syntactic* interoperability between information systems. Vertical industries and communities of interest are forging ahead with particular markup vocabularies within their specific domains, and in response to their domain-specific needs.

Furthermore, consortia such as the **Organisation for the Advancement of Structured Information Standards** (OASIS) and the **World Wide Web Consortium** (W3C), are hosting a wide range of initiatives aimed at promoting, extending and implementing the core XML standards.

XML on its own, however, cannot improve and enable *semantic* interoperability: systems can certainly talk to each other more easily, but they do not, by simply using XML, understand each other. A number of recent initiatives attempt to address this more complex area or at least have realised that these issues need to be addressed. There are nonetheless notable drawbacks to some of these initiatives:

- They are driven by the most active players and those with the resources available to invest in standardisation issues;
- The most active proponents are technologists whereas the nature of semantic interoperability requires a strong business focus and lead;
- In the absence of an existing framework for dealing with semantic interoperability questions, each initiative is tending to create the rules as they go along, in response to their specific needs;
- There is often duplication of effort as parallel initiatives forge ahead, unaware of the existence of others tackling similar or identical problem areas;
- Many industries or communities of interest do not have either the economies of scale or the sponsors needed to drive such an initiative.

Furthermore, with a technology-driven approach, many issues relating to semantic interoperability are addressed very late in the development process and, regrettably, often without the input of business managers: choice of key terminology, naming conventions, definition of critical business objects and assets.

In order to reap the full benefits of an XML-centred *and* semantically interoperable information architecture, these issues need to be addressed very early, and upstream of any technology-based initiative, within a clear governance framework. This was most clearly and most recently demonstrated during the XML2003 Conference in Philadelphia in a number of (unintentionally) related presentations from the public sector [2] and in the most recent discussions regarding the proposed “European Interoperability Framework” (EIF).

A set of **Business Implementation Guidelines for Semantic Interoperability** would help prepare both individual enterprises and community initiatives. Properly considered within any enterprise or community of interest, these guidelines would provide a clear framework for semantic interoperability, centred on the use of key XML-based standards and specifications.

Such guidelines could also provide an outline for the governance framework, proposed as part of the EIF.

Workshop Proposers

The initial impetus for this proposal has come from three sources:

- The **European Parliament**: project leader for a number of projects sponsored and funded by the European Commission's IDA Programme. Many of these projects raised issues of semantic interoperability and the need for a governance model for policy making. Most of the national parliaments and a number of national administrations of the EU member states have taken part in these projects.
- A number of members of **OASIS**, and in particular its **eGovernment Technical Committee**: many, relatively small-scale, initiatives are under way both within and beyond OASIS, and looking at different, but nonetheless technically-focussed, aspects of semantic interoperability.
- The IT policy and standards agencies of the **United Kingdom** and **Denmark**.

Workshop Objectives

The principal objective of the workshop is to produce a set of guidelines and best practices for encouraging and developing semantic interoperability. It should offer a clear framework, upstream from particular XML implementations, that stresses early and effectively input by key business units and a means of dialogue with technical implementers and IT project managers.

Workshop's Work Programme

a) Deliverables

The deliverables should be drafted in such a way that they are as directly usable as possible with commercial off-the-shelf XML-enabled applications and software or, where appropriate, can be used as requirements documents to direct the work of bespoke systems developments.

They should encourage the spread in use of standards-based registries, within which organisations define and maintain their key business terminology.

b) Tasks

- 1) Examine and analyse the commonly raised business issues surrounding the introduction of XML standards, including the importance of:
 - a common business vocabulary;
 - standardised naming conventions for document, content and other digital object types;

- a proven methodology for developing the above;
- mapping mechanism between the business vocabulary and specific XML-based constructs, including:
 - element and attribute names and values;
 - metadata elements and values;
 - business processing terminology;
 - RDF and Topic Maps subjects, identifiers and indicators, as well as other object identification needs and schemes,
- establishing a framework within which these business issues are developed;
- a system of governance that oversees and maintains this framework;
- handling information assets as any other type of business asset.

2) Demonstrate the business value in such an approach

3) Demonstrate the best use of existing specifications, in particular those of ebXML and UBL

Comment: Other references? Dublin Core, MIREG?, etc

4) Work together with existing agencies, particularly in the public sector in North America and the European Union, to encourage use of such standards and frameworks, to complement their own work in these areas

5) Propose a standard approach for the development of such frameworks, through the creation of a series of best practice documents and framework "templates"

It is proposed to vest ownership of the deliverables in CEN and OASIS, and make them freely available to anyone without licensing or other fees.

c) Related work

The workshop shall take as its starting point the work on semantic interoperability as presented by the European Parliament, the Danish Government, the OASIS Naming and Design Rules work of the UBL TC and the ebXML Core Components specifications. In addition, it should work in close conjunction with other technical committees or bodies involved in related activities, such as

Workshop organisation

a) Timescale and Planning

- 1) A face-to-face forum to collect experiences and exchange initial ideas on the scope of the deliverables. This could be envisaged alongside the XML Europe 2004 Conference (April 2004, Amsterdam)
- 2) Initial research to identify those aspects of current practices that could be included in the proposed deliverables (2Q2004 and 3Q2004)

- 3) Finalisation of a set of formal deliverables (4Q2004) to be approved by CEN and OASIS.

b) Liaisons and related activities

As a proposed joint initiative between CEN and OASIS, liaison between the organisations and their members will be an essential part of the work.

Resources

The Workshop will seek to raise research funding from public agencies to underwrite the costs of the research, project coordination and involvement of public administrations that are not able to support OASIS membership or the normal CEN workshop participation fee. This is estimated at a total of € 80,000

a) Human/days

A total of some 125 days work (at a day rate estimated at €600-650) will be required for the workshop. Experts shall be nominated after an open call by the CEN. The Chair will be proposed by the European Commission.

Technical Secretariat	20 days
Work Item 1	30 days (Analyst/Expert Editor)
Work Item 2	10 days (Expert Editor)
Work Item 3	20 days (Expert Editor)
Chair and Work Item 4	45 days (Leadership, Liaison and Project Management)
Work Item 5	20 days (Expert Editor)

b) Other Costs

Workshop participants will finance their own travel or other costs of participation. The liaison work is an ongoing activity throughout the course of the workshop and will involve participation in a number of meetings (and in particular, organising meetings on the fringes of already planned conferences at which a high number of participants are likely to attend):

XML Europe Conference, Netherlands	€ 600
OASIS Symposium on Reliable Infrastructures, USA	€ 2000
Extreme Markup Conference, Canada	€ 2000
3 Workshop meetings, Belgium	€ 450
Reserve	€ 1000
Total	€ 6050

References

- [1] For example, in OASIS: eGov, BCM, RegRep-Semantic, PubSubj, XRI
- [2] See in particular: "Information Architecture with XML: From Lingua Ubiquita to Lingua Franca", "How the US Federal Government is Using XML", and "Naming and Design Rules for E-Government - The Danish Approach"