

Outline for Report to the Executive Committee
EBB Internet Transition Group on XML
Future Technology Task Force Meeting
06/01/1998

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Original Draft XML Work Paper FTTF Meeting, June 1-2, 1998

Executive Summary

XML is a technology that has been promoted as a possible web-enabled solution for electronic commerce in the Gas Industry.

This paper is not intended to either promote or dissuade the use of XML

XML has future potential but is still immature.

As with any technology, XML's true value and benefits to the Gas Industry are uncertain until business requirements are defined.

It would not be feasible to implement an XML industry solution by June 1, 1999.

Definition of XML

SGML (Standard Generalized Markup Language, ISO 8879) enables the delivery of self-describing data structures to applications over the Internet. HTML is based on SGML. XML (Extensible Markup Language) is a subset of SGML. It retains the key advantages of extensibility, structure, and validation in a language that is designed to be vastly easier to learn, use, and implement than full SGML.

XML differs from HTML in three major respects:

1. XML allows information providers to define new tag and attribute names at will.
2. In XML, document structures can be nested to any level of complexity.
3. Any XML document can contain an optional description of its grammar for use by applications that need to perform structural validation.

XML is a meta-language for creating other markup languages. Unlike HTML, XML allows you define the usage of tags through the use of standardized Gas Industry (Document Type Definition) DTDs. The DTD defines the elements, their order, the relationship between elements, and processing of the elements.

Standards Development

XML is a subset of ISO's SGML developed by the World Wide Web Consortium (W3C) SGML on the Web working party during the latter half of 1996 and early 1997. The World Wide Web Consortium issued XML 1.0 as a W3C recommendation on February 10, 1998.

At present the form handling characteristics of XML are yet to be full agreed (agreement is expected during 1998).

Many industry groups are currently developing XML document standards specific to their industry. For example the Open Molecule Foundation is currently developing CML (Chemical Markup Language) for chemistry and molecular data encoding.

Products Supporting XML

Browsers:

- Microsoft has already shipped partial XML support in Internet Explorer 4.0, and they're likely to expand their XML functionality in a further release.
- Netscape will potentially support XML in the 1998 version of Communicator.

X12 Translators

- Various X12 suppliers have announced plans to support XML. Some as soon as the end of 1998.

Web Servers

- Currently the various web server vendors have plans to release versions of their products that support XML.

XML Editors

- Various authoring tools are available or under development.
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The XML/EDI Group isn't creating a new standard. XML/EDI is defining how companies can use current standards to solve their business problems.

Issues to be considered

- Interactive access for transactional and non-transactional data
- Low entry cost for users (are packages readily available?)
- Deliver date (June 1, 1999)
 - availability of browsers
 - availability of servers
 - availability of knowledgeable and experienced resources (both internally or externally)
 - availability of software development kits
 - prototype/pilot test
- standardized look and feel
- rigor of conformity for industry participants
- back-end processing support
- end user data formats for downloading information
- security and non-repudiation
- use of the public Internet
- coexistence/comparability with batch

Potential Application of XML in the Gas Industry

XML for Presentation Format Only

In this implementation the industry would define standard web page layouts (look & feel). However, this is limiting the power of XML and has few advantages over HTML.

XML for user-defined presentation

The flexibility is placed in the hands of the user to customize their XML presentations. So in theory, a SR could develop their own forms to access multiple TSPs. This would require underlying industry data structures to be standardized.

XML for EDI

Industry standard DTDs could be defined to use the current GISB defined X12 standard documents. Efforts are currently underway by XML/EDI Group to define DTDs for ANSI X12 documents. An advantage of using ANSI X12 formats is to leverage those processes already in place.

Another way to utilize DTDs would be to develop standard document formats for the industry. This would allow more flexibility for the Gas Industry to develop standard document formats specific to their needs.

Could eliminate the need for some trading partners to have an X12 translator

Conclusions

- Although XML has future potential, it is still an immature product. Until XML standards have been refined and products are commercially available, the Gas Industry should not consider it as an alternative at this time.
- XML has a lot of potential and GISB should monitor the maturing of the technology for future applications.
- Implementing XML would require the development of standards as well as programming. This is not a trivial task and would take a considerable amount of time by industry participants.
- Given the maturity of the technology and the effort required to develop standards and compliant systems, a June 1, 1999 implementation would not be feasible.
- It would be premature to select any particular technology on which to standardize prior to defining and developing business requirements.