



XML: A Key Factor in Helping Organizations Move Their Businesses to the Web

Mohammad Ibrar

Department of Computer Science, Metas Adventist College,
Ranchi University, Ranchi, India

Abstract: *Today we are fully dependent on technologies. And each and every second some new things are being developed by the researchers and developers. The field of computer science has become the one of the most desirable field. Each and every person wants to get information and products on a single click. E-commerce, E-business are trying to fulfill the person's desire and making the work easy. There are many languages and tools which are playing important role for designing and creating the system effective. This paper is focused on the web enabling business using XML. And we know that XML (Extensible markup language) can be a very effective way to represent business data for transfer between different systems and organizations.*

Keywords: *technology, web business, XML (Extensible Markup Language), E-commerce, E-business*

I. INTRODUCTION

Most people think of using the internet for business, they think of online retailers selling goods and services through a web site. XML can be an extremely effective way to pass data from the database to the web application. XSL can then be used to easily transform the XML data into HTML for display in the browser. This approach is usually more efficient than retrieving data as a rowset and writing presentation logic in a web page script or component to render the data.

The Internet is changing the economy by redefining supply chains and allowing companies to interact with customers, manufacturers, and distributors in ways previously not possible. The eagerness of companies to take advantage of this new market channel has resulted in rapid business innovation, causing the explosive growth of e-Business especially for B2B cooperation. XML has emerged as an important new Internet standard. It has rapidly achieved endorsement and adoption from nearly all software platform providers, spurring adoption in most industries. XML combines a heritage of markup languages for publishing applications with the value of structured data for online applications. The resulting merger of ideas has led to new ideas and revitalized old ones. C-bridge believes that XML will change how applications are built. It will unlock new possibilities by allowing standardized business information, allow more universal data processing, and enable a world of mass-customized services provided over the Web.[2]

II. AN EXTREMELY EFFECTIVE WAY TO PASS DATA FROM THE DATABASE TO THE WEB APPLICATION

There was a need for a tag based markup language standard that could describe data more effectively than HTML, while still using the very popular and standardized HTTP over the Internet. Therefore in 1998 the world wide consortium (w3c) came up with the first Extensible Markup Language recommendations. Now In today's era XML has emerged as the standard for structuring and exchanging data over the web.

It has become easy for displaying data in a desirable format on the web using XML, because XML is a versatile language, capable of labeling the information content of diverse data source including data structured and semi-structured documents, relational databases and object repositories. A query language that uses the structure of XML intelligently can express queries across these kinds of data, whether physically stored in XML or viewed as XML via middleware.

In e-commerce and e-business, queries can be asked by the customer and the companies. XQuery one of the feature of XML plays an important role for extracting data from the data source. XQuery not only gives a data model to interpret XML documents, but also a set of operators and functions to extract data from those documents.

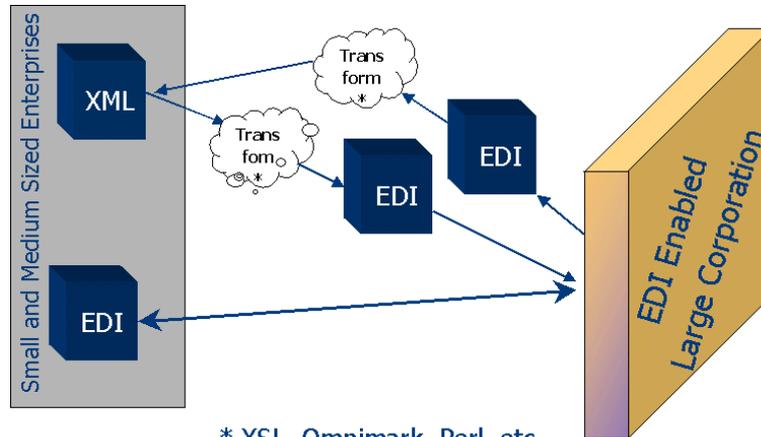
Using XML in business to consumer(B2C) solution: when most people think of using the Internet for business , they think of online retailers selling goods and services through a web site. Retail e-commerce solutions, such as these usually rely on HTML pages accessed by means of a web browser. The pages show product data from a database and allow customers to place orders, the details of which are also stored in a database.[3]

An XML product catalogue could be transformed into HTML for display in a browser or into Wireless Markup Language(WML) for display on a Wireless Application Protocol(WAP)- enabled cell phone.

Using XML in Business to Enterprise(B2E) solution: Internet technologies such as HTTP are often used to build internal application. This is particularly helpful in environments where multiple platforms and development languages are used because an Intranet-based solution allows any application that can communicate over TCP/IP to be integrated. for example, the existing telephone sales orders can continue to be entered into the IMS(Information Management System)

as before, and new orders placed through the web site can be represented as XML and passed on to be stored in the IMS application.

Using XML in Business to Business (B2B): One of the most important aspects of web development is the integration of business processes across trading partners. Most interbusiness processes involve an exchange of business documents, such as orders, invoice, delivery notes and so on. XML provides an ideal way to describe these business documents for exchange across the Internet. XML schemas can be used to define the XML representation of the business documents, allowing trading partners to agree on a format for the data being exchanged. Business documents can be exchanged by using any protocol, such as HTTP, SMTP, or FTP or by using a message queuing solution.[4]



* XSL, Omnimark, Perl, etc.

Figure 1 XML Enabled EDI

A sample code XML document

```
<? xml version = "1.0"?>
<!DOCTYPE CustomerOrder
SYSTEM http://www.a-company.com/dtd/order.dtd>
<CustomerOrder>
  <customer>
    <person>
      <Fname>M</Fname>
      <Lname>Hasan</Lname>
    </person>
    <address>
      <address addrtype = "home">
        H-40,New city, New Delhi 110012</address>
      <address addrtype = "biling">
        H-40,New city, New Delhi 110012</address>
    </customer>
    <orders>
      <orderNo>40</orderNo>
      <productNo>60</productNo>
    </orders>
  </CustomerOrder>[6]
```

III. WHY SHOULD CONSIDER XML FOR EFFECTIVE WEB ENABLED BUSINESS?

XML is considering because it specifically addresses issues of single-source content management, automatically generated output, consistent information, and multiple delivery formats. XML is being used by the companies for carrying their data or information on the global platform now days. Some reasons for considering XML are:[1]

- The content of your Web site come from multiple sources (program managers, public information officers, administration, customers, etc.)
- The contents exist in multiple formats (e.g., Word files, HTML, database fields, PDF, etc.)
- A Web site contains a large amount of text
- It delivers to a variety of formats and platforms such as PDF, RTF, and mobile devices

IV. BENEFITS OF XML

The benefits of using XML for making the business effective from its property of separating a document's content from its presentation. This enables that content to be managed more efficiently in a single source file. The principle behind single source is that one document contains all the content independent of presentation attributes. When a change is made to that content, it is made in only one place and automatically propagated to all the places it is used and displayed (Web pages, PDF pages, etc.) The following is a list of some of the benefits of XML:[1]

Automatic Generation of Multiple Formats: The XML source document is processed with an XSL (Extensible Stylesheet Language) file to produce a variety of outputs including HTML pages, PDFs, and RTFs. This technique is frequently referred to as reusing and repurposing content. The ability to create a variety of outputs from a single source can save time and ensure consistency, which has a direct impact on the return on investment.

Consistency Across Multiple Formats and Devices: In addition to repurposing content, XML's single source capability decreases errors in content and ensures consistency of format throughout entire Web sites and between formats for multiple devices. With today's fast pace of information flow, changes to content can be frequent. Since content often appears in more than one place on a Web site, executing those changes can also be challenging. Without a single content source, a Webmaster might not be able to update all instances of the outdated content and thus risk inconsistency of presentation.

Potential for Data Exchange: In addition to content management, there are other general benefits that can be obtained by using XML. For example, XML's data structure requirements provide an effective method to share and exchange data within and across organizations. It also provides a standard mechanism to access data in legacy systems through standard, non-proprietary formats.[3]

Device Independence: XML is device independent, which is growing in importance as wireless, mobile, and portable devices enter mainstream use. XML/XSL can deliver to PDAs, cell phones, and other wireless devices with the same ease as to desktop computers.

V. CONCLUSION

With the increasing importance of the Internet and related technology, XML really can be a key factor for making e-business powerful and effective due to its great features. This flexibility makes XML a great choice for developing web based applications that will be accessed by multiple client types.

REFERENCES

- [1] Williams, XML: The Complete Reference. 2001 Tata McGraw Hill Education
- [2] Natanya pitts-Moultis, Cheryl Kirk, XML Black Book. 2001 The coriolis Group
- [3] Sean McGraw, XML by Example: Building E-Commerce Application. 1998 prentice Hall PTR
- [4] Zheng Qin, Introduction to E-Commerce. 2009 Tsinghua University Press
- [5] <http://www.xml.com>
- [6] www.eccnet.com/presentations/SSGR/Role-XML-E-business.pdf