



## **Chapter 18**

# **XML - Digital Glue for the Modern World Electronic Business Standards Fuelling Intra- and Inter-Enterprise Interoperability for Global Collaboration**

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## **ABSTRACT**

This chapter provides information about current XML-related standards for the electronic interchange of business documents. The reader is introduced to the principles of the major standards in this area, such as XML, DTDs, XML Schema, XSL, XSLT, XPath, XPointer, DOM, and SAX. Furthermore, it is discussed why XML is not only an ideal data interchange format, but is very likely to earn its merits as a very effective format for persistently storing XML-based documents required in the modern e-business world. Finally, the chapter provides a brief introduction to industry initiatives aimed at optimizing the standardized exchange of business documents, such as BizTalk, ebXML, and others.

## **INTRODUCTION**

Currently, we are facing a very challenging moment in the development of electronic business processes for cross-company collaboration. The Internet itself has driven us to develop open public standards across a wide range of individuals and companies, no matter where they are located. Though the rise and fall of the new economy created and swept away

an incredible amount of business and investments, the initial reason for introducing electronic business in enterprises is still evident: if companies wish to continue their business successfully in times of global trading, pervasive networking, and constant change, they need to coordinate their business processes optimally with one another.

With Internet standards such as TCP/IP, HTTP, SGML, HTML and the globally recognized information exchange standard XML (eXtensible Markup Language), the Internet community will continue to provide an ideal basis for successfully streamlining all business processes. XML is user-driven and text-based, and frees information from computing systems and applications. It is based on simple rules that are just as responsible for bringing about the success of XML as the associated substandards or proposals that were submitted to and discussed and passed by the World Wide Web Consortium (W3C). It is these substandards that enable the actual potential of XML to be put into practice in effective applications.

## **ELECTRONIC BUSINESS IS ALL ABOUT COLLABORATION.**

### **Electronic business is more than just e-commerce!**

The Internet will continue to be the driving force behind the ever more rapid expansion of e-commerce. Consequently, only those enterprises that realize the necessity of being able to access internal and external data quickly, to integrate and manage this data effectively, and to make it available both within the company and externally over the Web will be able to maintain and extend their lead over their rivals. Therefore, companies will create ideal conditions for ensuring their own survival in the age of the Internet if they begin now to adjust their business processes towards electronic business. Only then will they be able to respond to the future demands in today's fast-moving, global market. Whoever carries this through systematically will very probably be rewarded with excellent, way-above-average growth prospects. Now, what does electronic business really mean?

Electronic business can be viewed as transactions that are handled electronically and that support the corporate business process. Such transactions can take place either within companies, such as between departments, teams, or individual members of staff, or even across company boundaries, such as between business partners. When all direct contact with the customer takes place electronically—that is, for example, electronic orders are placed over the Internet (i.e. business to consumer, B2C), and the entire purchasing and delivery processes of all the companies involved in the manufacturing and delivery process are also handled by electronic means (that is, business to business, B2B), then we speak of electronic business. It is clear that automating many separate, interlinked business processes across the entire value-added chain results in a multitude of speed-related advantages and cost savings that every company hopes for from implementing electronic business processes.

We do indeed already have powerful, economically priced computers and high-bandwidth networks today, but it is only through the rapid development of Internet technology and the introduction of XML that it has become possible to put the exchange of data and information on a uniform, standardized basis that is totally independent of the platforms and applications used. This development was absolutely essential, since the actual problem today no longer lies with the capability of the technology, but far more with the limited capability of a global army of programmers. Until now, these people have had to waste a great deal of energy, time, and resources getting different heterogeneous and, for the most part, incompatible systems to communicate with one another by means of specially developed

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