XML is one of the biggest buzzwords these days. Some researchers and practitioners are even talking about an XML revolution. One expectation is that XML will simplify Web site management and the publishing of documents; for this purpose XML was initially designed. A second vision is that XML will be a lingua franca which makes it possible to exchange data and thus develop truly interoperable applications. Another vision is that XML will turn the Web into a database system, thereby making it possible to pose SQL-like queries and get much better results than from today's Web search engines.

Of course, we are still a far cry from all these visions. The purpose of this issue is to present recent developments and describe what needs to be done. Following the tradition of this Bulletin, the focus is on database and data management issues.

The first paper gives background material. This paper gives an up-to-date overview of XML and XML-related standards and proposals; i.e., RDF, XSL, XPath, and XPointer. The second paper addresses the topic of XML query languages; obviously a good query language is crucial to turn the Web into a database. The paper analyzes the requirements of an XML query language, gives an overview of existing proposals, and describes one proposal, XML-QL, in more detail. The third paper describes a suite of tools developed as part of the Araneus project. The overall goal of this project is to simplify XML Web site management. The paper presents the Araneus data model and discusses some of the challenges of (forward and backward) engineering of Web sites. The fourth paper studies how XML data can be stored in a relational database and contains the results of performance experiments. The overall conclusion is that RDBMSs do extremely well in terms of query performance, but might not be appropriate to store XML for other purposes. The last two papers are visionary papers and give a detailed description of technical issues that need to be addressed before the XML revolution becomes reality. The fifth paper specifically describes the steps that need to be taken before interoperable applications can be built using XML as a data exchange format. The sixth paper describes a research agenda for turning the Web into a database system, the ultimate XML vision.