

RESEARCH PAPER

1)XML and Web Services Security Standards

A Web service is defined as a software system designed to support interoperable machine-to-machine interaction over a network [1]. Put in another way, Web services provide a framework for system integration, independent of programming language and operating system. Web services are widely deployed in current distributed systems and have become the technology of choice for implementing service-oriented architectures (SOA).

In such architectures, loosely coupled services may be located across organizational domains. The suitability of Web services for integrating heterogeneous systems is largely facilitated through its extensive use of the Extensible Markup Language (XML). The interface of a Web service is for instance described using the XML based Web Services Description Language (WSDL). Furthermore, communication is performed using XML based SOAP messages.

Thus, the security of a Web services based system depends not only on the security of the services themselves, but also on the confidentiality and integrity of the XML based SOAP messages used for communication

2)Data Management for XML: Research Directions

XML—the eXtensible Markup Language—has recently emerged as a new standard for data representation and exchange on the Internet [2]. The basic ideas underlying XML are very simple: tags on data elements identify the meaning of the data, rather than, e.g., specifying how the data should be formatted (as in HTML), and relationships between data elements are provided via simple nesting and references.

Yet the potential impact is significant: Web servers and applications encoding their data in XML can quickly make their information available in a simple and usable format, and such information providers can interoperate easily. Information content is separated from information rendering, making it easy to provide multiple views of the same data.

XML data files can be rendered via specifications in XSL, the eXtensible Stylesheet Language . Laborious, error-prone, and unmaintainable “screen-scraping” as a method for extracting useful data from HTML Web pages is greatly reduced, since XML is designed for data representation—XML is simple, easily parsed, and self-describing.

3)Relational Databases for Querying XML Documents: Limitations and Opportunities

XML is fast emerging as the dominant standard for representing data in the World Wide Web. Sophisticated query engines that allow users to effectively tap the data stored in XML documents will be crucial to exploiting the full power of XML. While there has been a great deal of activity recently proposing new semistructured data models and query languages for this purpose, this paper explores the more conservative approach of using traditional relational database engines for processing XML documents conforming to Document Type Descriptors (DTDs).

To this end, we have developed algorithms and implemented a prototype system that converts XML documents to relational tuples, translates semi-structured queries over XML documents to SQL queries over tables, and converts the results to XML. We have qualitatively evaluated this approach using several real DTDs drawn from diverse domains.

It turns out that the relational approach can handle most (but not all) of the semantics of semi-structured queries over XML data, but is likely to be effective only in some cases. We identify the causes for these limitations and propose certain extensions to the relational model that would make it more appropriate for processing queries over XML documents.

4)The Semantic Web - on the respective Roles of XML and RDF

The next generation of the Web is often characterized as the “Semantic Web”: information will no longer only be intended for human readers, but also for processing by machines, enabling intelligent information services, personalized Web-sites, and semantically empowered search-engines. The Semantic Web requires interoperability on the semantic level.

Semantic interoperability requires standards not only for the syntactic form of documents, but also for the semantic content. Proposals aiming at semantic interoperability are the results of recent W3C standardization efforts, notably XML/XML Schema and RDF/RDF Schema. In this paper, we make the following claims:

- A further representation and inference layer is needed on top of the currently available layers of the WWW.
- To establish such a layer, we propose a general method for encoding arbitrary ontology representation languages into RDF/RDF Schema.

· We illustrate the extension method by applying it to a particular ontology representation and inference language (OIL).

5)An RSS Feed Analysis Application and Corpus Builder

This article describes a software application that downloads given RSS feeds and compiles them into a corpus. The user simply supplies RSS feed addresses and the application automatically connects to the feeds, downloads them and strips any formatting tags.

The application incorporates the Expat () XML parser to identify the tags in the RSS feeds, and the user has the flexibility to define what they would like to keep and what is to be stripped [1]. The application was tested on a project to analyze Middle-Eastern blogs.

Thirty-seven blogs were downloaded using the RSS Feed Analyzer and compiled into a corpus of 131,836 words. Both the RSS Feed Analyzer and corpus are freely available under the GNU General Public Licence.

METHODOLOGY

BROWES RSS CONTENT

FEED

XML - RSS

XML

Using XSTL

DATA

DATA BASE FLOWCHART

TECHNOLOGY USED

- XML
- XSLT
- XSL

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