

XML, XSD and XSL for Applications detailed course contents

Positioning. (XML,HTML,EDI,SGML)

- Where does XML come from?
- Separating structure from presentation.
- EDI and XML, hype or real?
- Move from EDI to XML?

Modeling tools and usage of UML.

- Making a model.
- Important case tools.
- Why is the data model so important?
- Discussion: elements or attributes

XML documents.

- What is an XML instance?
- Creating XML instances based on a data model.
- Well formed XML and Valid XML.
- Markup and content rules.
- Validation tools.

Document Type Definition

- Making a DTD based on a model.
- DTD rules and techniques.
- Declaring elements and Attributes
- Limitations of DTDs.

Namespaces.

- What are namespaces?
- Default namespace.
- Reserved W3C namespaces.
- When to use namespaces?

Schemas

- What are XSD data types?
- Simple and Complex data types.
- Making your own data types.
- Reuse of data types.
- XSD and namespaces
- Using Include and Import statements
- Schemas used in middleware tools.

Overview of B2B Integration tools

- Why use a B2B integration tool?
- Different tools available today.
- Positioning of EAI and B2B functionality.
- Some interesting B2B tools compared.

Transport protocols

- File transport through FTP.
- HTTP usage, database adapters
- XML as an attachment in SMTP.
- Message Queuing adapters
- Other transport solutions.

What is a Framework, and why do we need it?

- Self routing and non-routing documents.
- The ebXML and BizTalk framework.
- What is SOAP?
- SOAP messages
- SOAP and RPC
- Tightly versus Loosely coupled systems

XPath, XLink and XPointer.

- XLL (XML Linking Language)
- Simple and Extended links.
- XInclude.
- Basic XPath instructions
- Axes examined.
- XPath functions.

XSL for Presentation.

- Usage of XPath within XSL
- XSL to HTML examples
- Using style sheet Templates.
- XSL for Transformation.
- XSL used to integrate with business partners.
- Transformation of non-XML files.
- Transforming text and CSV to XML.
- From XML to PDF
- Using XSL-FO..
- Real world examples using B2B tools.

B2B and EAI

- The difference between B2B and EAI.
- Techno trends in B2B and EAI.
- Most important Middleware tools
- Popular Application Servers

XML based Content Management

- XML & Databases.
- SQL Server and Oracle XML support.
- Application based DB access
- Programmatic DB access
- Scripting, XSL and XML combined

Parsers

- DOM, the tree-based approach.
- Applying DOM examples using a browser.
- Programmatic access to XML data.
- Handling events with SAX.

XML A2A Architecture

- Why XML based A2A?
- Components of a total XML A2A solution.
- Core web service technologies.
- Positioning of SOA, ESB and BPM

WSDL and UDDI

- WSDL explained.
- Service catalogs: private and public usage.
- Registries: UDDI and ebXML.

XML and Security

- Security mechanisms.
- Hashing mechanisms and digital signatures
- Certificates, PKI and SSL.

Conclusions

- XML and financial implications.
- XML and business implications.
- Technical implications when using XML.