Motivation for XML

- Increased semantics
  - Author in <author> not <center>
- Robust decentralized data interchange
  - Adequate abstract data type (ADT) language
  - Capability for meta-information
- Increased processing efficiency
  - Author is child 2 of element 2 of root
  - Authoritative source with multiple derivative transformations
  - Rendering as a transformation to a style standard
- Linking improvements
  - Extended and external links
  - Non-intrusive pointers

Course Overview

- An introduction to structured documents
- An overview of XML
- XML
  - XPath and XSLT
  - XSLT and Rendering (formatting objects)
  - Schema and Document Definition
    - Namespaces
    - Datatypes
  - XPointer and XLink
- Programmatic Processing of XML
  - DOM and SAX
What is not covered

- Metadata models for XML
  - Models
  - RDF
  - Topicmaps
  - Implementations
  - Dublin Core/Warwick Framework
- PICS
- Analysis and Design using XML
  - Document Content Models
  - Transformation and Specialized Applications (WAP)
  - Business Processes and Object Access
  - Simple Object Access Protocol (SOAP)
  - Universal Description, Discovery, and Integration (UDDI)

Resources

- Books
- Tools
  - LT XML version 1.2 (a development tool set)
    [http://www.ltg.ed.ac.uk/software/xml/](http://www.ltg.ed.ac.uk/software/xml/)
  - The Apache XML Project (Xerces & Crimson - XML parsers; Xalan - XSLT processor; FOP - XSL formatting objects; SOAP - Simple Object Access Protocol)

A Word of Preparation

- XML is a set of specifications or standards
- While most have achieved some level of stability,
  - There are still competing approaches
  - Some evolution of the specification is normal
  - The standards are defined with an eye to extensibility
- Even with stable standards, tools need to implement the specification and it is likely:
  - Some tools will be non- or minimally compliant
  - Some tools will implement supersets of functionality