

## **Comp 336/436 - Markup Languages**

---

Fall Semester 2017 - Week 12

Dr Nick Hayward

## Contents

---

- Demo
- Metadata typology and uses - part 2
- Text Encoding Initiative - part I

## **XML & XSLT - Demo**

---

- Brief demo of class exercises

## Metadata typology and uses - use case evaluation

---

- no clear, standard set of practices or methodologies to monitor the use of metadata
- might monitor metadata using more traditional and resource intensive methods
  - *such as user surveys and interviews*
- there are a couple of examples for better monitoring usage of metadata
  - *dynamic search interfaces - last.fm, Facebook...*
  - *use case evaluation - collection management...*

# Metadata typology and uses - use case evaluation - example

---

## monitoring metadata usage with dynamic search interfaces

- marketers and HCI specialists often deduce user information
  - *regarding preferences of users*
  - *by analysing their behavior and actions*
  - *analyse through logfiles and tools such as heatmaps*
- Facebook and *last.fm* rely heavily on the analysis of use data
  - *helps deliver a more personalised service*
- *last.fm* tracks, for example, all of the music files played by the user
  - *allows them to fine-tune the user's profile*
  - *also allows them to offer extra features*
  - *features such as concert notification*
- Facebook is able to offer customised features, similar to *last.fm*

## Metadata typology and uses - use case evaluation

---

- metadata fields are effectively used within a collection management database
- crucial to offer direct added value to users - encourages interaction with an application
- user is confronted with a default search interface
  - *may be intuitively configured to a user's individual needs*
  - *e.g. by adding, deleting, re-arranging metadata fields/elements...*
- possibility to monitor metadata fields usage within the database by a collections manager
- use recorded outcomes to manage relevance and usage of metadata fields
- provides statistical support for modifications and updates to metadata
- metadata providers need to start experimenting with tools and methodologies
  - *to allow them to monitor the effective use of the metadata*

## Text Encoding Initiative - Consortium

---

- maintains a technical standard
- set of guidelines
- user wiki
- set of tools for development and processing
- currently predominant in social sciences and humanities, in particular
  - *textual studies*
  - *literary studies*
  - *linguistic studies*

## Text Encoding Initiative - Contribute

---

- membership
- Special Interest Groups (SIG)
  - *currently 12 active groups*
  - *wiki and mailing list*
- Activities
  - *various boards and membership groups*
  - *conferences*
  - *workgroups*
  - *project information*



# Text Encoding Initiative - Guidelines

---

## a gentle introduction

- guidelines for electronic text encoding and interchange
- define and document a markup language for representing
  - *structural*
  - *rendition*
  - *logical & semantic*
  - *analytic*
- rules and recommendations rather than standard
- wide variety of possible solutions for encoding material
- freedom of expression of personal textual theory
- current version = P5
- ~ 569 elements, ~ 214 attributes...
- customisations such as TEI Lite

## Text Encoding Initiative - Text Structure

---

- structural features
  - *organisation of information in text*
- TEI defines overall text structure using
  - *front*
  - *body*
  - *group*
  - *back*
- a consideration of rendition features

# Text Encoding Initiative - Text Structure

---

## some examples

Example structural features commonly found in prose, verse, and drama.

### **Prose**

- paragraphs <p>
- divisions <div>
- headings <head>
- lists <list>
- list item <item>
- quotations <q>
- page breaks <pb>
- segments <seg>
- figures <figure>
- tables <table>

### **Verse**

- linegroups <lg>
- lines <l>

### **Drama**

- divisions <div>
- speeches <sp>
- paragraphs <p>
- linegroups <lg>
- lines <l>
- segments <seg>

# Text Encoding Initiative - Text Structure

---

## conceptual usage

- how might we initially consider structuring a document
- a book
  - *mainly consists of chapters, sections, paragraphs...*
- poetry
  - *commonly organised in poems, stanzas, lines...*
- performance texts
  - *often think in terms of scenes, acts, or parts of speech*

## Text Encoding Initiative - Rendition Features

---

- rendition features such as

- *distinct fonts*
- *colours*
- *alignments*
- *italics, underline, bold*
- *font weight...*

- highlighting

```
<hi>italic words...</hi>
```

```
<hi rend="italic">italic words...</hi>
```

- Malory Project - XML example

## Text Encoding Initiative - Logical and Semantic features

---

- logical and semantic features such as
  - *emphasis*
  - *foreign words*
  - *linguistically distinct words, phrases*
- we can also consider
  - *quotation marks*
  - *quotes*
  - *cited quotation...*

## Text Encoding Initiative - Analytical Features

---

- analytical features such as
  - *notes and comments*
  - *marking for indexing*
  - *regularisation*
  - *editorial statements*

# Text Encoding Initiative - Modules

---

## part I

1. TEI Infrastructure (tei)
  2. Common metadata (header)
  3. Common Core (core)
  4. Default text structure (textstructure)
  5. Character and Glyph Documentation (gaiji)
- TEI guidelines - module list
  - TEI Header example



# Text Encoding Initiative - Modules

---

## part 2

6. Verse (verse)
7. Performance texts (drama)
8. Transcribed speech (spoken)
9. Print dictionaries (dictionaries)
10. Manuscript description (msdescription)

# Text Encoding Initiative - Modules

---

## part 3

- 11. Transcription of primary sources (transcr)
- 12. Text criticism (textcrit)
- 13. Names, Dates, People, and Places (namesdates)
- 14. Tables, Formulae, Figures (figures)
- 15. Metadata for language corpora (corpus)

# Text Encoding Initiative - Modules

---

## part 4

- 16. Linking, segmentation, and alignment (linking)
- 17. Analysis and interpretation (analysis)
- 18. Feature structures (iso-fs)
- 19. Graphs, networks, and trees (nets)
- 20. Certainty and Uncertainty (certainty)
- 21. Documentation elements (tagdocs)

# Text Encoding Initiative - getting started

---

## Common Data Structure & Elements

- expressed using XML
- elements for information
- attributes for additional information
- comments use standard delimiters

```
<!--this is a comment in TEI-->
```

# Text Encoding Initiative - getting started

---

## TEI Document

- `<teiHeader>` - documents all metadata for the TEI document
- `<text>` - contains the document proper
- these elements are mandatory for all TEI documents
- this structure is contained within the `<TEI>` element

```
<TEI>
  <teiHeader>...</teiHeader>
  <text>...</text>
</TEI>
```

# Text Encoding Initiative - getting started

---

## TEI Header <teiHeader>

- mandatory for all TEI documents
- <fileDesc> - contains a description of the electronic file
- <fileDesc> consists of at least three mandatory elements
  - <titleStmt>
  - <publicationStmt>
  - <sourceDesc>

# Text Encoding Initiative - getting started

---

## TEI Header <teiHeader> example

```
<teiHeader>
  <fileDesc>
    <titleStmt>
      <title>Around the World in Eighty Days</title>
      <respStmt>
        <resp>editor</resp>
        <name xml:id="NJH">Nicholas J Hayward</name>
      </respStmt>
    </titleStmt>
    <publicationStmt>
      <p>Not for distribution.</p>
    </publicationStmt>
    <sourceDesc>
      <p>Transcribed from 1873 English Edition</p>
    </sourceDesc>
  </fileDesc>
</teiHeader>
```

# Text Encoding Initiative - getting started

---

## global attribute usage - xml:id

```
<!-- transcriber note -->  
<note resp="#NJH">Possible mis-interpretation of author correction.</note>  
  
<!-- editorial note -->  
<note resp="#AL">correction meant as addition and not correction</note>
```



## Text Encoding Initiative - getting started

---

### <text> & <body>

```
<text>
  <body>
```

- minimally contains <body>
- <body> contains lower level text structures such as
  - <p>
  - *or different structures for genres other than prose*

```
<text>
  <body>
    <p>some text...</p>
  </body>
</text>
```

# Text Encoding Initiative - getting started

---

## <text> & <front>

```
<text>
  <front>
```

- optional element containing front matter such as
  - *title pages, headers, prefaces, dedications...*
- also consider prologues for drama, forewords and introductions for prose
- except for title, front matter should be encoded using generic standard elements

```
<front>
  <div type="dedication">
    <p>a small dedication...</p>
  </div>
</front>
```

# Text Encoding Initiative - getting started

---

## <text> & <back>

```
<text>
  <back>
```

- optional element and grouping
- may contain all back matter for a text
- either numbered or un-numbered divisions with @type attribute
  - *appendix*
  - *glossary* - <list> of terms and their explanations
  - *notes*
  - *bibliogr* - list of bibliographical citations <listBibl>
  - *index*
  - *colophon*

```
<back>
  <div type="colophon">
    <p>Printed and bound by.....</p>
  </div>
</back>
```

# Text Encoding Initiative - getting started

---

## <text> - example

```
...
<text>
  <front>
    <div type="dedication">
      <p>personal dedication...</p>
    </div>
    <div type="contents">
      <head>Table of Contents</head>
      <list>
        <item>1. No.1...</item>
        <item>2. No.2...</item>
        <item>3. No.3...</item>
      </list>
    </div>
  </front>
  <body>
    <p>some body text goes here....</p>
  </body>
  <back>
    <div type="colophon">
      <p>Physical book conditions...</p>
    </div>
  </back>
</text>
...
```

# Text Encoding Initiative - getting started

---

## unitary or composite texts

- TEI also allows us to encode composite texts
- group structurally related text in a <group> element within <text>
- organise texts as a corpus of diverse texts
  - *using <teiCorpus> as the parent element for the group*
- <group>
  - *group structurally related text*
- <teiCorpus>
  - *corpus of diverse texts*

# Text Encoding Initiative - general usage

---

## Exercise - part I

```
<TEI>
  <teiHeader>
    <fileDesc>
      <titleStmt>
        <title>
          <!--Title-->
        </title>
      </titleStmt>
      <publicationStmt>
        <p>
          <!--Publication Information-->
        </p>
      </publicationStmt>
      <sourceDesc>
        <p>
          <!--Information about the source-->
        </p>
      </sourceDesc>
    </fileDesc>
  </teiHeader>
  <text>
    <body>
      <!--Some structural division, paragraph, line group, speech, ...-->
    </body>
  </text>
</TEI>
```

- using the above template
  - add some of the missing information - as commented in the XML
  - write a simple XSL stylesheet to render the content and metadata to HTML
  - test in a browser
- ~ 15 minutes

## References

---

- [last.fm](#)
- [Text Encoding Initiative - TEI](#)
- [TEI P5 Guidelines](#)