Authoring with the TEI

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The problem

- The TEI provides a wealth of elements arranged in classes and modules many of them are useful in writing new documents.
- Many elements are redundant, and a few new ones are needed.
- How do we decide what is needed, what extra can we do to make life easy for writers, and how do we write a TEI extension to describe the result?

Surveying current usage

Looking at the XML files comprising `http://www.oucs.ox.ac.uk` and `http://www.oss-watch.ac.uk`:

Documents

1698

Elements

233840

Unique elements

122

Elements occuring more than 10 times

94

Note that TEI Lite defines 151 elements

Most popular elements

1. <ref>: 1714
2. <title>: 1766
3. <Filespec>: 1861
4. <figure>: 2178
5. <emph>: 3412
6. <date>: 3451
7. <lb>: 3678
8. <list>: 4369
9. <head>: 5910
10. : 6240
11. <hi>: 7489
12. <row>: 10579
13. <p>: 24893
14. <cell>: 33342
15. <xref>: 37013
16. <item>: 37940

What do people want to do?

1. Make lists
2. Refer to other resources
3. Make paragraphs
4. Make tables
5. Include graphics
6. Emphasize things
7. Refer to file names
8. Force line breaks (!)

What might be lacking?

- Good facilities for code quoting
- Structured licence and copyright information
- Simplified lists
- Identifiers for computer-related things
- Simplified content models

Key decisions

- no numbered `<div>` elements
- no elements for marking-up transcribed text (`<gap>`, `<reg>` etc)
- simplified models for `<front>`, `<body>`, `<back>`, `<div>`, `<list>`
- new high-level `<uList>`, `<oList>` and `<glossList>` to replace old `<list>`
- add special elements for code, file paths etc
- some header extensions
- no more than 100 TEI elements

Elements in teiauth

97 elements available:

structural

<back>, <body>, , <divGen>, <front>, <head>, <group>, <TEI>, <text>, <titlePage>, <titlePart>

header-related

<authority>, <availability>, <change>, <copyright>, <distributor>, <editionStmt>, <fileDesc>, <keywords>, <language>, <licence>, <notesStmt>, <profileDesc>, <projectDesc>, <publicationStmt>, <quotation>, <reason>, <resp>, <respStmt>, <revisionDesc>, <seriesStmt>, <taxonomy>, <teiHeader>, <titleStmt>

Elements in teiauth (2)

block-level

<ab>, <cell>, <figDesc>, <figure>, <label><note>, <p>, <row>, <table>, <verbatim>

inline

<abbr>, <anchor>, <binaryObject>, <choice>, <command>, <date>, <emph>, <equiv>, <foreign>, <formula>, <gi>, <graphic>, <hi>, <index>, <indexTerm>, <lb>, <measure>, <name>, <path>, <ptr>, <q>, <ref>, <seg>, <software>, <term>, <time>, <url>

Elements in teiauth (3)

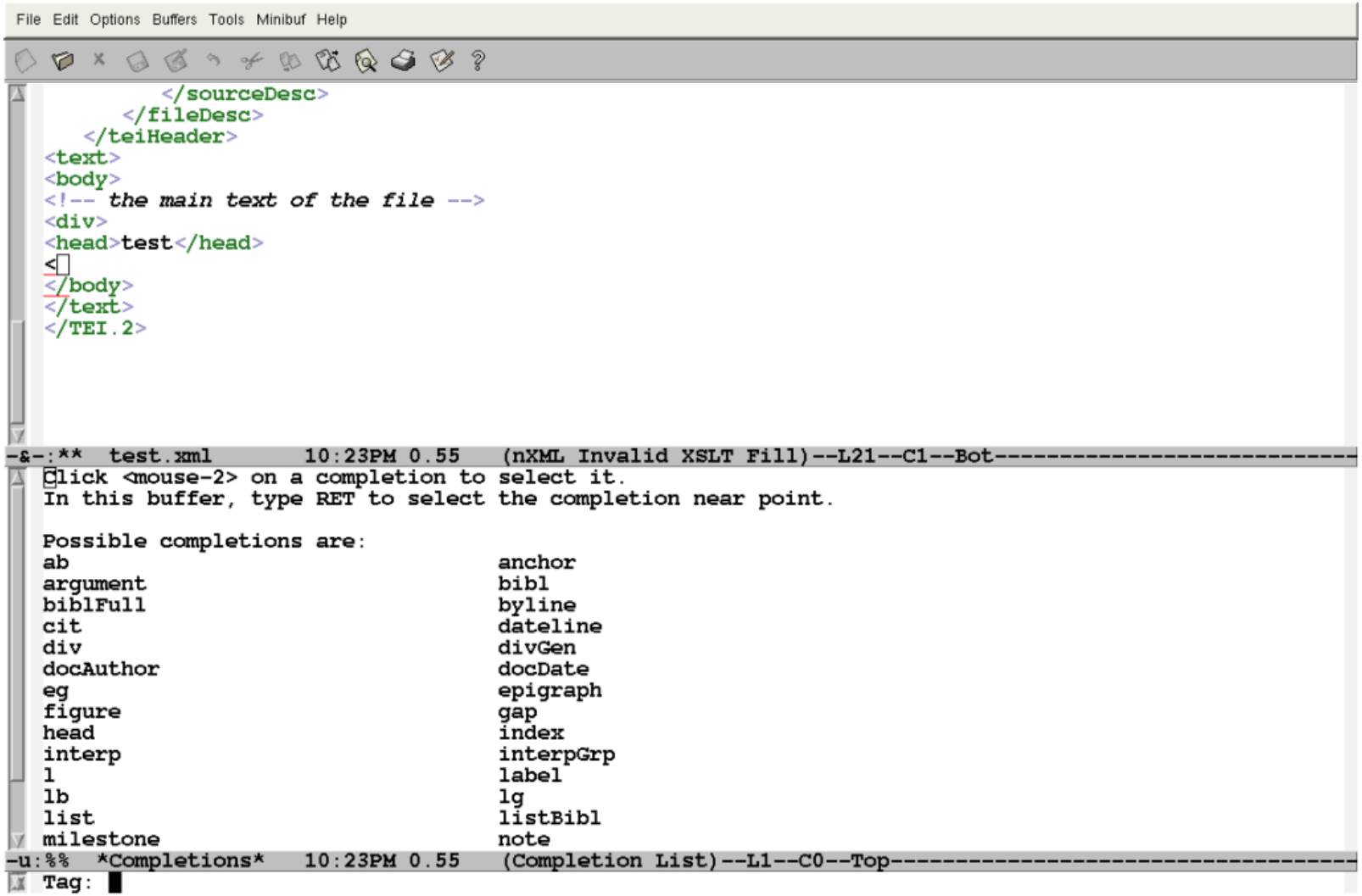
list-related

<gloss>, <glossList>, <item>, <oList>, <uList>

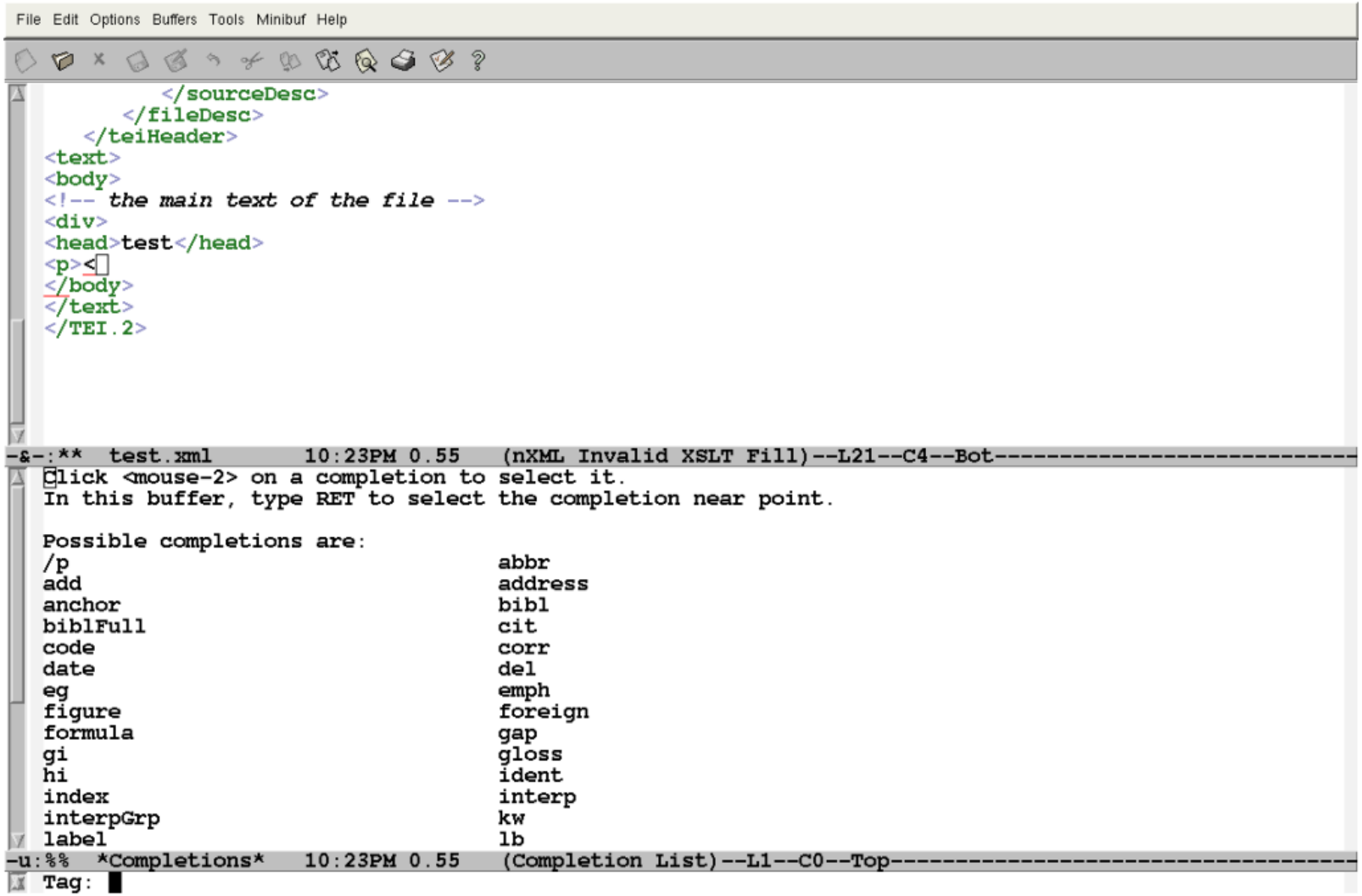
bibliography- and place-related

<addrLine>, <address>, <author>, <bibl>, <biblItem>, <biblScope>, <biblStruct>, <edition>, <editor>, <extent>, <idno>, <listBibl>, <monogr>, <postBox>, <postCode>, <principal>, <pubPlace>, <publisher>, <street>, <title>

Before: block-level choice



Before: inline choice



After: block-level choice


```
File  Edit  Options  Buffers  Tools  Minibuf  Help
<TEI xmlns="http://www.tei-c.org/ns/1.0">
   <teiHeader>
      <fileDesc>
         <titleStmt>
            <title>Untitled</title>
            <author>Unknown Author</author>
         </titleStmt>
         <publicationStmt>
           <p>[vacuous publication statement]</p>
         </publicationStmt>
      </fileDesc>
   </teiHeader>
<text>
<body>
<div>
<head>We go to sea</head>
<
-&-:**  test.xml       10:07AM 0.05    (nXML Invalid XSLT Fill)--L17--C1--Top----------------------------
Click <mouse-2> on a completion to select it.
In this buffer, type RET to select the completion near point.

Possible completions are:
ab                                  bibl
biblItem                            biblStruct
div                                 divGen
figure                              glossList
head                                label
listBibl                            note
oList                               p
q                                   table
uList                               verbatim




-u:%%  *Completions*   10:07AM 0.05    (Completion List)--L1--C0--All-----------------------------------
Tag:
```

After: inline choice


```
File  Edit  Options  Buffers  Tools  Minibuf  Help
<TEI xmlns="http://www.tei-c.org/ns/1.0">
   <teiHeader>
      <fileDesc>
         <titleStmt>
            <title>Untitled</title>
            <author>Unknown Author</author>
         </titleStmt>
         <publicationStmt>
           <p>[vacuous publication statement]</p>
         </publicationStmt>
      </fileDesc>
   </teiHeader>
<text>
<body>
<div>
<head>We go to sea</head>
<p><
-&-:**  test.xml       10:07AM 0.05   (nXML Invalid XSLT Fill)--L17--C4--Top----------------------------
Click <mouse-2> on a completion to select it.
In this buffer, type RET to select the completion near point.

Possible completions are:
/p                                  abbr
address                             anchor
bibl                                biblItem
biblStruct                          binaryObject
choice                              command
date                                emph
figure                              foreign
formula                             gi
gloss                               glossList
graphic                             hi
index                               label
lb                                  listBibl
measure                             name
note                                oList
-u:%%  *Completions*   10:07AM 0.05   (Completion List)--L1--C0--Top-----------------------------------
Tag:
```

The header, part 1


```
<fileDesc>
 <titleStmt>
  <title>A beginners guide to TEI authoring</title>
 </titleStmt>
 <publicationStmt>
  <publisher>TEI project</publisher>
  <authority>Oxford University</authority>
  <availability>
   <licence>
    http://creativecommons.org/licenses/by-sa/2.0/uk/
    </licence>
   <copyright>
    <name>Sebastian Rahtz</name>
   </copyright>
  </availability>
  <date>2005-09-18</date>
 </publicationStmt>

</fileDesc>
```

The header, part 2


```
 <revisionDesc vcdate="$Date:  2005/10/12 $" vcwho="$Author:
rahtz $" vcrevision="$Revision$">
  <change>
   <date>2005-09-18</date>
   <respStmt>
    <resp>author</resp>
    <name>Sebastian Rahtz</name>
   </respStmt>
   <reason>creation</reason>
  </change>

 </revisionDesc>
```

Using SVG

The <graphic> element has been extended to allow <svg> as a child element.

```
<figure>
 <head>An example of a drawing using SVG</head>
 <graphic>
  <svg width="11.487cm" height="3.564cm" viewBox="0.610
2.150 12.097 5.714">
   <polygon fill="#FFFFFF" stroke="none" stroke-width="0.100" p
4.900,2.200 2.800,5.550 "/>
   <polygon fill="none" stroke="#FF0035" stroke-width="0.100" p
4.900,2.200 2.800,5.550 "/>
   <polygon fill="#FFFFFF" stroke="none" stroke-width="0.100" p
12.000,5.664 9.725,2.450 "/>
   <polygon fill="none" stroke="#FF0035" stroke-width="0.100" p
12.000,5.664 9.725,2.450 "/>
  </svg>
 </graphic>

</figure>
```

Showing SVG

oh dear . . . no SVG implementation

So instead

My holiday photograph instead

Simple example of ODD: delete elements


```
<elementSpec ident="add" module="core" mode="delete"/>
<elementSpec ident="addName" module="namesdates" mode="delete"/
<elementSpec ident="alt" mode="delete" module="linking"/>
<elementSpec ident="altGrp" mode="delete" module="linking"/>
<elementSpec ident="altIdent" module="core" mode="delete"/>
<elementSpec ident="analytic" mode="delete" module="core"/>
<elementSpec ident="bloc" module="namesdates" mode="delete"/>
<elementSpec ident="broadcast" mode="delete" module="header"/>
```

More complex ODD: simplify elements


```
<elementSpec module="textstructure" mode="change" ident="back">
 <content>
  <rng:group>
   <rng:zeroOrMore>
    <rng:ref name="model.divWrapper"/>
   </rng:zeroOrMore>
   <rng:zeroOrMore>
    <rng:ref name="div"/>
   </rng:zeroOrMore>
   <rng:zeroOrMore>
    <rng:ref name="model.divWrapper.bottom"/>
   </rng:zeroOrMore>
  </rng:group>
 </content>
</elementSpec>
```

More complex ODD: new element


```
<elementSpec ident="path">
 <equiv mimetype="text/xsl" filter="equivs.xsl" name="ident"/>
 <desc>A directory or file specification</desc>
 <classes>
  <memberOf key="model.pPart.data"/>
 </classes>
 <content>
  <rng:text/>
 </content>
 <exemplum>
  <egXML>
   <p>The grammar for Xaira command files
    is installed at <path>/usr/share/xaira</path>.</p>
  </egXML>
 </exemplum>

</elementSpec>
```

Tricksy ODD: syntactic sugar


```
<elementSpec ident="uList">
 <equiv name="list" mimetype="text/xsl" filter="equivs.xsl"/>
 <gloss/>
 <desc>A sequence of items organized as an
  unordered list.</desc>
 <classes>
  <memberOf key="model.listLike"/>
 </classes>
 <content>
  <rng:zeroOrMore>
   <rng:ref name="item"/>
  </rng:zeroOrMore>
 </content>
</elementSpec>
```

What was that <equiv> thing?

It pointed to a template in an XSL file:

```
<xsl:template name="list">
 <list>
 <xsl:copy-of select="@xml:id|@n"/>
 <xsl:attribute name="type">
  <xsl:choose>
   <xsl:when test="local-name(.)='oList'">ordered</xsl:when>
   <xsl:when test="local-name(.)='uList'">unordered</xsl:when>
   <xsl:when test="local-name(.)='glossList'">gloss</xsl:when>
   <xsl:otherwise>
    <xsl:message terminate="yes">
     <xsl:value-of select="local-name(.)"/> is mapped to
    "list", but I do not know what to do to with
it</xsl:message>
   </xsl:otherwise>
  </xsl:choose>
 </xsl:attribute>
 </list>

</xsl:template>
```

Resources for this talk

- teauth.odd: ODD source of schema
- teiauth.xml: This talk
- teiauth.rng: Schema (Relax NG)
- teiauth.rnc: Schema (Relax NG compact)
- teiauth.xsd: Schema (W3C)
- xml.xsd: Support XSD file
- svg.xsd: Support XSD file
- xlink.xsd: Support XSD file
- oddtofilter.xsl: Creating transform to canonicalize
- equivs.xsl: Canonicalisation rules