MODULE 8: CUSTOMISING TEI, ODD, ROMA

Ron Van den Branden

Edward Vanhoutte

Melissa Terras
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1. jTEI: a Customisation for Journal Articles

This examples provides some snippets of the jTEI customisation ODD file, which defines a minimalist TEI scheme for encoding journal articles. This customisation is being used for encoding the source files of the articles of the *Journal of the Text Encoding Initiative*. This “clean” customisation defines a trimmed-down model of TEI texts, making it easier to enforce a consistent encoding style. This way, authors and editors are offered guidance in the composition and editing of an article. Inside the `<schemaSpec>` section of this “tei_jtei” customisation, you’ll see that only a limited number of elements is included from the *core, corpus, figures, header, namesdates, tagdocs, tei, textstructure*, and *transcr* TEI modules.

In this example, the definition of the `<figure>` element is made more stringent, in order to enforce a very specific structure on its contents. This is done inside an `<elementSpec>` element with a value of "figure" for the `@ident` attribute; the `@mode` attribute indicates that the existing element element specification should be changed. The contents for the `<figure>` element are being redefined in a `<content>` element, which is specifying a very strict sequence of either a single `<graphic>`, `<eqXML>`, or `<eq>` element, which must be followed by one or more `<head>` elements. Notice how the `<elementRef>` elements are being used to refer to these different TEI elements, and the `<sequence>` and `<alternate>` elements are being used to specify how they are combined. With the `@minOccurs` and `@maxOccurs` attributes on the `<elementRef>` reference to the `<head>` element, it is stipulated that at least 1 `<head>` element must be present, without an upper bound. The `<attList>` section is used to remove the attributes `@place` and `@title` from `<figure>`.

Likewise, the specification of the `<titleStmt>` element is re(de)defined, in that its `<content>` is reduced to a sequence of one or more `<title>` elements, followed by one or more `<author>` elements. Notice that the order is important here: there’s no `<alternate>` wrapper here, that would allow alternation of these elements. Notice, too, how this `<elementSpec>` element contains additional modifications: a `<constraintSpec>` element is used to define additional Schematron checks that can express context-dependent validation rules. In this case, a rule is defined which ensures that at least one `<title>` element must be present in `<titleStmt>`, with a value "main" for its `@type` attribute. For more information on the definition of such Schematron constraints in ODD: see section 22.5.2 Additional Constraints of the TEI Guidelines.
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1. jTEI: a Customisation for Journal Articles
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<schemaSpec ident="tei_jtei" start="TEI">
  <moduleRef key="tei"/>
  <moduleRef key="core" include="abbr author bibl biblScope cit date desc editor email emph foreign gap graphic head hi item label lb list listBibl mentioned name note num p pubPlace publisher q quote ptr ref resp respStmt series so Called term title"/>
  <moduleRef key="corpus" include="particDesc"/>
  <moduleRef key="figures" include="cell figure row table"/>
  <moduleRef key="header" include="appInfo application availability catRef change classCode edition encodingDesc fileDesc idno keywords langUsage language licence listChange profileDesc projectDesc publicationStmt rendition revisionDesc seriesStmt sourceDesc tagsDecl teiHeader textClass titleStmt"/>
  <moduleRef key="namesdates" include="affiliation forename listPerson person placeName orgName roleName surname"/>
  <moduleRef key="tagdocs" include="att code eg egXML gi ident tag val"/>
  <moduleRef key="textstructure" include="TEI back body div front text"/>
  <moduleRef key="transcr" include="supplied"/>
</schemaSpec>

<elementSpec ident="titleStmt" module="header" mode="change">
  <gloss versionDate="2005-01-14" xml:lang="en">title statement</gloss>
  <desc versionDate="2014-03-10" xml:lang="en">groups information about the title of a work and those responsible for its content. In jTEI, this must include a title and an <gi>author</gi> element for each author of the paper, which in turn must include <gi>name</gi>, <gi>affiliation</gi> and <gi>email</gi>.</desc>
  <content>
    <!-- [RvdB] sequence wrapper seems necessary to keep ODD2DTD happy -->
    <sequence>
      <elementRef key="title" minOccurs="1" maxOccurs="unbounded"/>
      <elementRef key="author" minOccurs="1" maxOccurs="unbounded"/>
    </sequence>
  </content>
</elementSpec>

<constraintSpec ident="jtei.sch-title" scheme="schematron">
  <constraint>
    <sch:rule context="tei:titleStmt">
      <sch:assert test="tei:title[@type = 'main']" sqf:fix="type.add"> A title of type "main" is required in <sch:name/>. </sch:assert>
    </sch:rule>
  </constraint>
</constraintSpec>
<sqf:fix id="type.add">
  <sqf:description>
    <sqf:title>Add a @type='main' attribute to the first title.</sqf:title>
  </sqf:description>
  <sqf:add match="tei:title[not(@type='main')][1]" node-type="attribute" target="type">main</sqf:add>
</sqf:fix>
</sch:rule>
</constraint>
</constraintSpec>
<!-- ... -->
<elementSpec xmlns:rng="http://relaxng.org/ns/structure/1.0" ident="figure" mode="change">
  <gloss xml:lang="en" versionDate="2015-03-03">figure</gloss>
  <desc xml:lang="en" versionDate="2015-03-03">groups elements representing or containing graphic information such as a graphic illustration, or a block of example code. Figure must contain either <gi>graphic</gi>, <gi>egXML</gi> (for example XML code) or <gi>eg</gi> (for non-XML code), and a mandatory <gi>head</gi> element containing the caption for the figure. Inline code examples may be provided through <gi>egXML</gi> and <gi>eg</gi> without the <gi>figure</gi> wrapper. </desc>
  <content>
    <!-- [RvdB] sequence wrapper seems necessary to keep ODD2DTD happy -->
    <sequence>
      <alternate>
        <elementRef key="graphic"/>
        <elementRef key="egXML"/>
        <elementRef key="eg"/>
      </alternate>
      <elementRef key="head" minOccurs="1" maxOccurs="unbounded"/>
    </sequence>
  </content>
  <attList>
    <attDef ident="place" mode="delete"/>
    <attDef ident="type" mode="delete"/>
  </attList>
</elementSpec>
<exemplum xml:lang="en">
<egXML xmlns="http://www.tei-c.org/ns/Examples">
<figure>
<graphic url="http://www.example.org/fig1.png" width="100px" height="750px"/>
<head type="legend">The View from the Bridge</head>
<head type="license">Used with permission</head>
</figure>
</egXML>
</exemplum>

<exemplum xml:lang="en">
<egXML xmlns="http://www.tei-c.org/ns/Examples">
<figure>
<eg>if ((err = SSLHashSHA1.update(&hashCtx, &serverRandom)) != 0) goto fail;
if ((err = SSLHashSHA1.update(&hashCtx, &signedParams)) != 0) goto fail;
if ((err = SSLHashSHA1.final(&hashCtx, &hashOut)) != 0) goto fail;</eg>
<head type="legend">An embarrassing error for Apple</head>
</figure>
</egXML>
</exemplum>

<exemplum xml:lang="en">
<egXML xmlns="http://www.tei-c.org/ns/Examples">
<figure>
<egXML xmlns="http://www.tei-c.org/ns/Examples">
<list rend="bulleted">
<item>Life</item>
<item>The Universe</item>
<item>Everything</item>
</list>
</egXML>
<head type="legend">A book title rendered as a list</head>
</figure>
</egXML>
</exemplum>
</elementSpec>

<!-- ... -->
</schemaSpec>
</div>
</back>
</text>
</TEI>

2. Abolishing Numbered Text Divisions

Following ODD file defines a minimal TEI schema (containing the core, tei, header, and textstructure modules). Besides that, it does away with numbered text divisions (<div1>, ..., <div7>) by specifying the value “delete” for the @mode attribute on their respective <elementSpec> declarations.

Notice that strictly speaking, only deletion of <div1> is necessary, as all further numbered subdivisions should nest according to the TEI scheme. By definition, if the topmost level is deleted, all further subdivisions are practically excluded from the document model. Although they are still declared, they can’t be used in documents according to this schema. Additionally, notice how this list of separate <elementSpec> instructions could be expressed more concisely as:

```xml
<moduleRef xmlns="http://www.tei-c.org/ns/1.0" key="textstructure" except="div1 div2 div3 div4 div5 div6 div7"/>
```

```xml
<TEI xmlns="http://www.tei-c.org/ns/1.0" xml:lang="en">
  <teiHeader>
    <fileDesc>
      <titleStmt>
        <title>numbered divisions</title>
        <author>The TBE crew</author>
      </titleStmt>
      <publicationStmt>
        <p>for use by whoever wants it</p>
      </publicationStmt>
      <sourceDesc>
        <p>no source, born digital</p>
      </sourceDesc>
    </fileDesc>
  </teiHeader>
  <text>
    <front>
```
Example 2. TBE-crafted example encoding, no material source.
BIBLIOGRAPHY