

Beyond TEI

Digital Editions with XPath & XSLT for the Web & in \LaTeX

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1. The workshop
2. Intro to \LaTeX (& *reledmac*)

The workshop

Goals

1. get to know XPath & XSLT (and learn how to use it)
2. understand the role of XML/TEI, XPath and XSLT in Digital Editing
3. be able to use XSLT to generate HTML and \LaTeX output from TEI
4. Two days isn't enough for you to master XSLT!

Schedule

Day 1, morning XML, TEI and Digital Editing → repetition of the basics, making sure we're all on the same page, understanding why we're even learning XSLT.

Day 1, afternoon Navigating XML documents using XPath, introduction to HTML (& Bootstrap) and \LaTeX (& *reledmac*)

Day 2 Transforming XML documents into HTML & \LaTeX output formats using XSLT

Single point of entry for all workshop-related materials: [L^AT_EX Ninja blogpost](#) & [Github Repository](#) ('additional resources' directory)

Introductions

Please introduce yourselves!

1. Name, pronouns, field/topic of study
2. Why did you come to this workshop?
3. Previous experience with Digital Humanities (DH) or editing?

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Sarah Lang (she/they)

- originally from Germany, now in Graz (Austria)
- Studied Latin, French & History (teacher's education) in Graz & Montpellier (France), then Archaeology Bachelor, Master in Religious Studies & Philosophy
- got a DH certificate & started working at Zentrum für Informationsmodellierung (ZIM) / Centre for Information Modelling in Graz
 - Moral Weeklies/Spectators → gams.uni-graz.at/mws
 - Graz Repository of Ancient Fables (GRaF) → gams.uni-graz.at/graf
 - *PhD thesis*: Decoding alchemical *Decknamen* digitally. A Polysemantic Annotation and Machine Reasoning Algorithm for the Corpus of Iatrochymist Michael Maier (1568–1622)
- Now: teaching in Graz, Passau & Vienna; PostDoc in Graz. *Research interests*: history of science (alchemy), Neo-Latin, text mining and computer vision

Intro to \LaTeX (& `reledmac`)

- **.tex** Typesetting with T_EX using Lamport macros (i.e. shortcuts to make complicated code easy)
- ΛT_EX reads in those macros (with telling names like `\emph{}` for ‘emphasis’, an ‘intelligent’ command which can be redefined for the whole document)
- feels like markup for those producing the code (illusion of descriptive markup)
- placeholder for complex procedural language
- **WYIWYG**-Editors (*what you see is what you get*, i.e. MS Word) vs. **WYSIWYM** (*what you see is what you mean* → ΛT_EX)

Example commands

Commands below without the spaces
`\textit {Italic}` *Italic*
 (presentational.)
`\emph {Italic}` *Italic*
 (semantic/‘intelligent’)
`\textbf {Bold}` **bold face**
`\section {Title}` Heading 1
`\subsection {Subtitle}` etc.
`\href`
`{http://a.com}{Link}` .. ‘hidden’
 link
`\includegraphics`
`{bla.png}` image

Typesetting critical editions with the reledmac package i

→ *reledmac* example

Typesetting scholarly critical editions with reledmac (1)

Source Rich Text Ω ↻ × ✓ < ↗ ↺ Recompile ↻ ↵

```
31 \beginnumbering
32 \pstart
33 \edtext{Lorem}{
34   \Afootnote{A critical note}
35   \Bfootnote{Critical note in series B}
36   \Cfootnote{Critical note in series C}
37   \Dfootnote{loram}}
38 \edtext{ipsam}{
39   \Afootnote{An other critical note}
40   \Bfootnote{Other critical note in series B}
41   \Cfootnote{Other critical note in series C}
42   \Dfootnote{ipsam}}
43 dolor sit amet, consectetur adipiscing elit.
44 \edtext{Fusce sed dolor libero. Aenean rutrum
vestibulum lacus ut pretium. Fusce et auctor
lectus. Ut et commodo quam, quis gravida
orci. Nullam at risus elementum, suscipit
enim a, pellentesque mi}
45 {\lemma{Fusce\ldots mi}
46 \Afootnote{A long critical note}
47 \Bfootnote{Again B}
48 \Cfootnote{Again C}
49 \Dfootnote{omit}}.
```

5 Lorem ipsum dolor sit amet, con
nean rutrum vestibulum lacus ut pre
quis gravida orci. Nullam at risus el
commodo, ligula vel consectetur acc
ante in turpis. Vivamus ut tellus so
Maecenas tincidunt dolor sed ante b

1 Lorem] A critical note
1 ipsam] An other critical note
1-3 Fusce...mi] A long critical note

1 Lorem] Critical note in series B
1 ipsam] Other critical note in series B

Typesetting critical editions with the reledmac package ii

5 Lorem ipsum dolor sit amet, consectetur adipiscing elit. Fusce sed dolor libero. Aenean rutrum vestibulum lacus ut pretium. Fusce et auctor lectus. Ut et commodo quam, quis gravida orci. Nullam at risus elementum, suscipit enim a, pellentesque mi. Morbi commodo, ligula vel consectetur accumsan, massa metus egestas velit, eu fringilla leo ante in turpis. Vivamus ut tellus sollicitudin, facilisis ipsum sit amet, tincidunt odio. Maecenas tincidunt dolor sed ante blandit tincidunt. Etiam vulputate ultricies facilisis.

1 Lorem] A critical note
1 ipsum] An other critical note
1-3 Fusce...mi] A long critical note

1 Lorem] Critical note in series B
1 ipsum] Other critical note in series B

1-3 Fusce...mi] Again B

1 Lorem] Critical note in series C	1 ipsum] Other critical note in series C	1-3 Fusce...mi] Again C
-------------------------------------	---	--------------------------

1 Lorem] loram 1 ipsum] ipsam 1-3 Fusce...mi] omit

Typesetting critical editions with the reledmac package iii

```
\documentclass{article}
\usepackage{polyglossia,fontspec,xunicode}
\usepackage{libertine}
\setmainlanguage{latin}
\setotherlanguage{english}

\usepackage[series={A,B,C,D},noend,noeledsec,
            nofamiliar,noledgroup]{reledmac}
\Xarrangement[B]{twocol}
\Xarrangement[C]{threecol}
\Xarrangement[D]{paragraph}
\begin{document}

\title{Critical notes}
\maketitle

\beginnumbering
\pstart
\edtext{Lorem}{
  \Afootnote{A critical note}
  \Bfootnote{Critical note in series B}
  \Cfootnote{Critical note in series C}
  \Dfootnote{loram}}
\edtext{ipsum}{
  \Afootnote{An other critical note}
  \Bfootnote{Other critical note in series B}
```

Explanation of the `reledmac` example i

The following loads the `reledmac` package with the option to have four different sets of critical notes.

```
\usepackage[series={A,B,C,D},noend,noeledsec,  
            nofamiliar,noledgroup]{reledmac}  
\Xarrangement[B]{twocol}  
\Xarrangement[C]{threecol}  
\Xarrangement[D]{paragraph}
```

Explanation

This defines the following arrangement:

Each note of type A gets its own paragraph.

Each note of type B gets its own paragraph but notes arranged in 2 columns.

Each note of type C gets its own paragraph but notes arranged in 3 columns.

Each note of type D is in the same paragraph.

Explanation of the `reledmac` example ii

This is one note – ‘lorem’ in the `\edtext`-command is the lemma on which the notes ‘hang’, i.e. we open a nested list. With `\Afootnote` we specify that the note should be added to the A apparatus (and so forth).

```
\edtext{Lorem}{  
\Afootnote{A critical note}  
\Bfootnote{Critical note in series B}  
\Cfootnote{Critical note in series C}  
\Dfootnote{loram}}
```

The superstructure of all this is

```
\beginnumbering  
\pstart  
[one paragraph of edition stuff]  
\pend  
\endnumbering
```

Explanation of the reledmac example iii

Special usecases, like a note spanning multiple lines, goes like this:

```
\edtext{Fusce sed dolor libero. Aenean rutrum vestibulum lacus ut  
pretium. Fusce et auctor lectus. Ut et commodo quam, quis gravida  
orci. Nullam at risus elementum, suscipit enim a, pellentesque mi}  
\lemma{Fusce\ldots mi}  
\Afootnote{A long critical note}  
[...]  
}
```

With `\lemma` we define what the abbreviated lemma should look like in the apparatus.

The overleaf example also contains three more documents you might want to look at: *sidenotes.tex*, *tabular.tex* and *verses.tex*. To get the result of their code, click into the document and then click ‘Recompile’ from there.

Explanation of the `reledmac` example iv

Further reading

- **A review on the RIDE journal:** *Reledmac. Typesetting technology-independent critical editions with LaTeX* = Reledmac, Maïeul Rouquette (ed.), 1987–2019.
<https://ctan.org/pkg/reledmac> (Last Accessed: 21.07.2019). Reviewed by Andrew N. J. Dunning. In *RIDE – A review journal for digital editions and resources* 11 (Tools and Environments), 2020. <https://ride.i-d-e.de/issues/issue-11/reledmac/>.
- **Package documentation:** For more info, see the *reledmac* package documentation (496 pages). You can make indices, glossaries – all sorts of options are documented here. Also: read up on the history of the package.
- **Marjorie Burghart's TEI Critical Apparatus Toolbox** contains a tool to turn TEI into *reledmac* PDF edition. → XSLT is here.
 - The web service gives you a *.zip* with the *.tex* code and the PDF generated from it. Or you can just transform it yourself, using the XSL from Github.
 - Our template (*mini-latex-reledmac.xsl*) is a simplified version of it – but with your new XSLT skills, you can make it your own (take what you need, leave what you don't).

LaTeX Practice!

To understand the basics of LaTeX better, open the [Humanities' seminar paper with LaTeX in 10min Overleaf template](#). Read the code, comments and understand the resulting PDF.

Open the [reledmac template on Overleaf](#) and play around with it.

Start working on the XPath/XSLT exercise sheet (resources/materials folder), XSLT 2.1 part and answer the same questions for LaTeX (for example, taking the above reledmac template into account). Feel free to use the slides and cheatsheet for help.

