The X-Technologies

- W3C standards XML, XSL, XPath, XQuery, XLink...
- Established, accepted, widely used
- Industry-driven
- Well suited for automated publishing
- Academic typesetting rather complicated; some issues are even not mentioned in the specifications

Requirements (not only) for a Critical Edition

- High quality (old-style numbers, real small-caps, micro typography, …)
- Apparatuses
- Indexes
- Bibliographies
- Cross-references

Workflow

XML

semantically annotated data

Data

Intermediate format

XSL-FO, \TeX{}, OOXML, …

XSLT

(using XPath)

Formats

Rules

Typesetting engine

Tools for Scientific Publications

Apache FOP:
The open-source XSL-FO processor is often used for modern workflows. However, it can not overcome the lack of powerful typesetting for academic texts introduced by the W3C standards. A commercial alternative is RenderX.

\TeX{}:
The open-source typesetting system is often misinterpreted as a tool for mathematicians only. In fact its wide range of extensions (packages) makes it possible to even create very complex critical editions and all other kinds of non-mathematical texts.

TUSTEP:
The „Tübinger System von Textverarbeitungs-Programmen“ is more than just a typesetting system. It offers several tools to investigate, analyze, transform and publish data. Moreover it is capable of handling XML files directly. Its print output is very well suited for humanists’ texts.

XML-Print:
The DFG-funded project tried to combine a comfortable graphical user interface with a powerful new typesetting engine based on XSL-FO. However, the different typesetting challenges were just too much for the project’s set-up. There are, however, plans to use the GUI for other (existing) typesetting engines.

VREs:
Virtual Research Environments like ediarum and FuD work as a wrapper around pure XML data. Thus inputting data is much more comfortable (at least for the average user). When it comes to publication VREs transform data into an appropriate format for the integrated typesetting engine. Ediarum uses Con\TeX{} – an alternative macro package upon \TeX{} – while FuD is about to integrate a general \TeX{} output.