

# Typesetting Using X-Technologies – Dead End or Promising Path?

## An Overview of Pros and Cons Regarding Critical Editions

*Martin Sievers*

Trier Center for Digital Humanities

sievers@uni-trier.de

The altered text reception by readers as well as the modified publication processes at publishing houses largely influence the way academic research is published. This is especially true for textual scholarship, where the standard book publications are increasingly substituted by hybrid or born-digital publications.

As a result a radical transition of technical requirements and standards has taken place. This trend is even increased by the fact, that more and more researchers start publishing research results self-contained, e. g. as part of open access initiatives. The magic word is XML. For publishers the media-neutral format of the meta language is an ideal starting point for ‘cross-media publishing’ (multi-format publishing). On the researchers’ and authors’ side – especially in the Digital Humanities – the widely spread TEI standard (Cf. Burnard and Bauman 2007) has already achieved, that different types of information (data) are provided in a standard format and are available to many software tools as an exchange and output format.

However, a big problem often remains open: how does one get the annotated data into the final (printed) publication? Typesetting tools like XML-Print (Cf. *XML-Print* 2014) or Apache FOP (Cf. *Apache FOP* 2014) try to solve this problem within the ‘X-technologies’<sup>1</sup>.

Having a closer look at different existing tools – both open source and commercial ones – it becomes quite obvious, that the requirements of academic typesetting have not been taken into account to the needed extent (yet?). The main reason is, that standards like the X-technologies are primarily industry-driven and therefore corresponding software consequently meets only the requirements of a specific – admittedly large – non-academic target group. Those requirements motivated from a rather academic perspective, however, regularly get much too little attention. Kevin Brown, Executive Vice President of Sales & Marketing at RenderX put it this way on the ‘xsl-list’:

One, in a few short specs it was nailed pretty well and it does what 90 % of the people want right now for **print**. There is really little to add to it to cover the full intention of what it should be – a standard for the representation of Formatted (print) output.

...

XSL FO will survive for a long time for those that require true print output and for a long time it will be the only Industry Standard way of doing it.<sup>2</sup>

---

<sup>1</sup>The X-technologies subsume W3C standards, namely XML, XSL and XPath as well as additional related languages and formats like XQuery or XLink depending on the context.

<sup>2</sup><http://www.biglist.com/lists/lists.mulberrytech.com/xsl-list/archives/201311/msg00010.html>, emphasis in original.

As a consequence modern virtual research environments like FuD (Cf. *FuD* 2016) or ediarum (Cf. *ediarum* 2016) integrate established, but not necessarily XML-based open source typesetting tools like T<sub>E</sub>X or TUSTEP to provide a formatted version for proofreading or even a camera-ready copy for a book publication.

The poster illustrates the status quo and presents different conceptual approaches to transform XML data into a printed publication.

## References

- Apache FOP* (2014) *Apache(tm) FOP – a print formatter driven by XSL formatting objects (XSL-FO) and an output independent formatter*, URL: <http://xmlgraphics.apache.org/fop/> (visited on 12/04/2016).
- Brown, K. (2013) *Re: [xsl] xsl 2.0?*, URL: <http://www.biglist.com/lists/lists.mulberrytech.com/xsl-list/archives/201311/msg00010.html> (visited on 12/04/2016).
- Burnard, L. and Bauman, S. (2007) *TEI P5, Guidelines for Electronic Text Encoding and Interchange*, Text Encoding Initiative.
- ediarum* (2016) *ediarum – an easy tool for editing manuscripts with TEI XML*, URL: <http://www.bbaw.de/en/telota/software/ediarum> (visited on 12/04/2016).
- FuD* (2016) *FuD – A Virtual Research Environment for the Humanities*, URL: <http://fud.uni-trier.de/de/> (visited on 12/04/2016).
- XML-Print* (2014) *XML-Print: typesetting arbitrary XML documents in high quality*, URL: <https://sourceforge.net/projects/xml-print/files/> (visited on 12/04/2016).