Pixel-oriented Visualization for Analyzing Classical Latin Texts

Bharathi Asokarajan  
School of Computer Science  
bharathi.asokarajan@ou.edu

June Abbas  
School of Library and Information Studies  
jmabbas@ou.edu

Sam Huskey  
Department of Classics and Letters  
huskey@ou.edu

Chris Weaver  
School of Computer Science  
weaver@cs.ou.edu

Latin textual criticism is a laborious and query-intensive task performed by classics scholars that involves comparison of textual variants across hundreds of pages. A critical apparatus consists of encoded footnotes on each page that record an editor's reasoning behind the primary text reconstructed from fragmentary sources. Textual variants are as a result of new evidence or due to errors and alterations that arise in transcription.

The tool is implemented using the Improvise visualization environment.

- It supports exploration and analysis of patterns of variants and source references across the apparatus.
- Focus+Context technique: Panning the lens lets scholars choose variants of interest (context) and view details (focus) at different levels of text—words, lines, pages—in views A–H–I.
- Hovering over a pixel in the summary view B helps scholars find all variant readings recorded in referenced sources.
- Highly coordinated views: Navigation and selection in any view dynamically affects all other views.

Exploring Latin textual variants with pixel-based visualization

Visualization Design

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- Focus+Context technique: Panning the lens lets scholars choose variants of interest (context) and view details (focus) at different levels of text—words, lines, pages—in views A–H–I.
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Current Efforts

Add dynamic filtering and sorting features to let users flexibly arrange sources along the vertical axis.

Broader Impacts

- Provides a full overview of apparatus structure with practical applicability to scholarship and teaching.
- Acts as a visual medium to express scholarly analysis of classical texts.
- Can aid in collaborative analysis between classics scholars.
- Can serve as a pedagogical tool to help students decipher apparatus.
- Likely to generalize well to any domain that calls for visual comparison of different versions of text.
- Realizes a new technique that use structurally-aware focus+context to visualize text at multiple levels of detail.

References


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