ETAP: Experimental Typesetting Algorithms Platform

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Didier Verna

EPITA / LRDE

didier@lrde.epita.fr

lrde/~didier   @didierverna   didier.verna   in/didierverna

Digital Typography

▶ A fascinating domain
  - ▶ Strong focus on beauty and aesthetics
  - ▶ Full of technical challenges

▶ Example
  - ▶ 5 identifiable problems
  - ▶ 12341 (C_{43}^3) breaking solutions

Domain-specific language (DSL) design and implementation is inherently a transverse activity (Ghosh, 2010; Fowler, 2010). It usually requires from the product team knowledge and expertise in

Motivation

1. General interest for the application domain
2. Need to strengthen an existing lecture on typesetting

▶ Common requirement: experimentation platform / demonstrator
  ▶ real-time
  ▶ interactive
▶ Problem: no existing solution
  ▶ WYSIWYG tools are of varying quality
  ▶ T$_{\text{E}}$X is not *really* interactive
  ▶ Neither have easily accessible internals (production systems)

Demo Time...

Future Work

- **General**
  - Internals stabilization
  - instrumentation
- **Experimentation**
  - Revisit Knuth-Plass
  - Rivers detection
  - …
- **Analysis**
  - Qualitative / performance data collection
  - Comparative study
  - …
- **Blue sky territory**
  - A new typesetting system?
  - Real-time, interactive, GUI ⟷ code round-trips

Help!

- **Currently**
  - Lispworks / CAPI
- **Wanted**
  - * / (Mc)CLIM
  - ECL / EQL
  - …

`https://github.com/didierverna/etap`