README-hintview

Hintview is a sample of current typesetting research, giving users a feel for Martin Ruckert's Hint project.

Many people work on the problem of converting LaTeX documents to formats readable on devices like the Kindle, iPad, iPhone, Android Phone and the like. These devices allow users to adjust the font size for easy reading, but that requires reflowing the text. Some solutions require embedding TeX in the device and typesetting again when necessary.

1 Martin Ruckert and the Hint Project

An alternate solution by Martin Ruckert replaces the pdf file with a so-called "hint file" or hnt file, containing the typeset output and hints about how to reflow the text when necessary. This project is described on Ruckert's web page https://hint.userweb.mwn.de and on four special pages linked from this home page

- **Web2w: Converting WEB to cweb**
- **HINT: The File Format**
- **HiTeX: Using TeX to produce HINT files**
- **Viewing HINT files**

The typesetting engine *hitex* is part of this project, and was added to TeX Live in 2022. This engine can input a TeX or LaTeX source file and output a corresponding hint file. For instance, the two commands below input a TeX source named "Galois.tex" and a LaTeX source named "Riemann.tex" and output files "Galois.hnt" and "Riemann.hnt".

```
hitex Galois
hilatex Riemann
```

The *hitex* program is also in TeX Live 2023, but with a significant change. The 2022 version produced HINT Format Version 1.4 files, while the 2023 version produces HINT Format Version 2.0 files. These formats are not compatible. Current plans are to make the new format compatible with later versions.

2 HINT Viewers

Ruckert also released hint viewers for Windows and Android. He provides source for viewers on Linux, MacOS, and iOS. The iOS viewer is not yet in the Apple Store.

MacTeX-2023 includes the Hint Viewer for MacOS. The viewer is universal with both Arm and Intel code, and runs on all versions of macOS supported by MacTeX-2023.

3 About hintview

The program hintView has a slightly unusual interface, but it contains short documentation describing all of its features. Here are a few hints which will rapidly get you started.

Start the program by double clicking its icon. A blank window will open. To view a hnt file, drag the file's icon to this window and drop it there.

Resize the window and notice that the text reflows. The viewer shows a page at a time. Use the PageUp and PageDown arrows on your keyboard to change pages.

The size of the font in the window can be changed. Imagine an invisible diagonal line from top left of the window to bottom right. Move your finger on the trackpad along this line down to decrease the size of the font, and up to increase its size. The keystroke command-Z zooms back to the original size.

The keystroke command-N toggles between night and day modes. The keystroke command-F is a toggle showing the search field. Use command-G to see the next occurrence of the search text, and shift-command-G to see the previous occurrence.

4 Samples

Ruckert's web page for viewing HINT files contains many samples written in Format Version 2.0, and links to the same samples written in Format Version 1.4. The hintview program in MacTeX-2023 only understands Format Version 2.0.