Les Cahiers GUTenberg

Les Cahiers GUTenberg is the journal of GUT, the French-language \TeX user group (http://www.gutenberg.eu.org).

Paul Isambert, Lua\TeX: vue d’ensemble [Lua\TeX: An overview]; pp. 3–12

Manuel Pégourié-Gonnard, Un guide pour Lua\LaTeX [A guide to Lua\LaTeX]; pp. 13–35

This document is a map, or tourist guide, for the new world of Lua\LaTeX. The intended audience ranges from complete newcomers (with a working knowledge of conventional \LaTeX) to package developers. This guide is intended to be comprehensive in the following sense: it contains pointers to all relevant sources, gathers information that is otherwise scattered, and adds introductory material.

Maxime Chupin, Lua\LaTeX pour les non-sorciers, deux exemples [Lua\LaTeX for non-wizards, two examples]; pp. 37–56

This article presents a way to use Lua\LaTeX without being an expert in \TeX or Lua. The examples illustrate the treatment of external files by Lua, and the use of Lua in order to perform some computations hardly implementable in \TeX. These examples are the generation of \LaTeX tabular code from an external data file and the implementation of the method of least squares and its graphical presentation.

Manuel Pégourié-Gonnard, Attributes et couleurs [Attributes and colors]; pp. 57–85

This article presents a new tool provided by Lua\LaTeX to extend \TeX: attributes, and how they can be used to implement colors. First, we study the general concept of attributes and the \LaTeX and Lua interfaces. Then, we recall the main points of the classical color implementation in \LaTeX and its well-known limitations. Finally, a solution to these problems, using attributes, is presented, and demonstrates a few general principles in the use of attributes, which are obviously not limited to colors.

Paul Isambert, Ponctuation française avec Lua\LaTeX [French punctuation with Lua\LaTeX]; pp. 87–100

If \LaTeX had been created by a French man, maybe it would have a primitive dedicated to inserting spaces before some punctuation signs (question mark, exclamation mark, colon, semi-colon) as is usual in the French typographical tradition—but this wasn’t the case. Lua\LaTeX is not written by a French team either, but it enables handling character lists while texts are being typeset. The goal of this work is to illustrate its power by presenting Lua algorithms meant to insert the proper space before those symbols that require it.

Taco Hoekwater, Lua\TeX 0.65 et les mathématiques [Lua\TeX 0.65 and mathematics]; pp. 101–127

The math machinery in Lua\TeX has been completely overhauled since version 0.40. The handling of mathematics in Lua\TeX has been extended quite a bit compared to how \TeX82 (and therefore pdf\TeX) handles math. First, Lua\TeX adds primitives and extends some others so that Unicode input can be used easily. Second, all of \TeX82’s internal special values (for example for operator spacing) have been made accessible and changeable via control sequences. Third, there are extensions that make it easier to use OpenType math fonts. And finally, there are some extensions that have been proposed in the past that are now added to the engine.

This article is an update of the original article that was published in MAPS 38, documenting the changes in Lua\TeX between version 0.40 and version 0.65.

Thierry Bouche, Colophon; pp. 128–130