

# The lua-visual-debug package (V0.9)

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## 1 About

This package aids debugging your T<sub>E</sub>X and L<sup>A</sup>T<sub>E</sub>X document by drawing rectangles around boxes and rules where glue is inserted. Other items are marked as well: kerns, hyphenation points and penalties.

## 2 How to use

When you load the package `lua-visual-debug` in your LuaL<sup>A</sup>T<sub>E</sub>X document (or use `\input lua-visual-debug.sty` in plain T<sub>E</sub>X), LuaT<sub>E</sub>X will highlight boxes, penalties, glues and kerns in the PDF. This package requires you to process the document with LuaT<sub>E</sub>X (plain and L<sup>A</sup>T<sub>E</sub>Xformats).

## 3 A L<sup>A</sup>T<sub>E</sub>X example

```
\documentclass{article}
\usepackage{lua-visual-debug}

\usepackage{lmodern}
\setlength\textwidth{300pt}
```

```

\setlength\textheight{10cm}

\begin{document}

\section{A short story}

A wonderful serenity has taken possession of my entire soul, like these sweet
mornings of spring which I enjoy with my whole heart. I am alone, and feel
the charm of existence in this spot, which was created for the bliss of souls
like mine. I am so happy, my dear friend, so absorbed in the exquisite sense
of mere tranquil existence, that I neglect my talents\footnote{A very special
    ↪ note for you}.

\begin{itemize}
  \item one
  \item two
  \item three
\end{itemize}

\bgroup\fontsize{30}{34}\selectfont
\centerline{\TeX}
\egroup

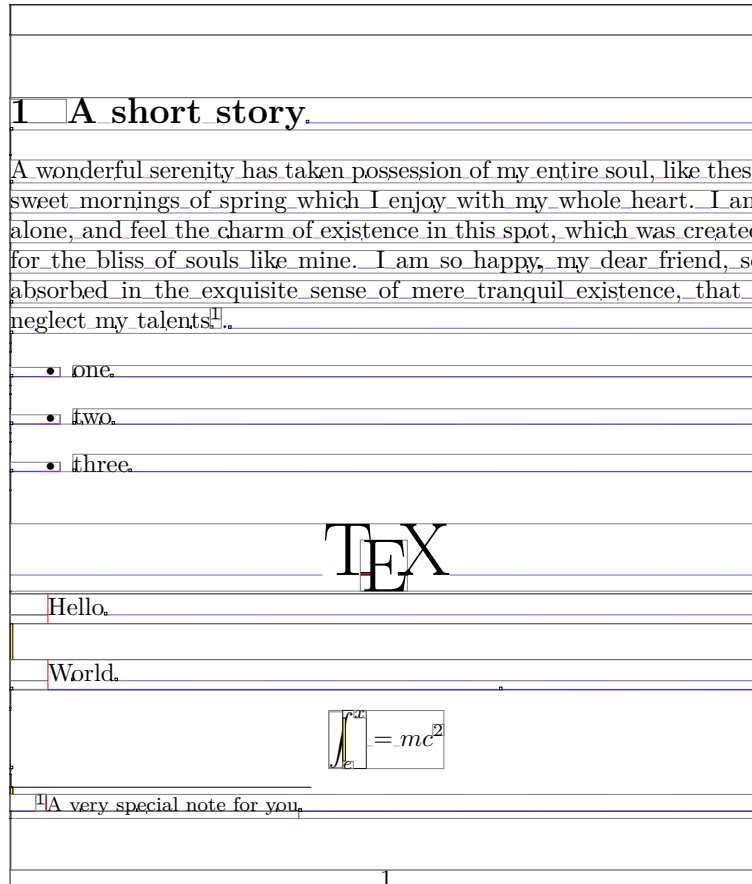
\ vbox{\strut Hello}\kern .5cm\ vbox{\strut World}

\[ \int_e^x mc^2 \ ]

\end{document}

yields

```



## 4 A plain TeX example

```

\input lua-visual-debug.sty

\hsize 3in \vsize 3in
\centerline{A centered line with \TeX}

\vskip .5in

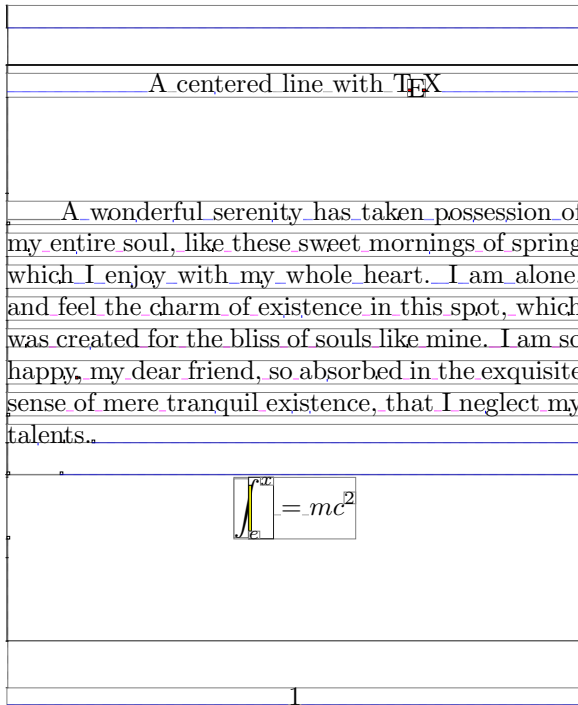
A wonderful serenity has taken possession of my entire soul, like these sweet
mornings of spring which I enjoy with my whole heart. I am alone, and feel
the charm of existence in this spot, which was created for the bliss of souls
like mine. I am so happy, my dear friend, so absorbed in the exquisite sense
of mere tranquil existence, that I neglect my talents.


$$E = mc^2$$


HA very special note for you.

\bye
yields

```



## 5 How to interpret the markers



1. A vertical glue. Beginning and end are marked with a small tick. At the mark 1, two vertical glues are connected.
2. A horizontal glue. Blue dashed lines represent stretched glues, magenta lines represent shrunk glues, gray at their natural width.

3. A negative kern. Positive kerns are yellow.
4. A possible hyphenation point.
5. Horizontal and vertical boxes are drawn with a border.
6. Penalties are marked with a square. A penalty of 10,000 is marked with a blank square, a penalty less than 10,000 is filled with a gray square (that will improve in the future, currently it is grayness of penalty / 10000).

A strut box (zero width box) is marked with a red rule:



## 6 Copying

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