simplot — LaTeX inline simplot graphics*

Wybo Dekker†

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1 Introduction

This package provides the `\simplot` macro, which lets you use inline Simplot commands to generate graphics. Simplot is an interpreter program to generate vector graphics and is described in the documentation. The descriptions for the individual commands can be found in the documentation of the simplot library.

2 Usage

In your preamble, load the simplot style with `\usepackage{simplot}`. In your document you can then generate a graphic with the `\simplot` macro. For example, to generate a circle with a radius of 5 mm you can say:

```
\simplot{20 20 10 10 "" "" plarc 0 0 5 0 360 DOWN}
```

This generates a plotting field of 20x20 mm with the origin in the middle (10,10). The "" "" let the font and the altenate font at their defaults (Adobe Times and Symbol) and the arc is plotted with its center at the origin (0,0), a radius of 5 mm, starting at 0 degrees and continuing over 360 degrees.

Since the macro compiles the Simplot commands on the fly, you must either, in your `texmf.cnf`, enable the `\write18` command, or you must compile you document with the `-shell-escape` option.

`\simplot` The `\simplot` macro has one argument, consisting of all Simplot commands generating a graphic, with one exception: normally a Simplot script starts with a call to `plinit`:

```
plinit PDF filename pagewidth pageheight x-origin y-origin font alt font
```

Here, the first three elements: `plinit PDF filename` are left out. This is because the filename of the PDF graphic is automatically genenrated. The first will be named `\jobname_1.pdf`, the second `\jobname_2.pdf`, and so on. So when your TEX source is named `test.tex`, the graphics will be called `test_1.pdf`, `test_2.pdf`, and so on.

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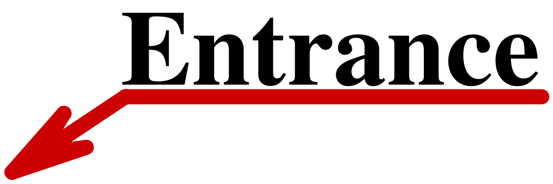
†E-mail: wybo@dekkerdocumenten.nl

3 Examples

Here is a simple example, printing a text with a arrow under it:

```
\documentclass{article}
\usepackage[papersize={100mm,100mm},margin=5mm]{geometry}
\usepackage{simplot}
\begin{document}\newfont{\HUGE}{txb at 40pt}
\center\HUGE
\quad Entrance\\
\simplot{
  90 20 0 0 "" ""
  plset PENDIA 2
  plcolor .8 0 0
  plu 75 18 pld 20 18
  plarrow -15 -10 10 15 25 0 0 0 0 ""
}
\end{document}
```

And this is how it looks:

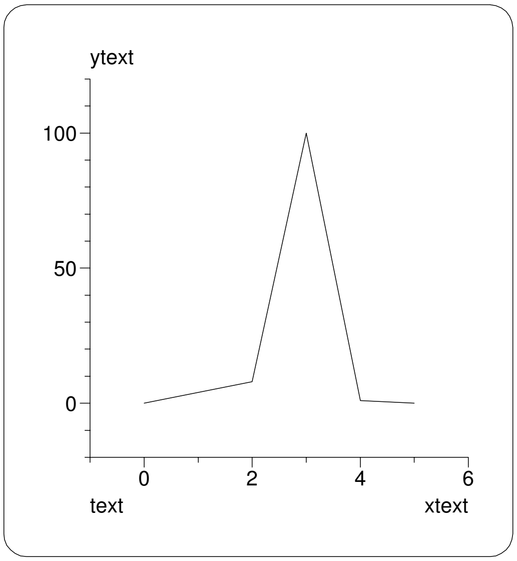


Here is another example:

```
\documentclass{article}
\usepackage[papersize={100mm,100mm},margin=5mm]{geometry}
\usepackage{simplot}
\begin{document}

\simplot{
  90 20 0 0 "" ""
  plset PENDIA 2
  plu 75 18 pld 20 18
  plarrow -15 -10 10 15 25 0 0 0 0 ""
}
\end{document}
```

which produces just a picture:



4 Implementation

A counter, `\simplotpicno`, is needed to name the subsequent PDF graphics; it start with 1:

```
⟨*package⟩
\newcount\simplotpicno\simplotpicno=1
```

`\simplot` The `\simplot` macro takes its argument, prefixes it with the missing `plinit PDF filename` part that makes it a full Simplot script, and pipes the resulting string into the `simplot` program, which generates the PDF graphic. That graphic, finally, is included with `\includegraphics`:

```
\RequirePackage{graphicx}
% \changes{v1.02}{2014/07/21}{
%  force space behind filename
% }
\newcommand{\simplot}[1]{\immediate\write18{%
  echo 'plinit PDF \jobname_\the\simplotpicno\space #1'|simplot}
  \includegraphics{\jobname_\the\simplotpicno}
  \global\advance\simplotpicno by 1
}
```

```
⟨/package⟩
```

5 Change History

v1.01

General: Added README, standardized inst script 3