News - 2019

new macros and bugfixes for the basic package pstricks

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Contents

Part I.
pstricks – package

1. pstricks.sty – pstricks-pdf.sty

There is now a new optional argument for the package: `ckeckengine`, which will be used in later versions.

2. pstricks-tex.tex

This package collects all additional latex macros which must be definied when running PSTricks with tex. They all moved from the base `pstricks.tex` into this new file.

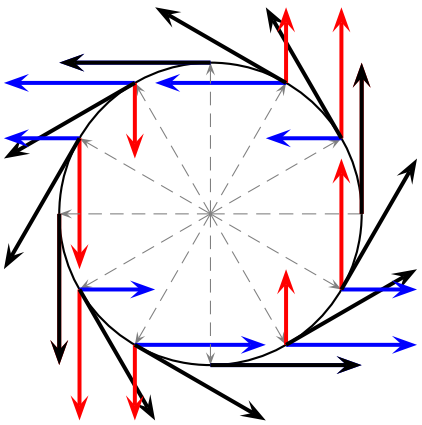
3. pstricks.tex (v. 2.98 – 2019/05/16)

3.1. Plotting multilines

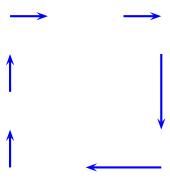
There is a new macro called `\psLine` (uppercase L!) which can have only one or two pairs of coordinates. Remember that `\psline` can have more. With `\psLine` and an defined arrow you'll get nothing for something like `\psLine{->}{1,1)(1,1)`, whereas `\psline` will output the arrowtip! This behaviour of `\psLine` maybe helpful for animations where a speedvector or a vector is shown with its components and one do not really knows the coordinates.

`\psLine` `[Options]` `[(`x_0, y_0`)]` `(`x_1, y_1`)`
`\psLineSegments` `[Options]` `(`x_0, y_0`)(`x_1, y_1`)`$\ldots$`(`x_{n-1}, y_{n-1}`)(`x_n, y_n`)`

If P_0 is missing for `\psLine` then $(0, 0)$ as first point is assumed. `\psLineSegments` expects always pairwise coordinates.



```
\psset{unit=2cm}
\begin{pspicture}(-1,-1)(1,1)
\degrees[12]
 \pscircle{1}
  \multido{\iA=0+1,\iB=3+1}{12}{%
    \pnode(1;\iA){R}
    \psLine[linecolor=gray,linestyle=dashed,
      linewidth=0.4pt](R)
    \psset{arrows=->,arrowscale=1.5,linewidth=1.5pt}
    \rput(R){%
      \psLine[linecolor=blue]({1;\iB}|0,0)
      \psLine[linecolor=red](0,0|{1;\iB})
      \psLine(1;\iB)}%
}
\end{pspicture}
```

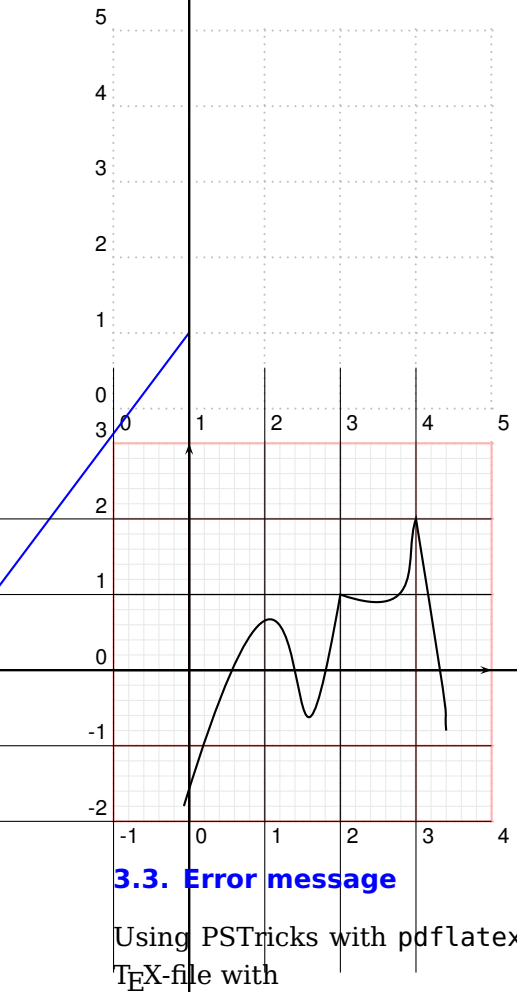


```
\psset{unit=0.5cm}
\begin{pspicture}(6,6)
\psLineSegments[linecolor=blue]{->}(0,0)(0,1)(0,2)(0,3)(0,4)(1,4)%
    (3,4)(4,4)(4,3)(4,1)(4,0)(2,0)
\end{pspicture}
```

3.2. Relative coordinates – experimental

All objects which can have at least two pairs of coordinates can use the »+«-operator to mark relative coordinates:

```
\psline [Options] [(x0,y0)] (x1,y1)+(x2,y2)...
```




```
\begin{pspicture}[showgrid](5,5)
\psline[linecolor=blue]{->}%
   (1,1)+(3,4)+(-2,-3)
\end{pspicture}
```



```
\begin{pspicture}[showgrid](-1,-2)(4,3)
\psaxes[labels=none]{->}(0,0)(-1,-2)(4,3)
\psbezier%
  (!0.8 -95 PtoC 1 sub)+(8.5;85)+(5;-100)(2,1)%
 +(1;-70)+(0.5;-110)(3,2)%
 +(1;-80)+(0.5;95)(3.4,-0.8)
\end{pspicture}
```

3.3. Error message

Using PSTricks with `pdflatex` will work only when using package `auto-pst-pdf` and running the TEX-file with

```
pdflatex -shell-escape <file>
```

otherwise you'll get an error message which was misleading in the past:

```
[...]
! Undefined control sequence.
<recently read> \c@lor@to@ps
```

This changes now to

```
[...]
! Undefined control sequence.
\c@lor@to@ps ->\PSTricks
                          _Not_Configured_For_This_Format
```

3.4. Optional argument xetex

The output driver `xdvipdfmx` for using XeTeX or XeLaTeX is not fully compatible to `dvips`. Especially some node operations will not work. If the LaTeX package detects a programm run with XeLaTeX it automatically loads the file `pstricks-xetex.def` which defines some macros with a new name to keep the existing ones. By now there is only `\NCput`, which is the same as `\ncput`, but works with XeLaTeX.

If someone wants to use these macros though he/she runs not XeLaTeX then these macros are available too by using the optional argument `xetex`:

```
\usepackage[xetex]{pstricks}
```

4. pstricks.pro

References

[1] Michel Goosens et al. *The LaTeX Graphics Companion*. 2nd ed. Reading, Mass.: Addison-Wesley Publishing Company, 2007.

[2] Laura E. Jackson and Herbert Voß. “Die Plot-Funktionen von `pst-plot`”. In: *Die TeXnische Komödie* 2/02 (June 2002), pp. 27–34.

[3] Nikolai G. Kollock. *PostScript richtig eingesetzt: vom Konzept zum praktischen Einsatz*. Vaterstetten: IWT, 1989.

[4] Herbert Voß. “Die mathematischen Funktionen von Postscript”. In: *Die TeXnische Komödie* 1/02 (Mar. 2002), pp. 40–47.

[5] Herbert Voß. *PSTricks – Grafik für TeX und LaTeX*. 7th ed. Heidelberg and Berlin: DANTE – Lehmanns Media, 2016.

[6] Herbert Voß. *PSTricks – Graphics for LaTeX*. 1st ed. Cambridge/UK: UIT, 2011.

[7] Herbert Voß. *PSTricks Support for pdf*. 2002. URL: http://PSTricks.tug.org/main.cgi?file=pdf/pdfoutput.

[8] Herbert Voß. *LaTeX Quick Reference*. 1st ed. Cambridge/UK: UIT, 2011.

[9] Herbert Voß. *LaTeX Referenz*. 3rd ed. Heidelberg and Berlin: DANTE – lehmanns media, 2014.

[10] Michael Wiedmann and Peter Karp. *References for TeX and Friends*. 2003. URL: http://www.miwie.org/tex-refs/.

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