

News - 2017

new macros and bugfixes for the basic package pstricks

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Part I.

pstricks – package

1. pstricks.tex (v. 2.75 – 2017/08/24)

1.1. PostScript Fonts

This version of PSTricks uses the Ghostscript fonts from URW instead of the original base 14 fonts of PostScript. For example: instead of Helvetica we use NimbusSanL-Regu. The URW fonts are always embedded in the created ps or pdf output. This is not the default for the PostScript fonts.

1.2. Error message

Using PSTricks with pdf_latex will work only when using package auto-pst-pdf and running the T_EX-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
```

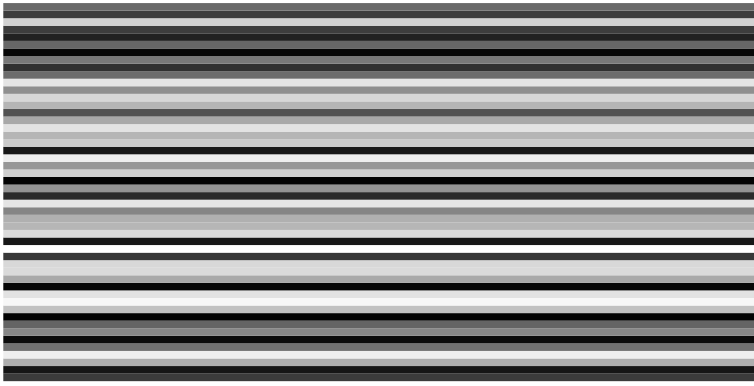
This changes now to

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

1.3. Random colors

There are now four predefined random "colors":

```
\definecolor[ps]{randomgray}{gray}{Rand}%
\definecolor[ps]{randomrgb}{rgb}{Rand Rand Rand}%
\definecolor[ps]{randomcmyk}{cmyk}{Rand Rand Rand Rand}%
\definecolor[ps]{randomhsb}{hsb}{Rand Rand Rand}%
```



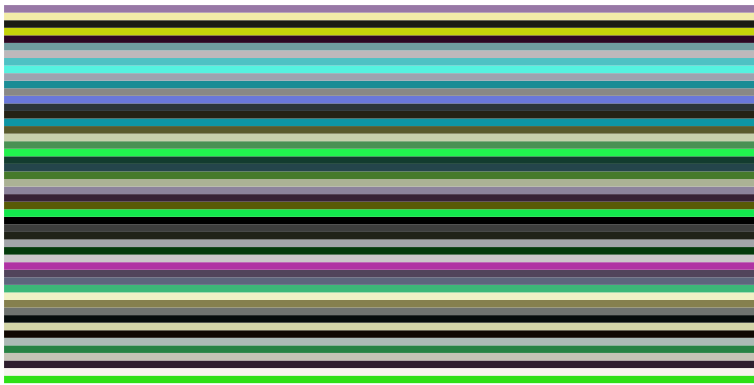
```
\begin{pspicture}(10,5)
\multido{\rA=0.0+0.1}{50}{\psline[linecolor=randomgray,linewidth=1mm](0,\rA)(10,\rA)}
\end{pspicture}
```



```
\begin{pspicture}(10,5)
\multido{\rA=0.0+0.1}{50}{\psline[linecolor=randomrgb,linewidth=1mm](0,\rA)(10,\rA)}
\end{pspicture}
```



```
\begin{pspicture}(10,5)
\multido{\rA=0.0+0.1}{50}{\psline[linecolor=randomcmyk,linewidth=1mm](0,\rA)(10,\rA)}
\end{pspicture}
```

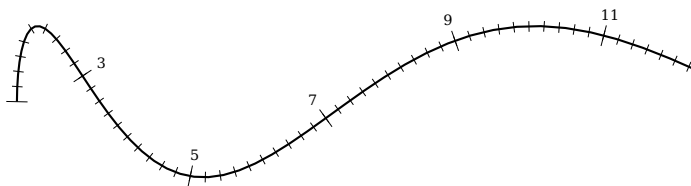


```
\begin{pspicture}(10,5)
\multido{\rA=0.0+0.1}{50}{\psline[linecolor=randomhsb,linewidth=1mm](0,\rA)(10,\rA)}
\end{pspicture}
```

The random counter can be initialized with `\pstVerb{rrand srand}`.

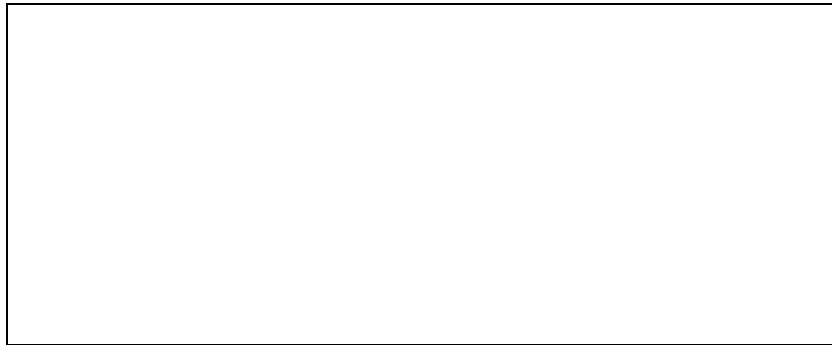
1.4. refangle

This version fixes a bug with `pst@refangle` which is used inside PostScript.



```
\begin{pspicture}(-1,-1)(10,3.5)
\psparametricplot[algebraic]{0}{9}{t^2/9 | sin(t)+1}%
\pscurvepoints{0}{9}{(t^2)/9 | sin(t)+1}{P}%
\pspolylineticks[metricInitValue=1,ticks=-2pt 2pt,0s=1,Ds=.2]{P}{ ds }{1}{56}%
\pspolylineticks[metricInitValue=1,0s=1,Ds=2]{P}{ ds }{0}{6}%
\multido{\iA=1+1,\iB=3+2}{5}{\Put{6pt;(PNormal\iA)}(PTick\iA){\tiny \iB}}
\end{pspicture}
```

There is a new optional argument `draft` which has the same meaning as the one for `\includegraphics`. The PSTricks image is not drawn, only the area of the `pspicture` coordinates is seen by a rectangle (only for \LaTeX).



```
\psset{draft}
\begin{pspicture}(-1,-1)(10,3.5)
\psparametricplot[algebraic]{0}{9}{t^2/9 | sin(t)+1}%
\pscurvepoints{0}{9}{(t^2)/9 | sin(t)+1}{P}%
\pspolylineticks[metricInitValue=1,ticks=-2pt 2pt,0s=1,Ds=.2]{P}{ ds }{1}{56}%
\pspolylineticks[metricInitValue=1,0s=1,Ds=2]{P}{ ds }{0}{6}%
\multido{\iA=1+1,\iB=3+2}{5}{\Put{6pt;(PNormal\iA)}(PTick\iA){\tiny \iB}}
\end{pspicture}
```

1.5. \newsstyle

The command `\newsstyle` has a new syntax:

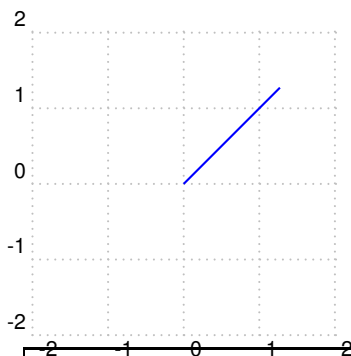
```
\newsstyle [package name] {name}{definitions}
```

For example

```
\newsstyle[pst-shell]{Epiteonium}{D=1,A=9.5,alpha=85.9,beta=9,mu=0,omega=0,
phi=81,a=2.1,b=1.6,L=1.3,P=-60,W1=200,W2=20,N=8.3}
```

2. pstricks.pro

A full circle has by default an angle of 360 degrees. Setting the circle with `\degrees[17]` to another value doesn't work for the PostScript function `PtoC` (Polat to Cartesian – $(r, \phi) \rightarrow (x, y)$). Now there is a `PtoC360` for the old definition and a `PtoC` which now takes the setting of `\pst@angleunit` into account.



```
\degrees[16]
\begin{pspicture}[showgrid](-2,-2)(2,2)
\psline[linecolor=blue](!1.8 2 PtoC)% 45 degrees
\end{pspicture}
```

References

- [1] Michel Goossens et al. *The L^AT_EX Graphics Companion*. 2nd ed. Reading, Mass.: Addison-Wesley Publishing Company, 2007.
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- [4] Herbert Voß. “Die mathematischen Funktionen von Postscript”. In: *Die T_EXnische Komödie* 1/02 (Mar. 2002), pp. 40–47.
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