

# PSTricks

---

## News - 2014

**new macros and bugfixes for the basic package pstricks**

July 31, 2014

2014

Package author(s):  
**Herbert Voß**

## Contents

<b>I. pstricks – package</b>	<b>3</b>
<b>1. pstricks.tex (2.56– 2014/07/31)</b>	<b>3</b>
1.1. Opacity . . . . .	3
1.2. PostScript notation for numbers . . . . .	3
1.3. Fillstyle eofill . . . . .	3
1.4. New macro \psellipseAB . . . . .	4
1.5. New macro \psRing . . . . .	4
1.6. New macro \pscspline (by Christoph Bersch) . . . . .	4
1.7. \Special Coord . . . . .	5
<b>References</b>	<b>6</b>

# Part I.

## pstricks – package

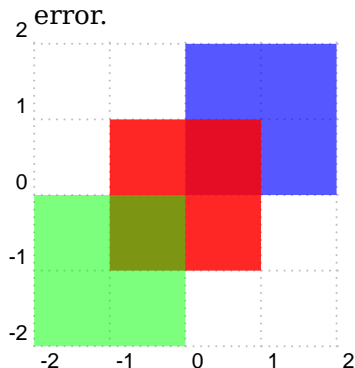
### 1. pstricks.tex (2.56– 2014/07/31)

#### 1.1. Opacity

The keyword `strokeopacity` is now also valid for `\psdot`, `\psdots`, and the `linestyle/plotstyle=do`

#### 1.2. PostScript notation for numbers

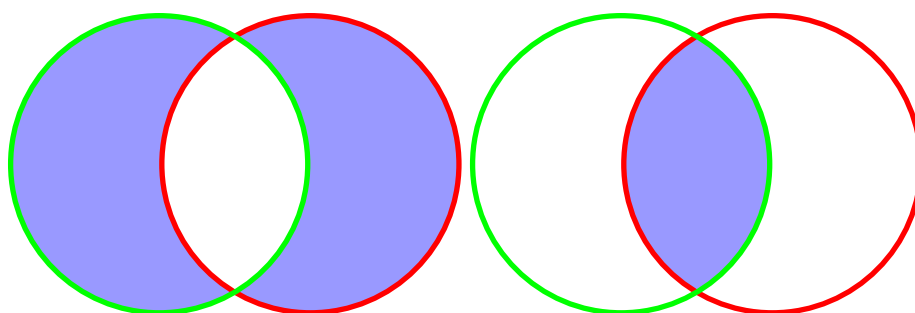
Optional arguments which expects a real number can now have a preceeding `!` character for a PostScript notation which is directly passed to PostScript. The user has take care that such a number isn't use before in another  $\TeX$  macro. In such a case it gives an error.



```
\pstVerb{ 1234321 srand }
\begin{pspicture}[showgrid](-2,-2)(2,2)
\psframe*[linecolor=blue,opacity=!Rand](2,2)
\psframe*[linecolor=red,opacity=!Rand](-1,-1)(1,1)
\psframe*[linecolor=green,opacity=!Rand](-2,-2)(0,0)
\end{pspicture}
```

#### 1.3. Fillstyle eofill

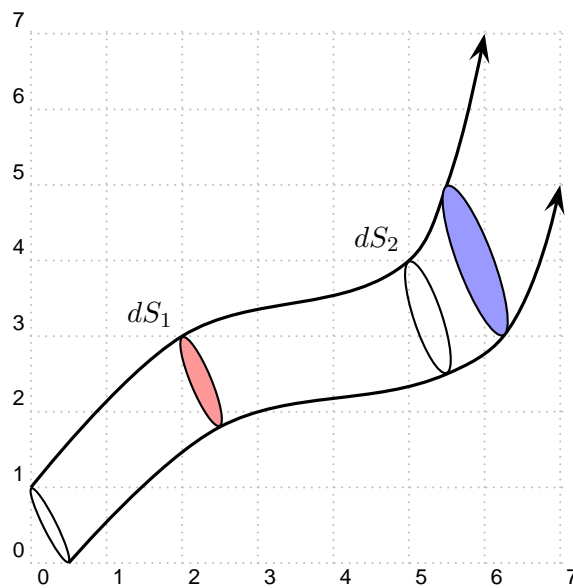
It is an experimental fillstyle. PostScript knows only the `eofill` and the other way round needs some tricky internal commands and may not work in all cases.



```
\begin{pspicture}[linewidth=2pt](12,4)
\pscustom[linestyle=none,fillstyle=eofill,fillcolor=blue!40]{%
\psellipse(4,2)(2,2)\psellipse(2,2)(2,2)}
\psellipse[linecolor=red](4,2)(2,2)\psellipse[linecolor=green](2,2)(2,2)
}%
\pscustom[linestyle=none,fillstyle=eofill,fillcolor=blue!40]{%
\psellipse(10,2)(2,2)\psellipse(8,2)(2,2)}
\psellipse[linecolor=red](10,2)(2,2)\psellipse[linecolor=green](8,2)(2,2)
\end{pspicture}
```

## 1.4. New macro \psellipseAB

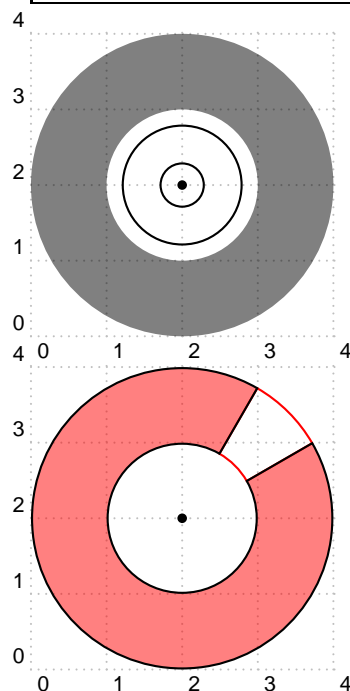
`\psellipseAB * [Options] (x,y) {half radius}`



```
\begin{pspicture}[showgrid=true](7,7)%
  showgrid=true
  \pnodes{a}(0.5,0)(2.5,1.8)(5.5,2.5)
    (6.25,3)(7,5)
  \pnodes{b}(0,1)(2,3)(5,4)(5.5,5)(6,7)
  \pscurve[arrowscale=2,linewidth=1.2pt]
    [->](a0)(a1)(a2)(a3)(a4)
  \pscurve[arrowscale=2,linewidth=1.2pt]
    [->](b0)(b1)(b2)(b3)(b4)
  \psellipseAB(a0)(b0){0.1}
  \psellipseAB[fillcolor=red!40,fillstyle=
    solid](a1)(b1){0.15}
  \psellipseAB(a2)(b2){0.2}
  \psellipseAB[fillcolor=blue!40,fillstyle=
    solid](a3)(b3){0.25}
  \uput[135](b1){$dS_1$}\uput[135](b2){$dS_
    _2$}
\end{pspicture}
```

## 1.5. New macro \psRing

`\psRing * [Options] (x,y) [start,end] {Inner Radius}{Outer Radius}`

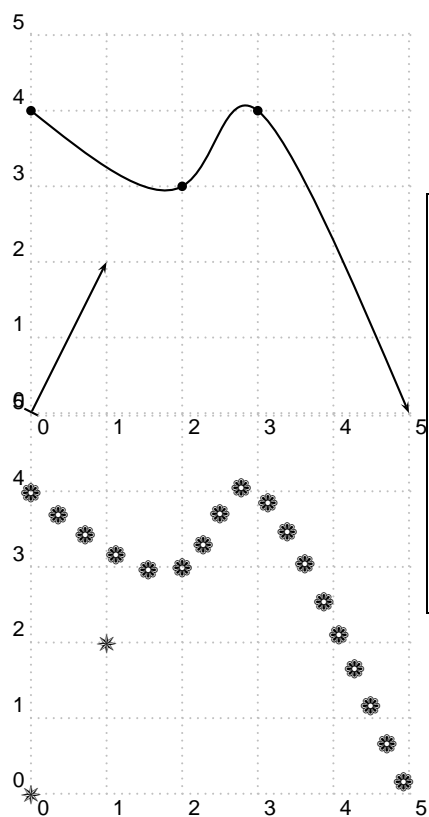


```
\begin{pspicture}[showgrid](4,4)
  \psRing(2,2){0.3}{0.8}
  \psRing*[opacity=0.5](2,2){1}{2}
  \psdot(2,2)
\end{pspicture}
```

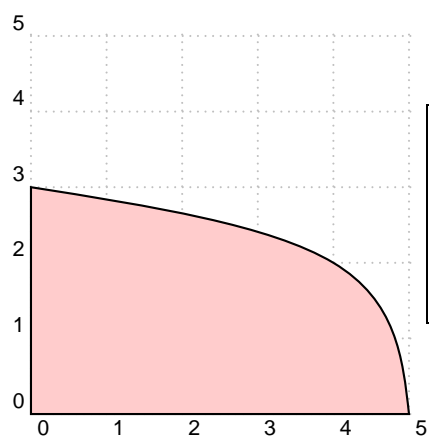
```
\begin{pspicture}[showgrid](4,4)
  \psRing[linecolor=red](2,2)[30,60]{1}{2}
  \psRing[opacity=0.5,fillstyle=solid,
    fillcolor=red](2,2)[60,30]{1}{2}
  \psdot(2,2)
\end{pspicture}
```

## 1.6. New macro \pscspine (by Christoph Bersch)

`\pscspine * [Options] (x0,y0) (x1,y1) ... (x,y)`



```
\begin{pspicture}[showgrid](5,5)
\pscspline[arrows=->, showpoints](0,0)(1,2)
\pscspline[arrows=->, showpoints](0,4)(2,3)(3,4)
(5,0)
\pscspline(4,4)
\end{pspicture}\par
\begin{pspicture}[showgrid](5,5)
\pscspline[linestyle=symbol, symbol=U,
symbolStep=12pt](0,0)(1,2)
\pscspline[linestyle=symbol, symbol=a,
symbolStep=12pt](0,4)(2,3)(3,4)(5,0)
\end{pspicture}
```



```
\begin{pspicture}[showgrid](5,5)
\pscustom[fillcolor=red!20, fillstyle=solid]{%
\pscspline(0,3)(4,2)(5,0)
\lineto(0,0)
\closepath}
\end{pspicture}
```

## 1.7. \Special Coor

The Macro \SpecialCoor for scanning special coordinate expressions is now enabled by default. You can disable it with \NormalCoor.

## References

- [1] Michel Goossens, Frank Mittelbach, Sebastian Rahtz, Denis Roegel, and Herbert Voß. *The L<sup>A</sup>T<sub>E</sub>X Graphics Companion*. Addison-Wesley Publishing Company, Reading, Mass., 2007.
- [2] Laura E. Jackson and Herbert Voß. Die Plot-Funktionen von pst-plot. *Die T<sub>E</sub>Xnische Komödie*, 2/02:27–34, June 2002.
- [3] Nikolai G. Kollock. *PostScript richtig eingesetzt: vom Konzept zum praktischen Einsatz*. IWT, Vaterstetten, 1989.
- [4] Herbert Voß. Die mathematischen Funktionen von Postscript. *Die T<sub>E</sub>Xnische Komödie*, 1/02:40–47, March 2002.
- [5] Herbert Voss. *PSTricks Support for pdf*. <http://PSTricks.tug.org/main.cgi?file=pdf/pdfoutput>, 2002.
- [6] Herbert Voß. *L<sup>A</sup>T<sub>E</sub>X Referenz*. DANTE – lehmanns media, Heidelberg/Hamburg, 2. edition, 2010.
- [7] Herbert Voß. *PSTricks – Grafik für T<sub>E</sub>X und L<sup>A</sup>T<sub>E</sub>X*. DANTE – Lehmanns Media, Heidelberg/Hamburg, 6. edition, 2010.
- [8] Herbert Voß. *L<sup>A</sup>T<sub>E</sub>X Quick Reference*. UIT, Cambridge/UK, 1. edition, 2011.
- [9] Herbert Voß. *PSTricks – Graphics for L<sup>A</sup>T<sub>E</sub>X*. UIT, Cambridge/UK, 1. edition, 2011.
- [10] Michael Wiedmann and Peter Karp. *References for T<sub>E</sub>X and Friends*. <http://www.miwie.org/tex-refs/>, 2003.

## Index

dots, 3

eofill, 3

Keyvalue

    dots, 3

    eofill, 3

Keyword

    linestyle, 3

    plotstyle, 3

    strokeopacity, 3

linestyle, 3

Macro

    \NormalCoor, 5

    \pscspline\*, 4

    \psdot, 3

    \psdots, 3

    \psellipseAB\*, 4

    \psRing\*, 4

    \SpecialCoor, 5

\NormalCoor, 5

plotstyle, 3

\pscspline\*, 4

\psdot, 3

\psdots, 3

\psellipseAB\*, 4

\psRing\*, 4

\SpecialCoor, 5

strokeopacity, 3