

PSTricks

News - 2014

new macros and bugfixes for the basic package pstricks

October 25, 2014

2014

Package author(s):
Herbert Voß

Contents

I. pstricks – package	3
1. pstricks.tex (2.60– 2014/10/25)	3
1.1. Opacity	3
1.2. PostScript notation for numbers	3
1.3. Fillstyle eofill	3
1.4. Option correctAngle	4
1.5. New macro \psellipseAB	5
1.6. New macro \psRing	5
1.7. New macro \pscspine (by Christoph Bersch)	5
1.8. \Special Coor	6
References	7

Part I.

pstricks – package

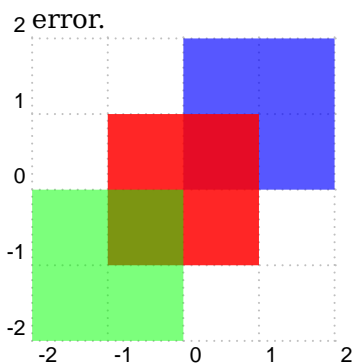
1. pstricks.tex (2.60– 2014/10/25)

1.1. Opacity

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

1.2. PostScript notation for numbers

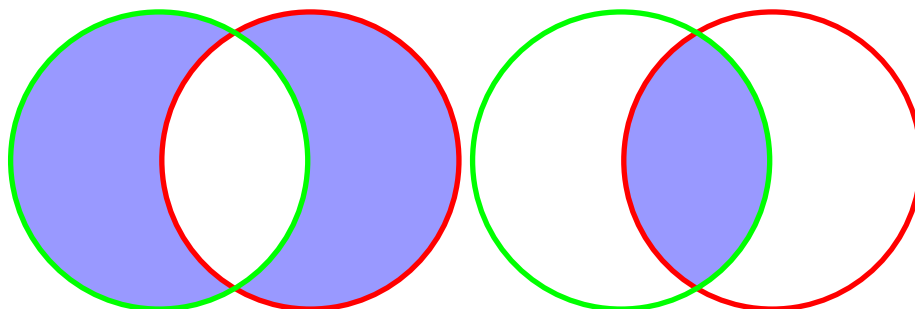
Optional arguments which expects a real number can now have a preceding `!` character for a PostScript notation which is directly passed to PostScript. The user has take care that such a number isn't use before in another T_EX macro. In such a case it gives an error.



```
\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

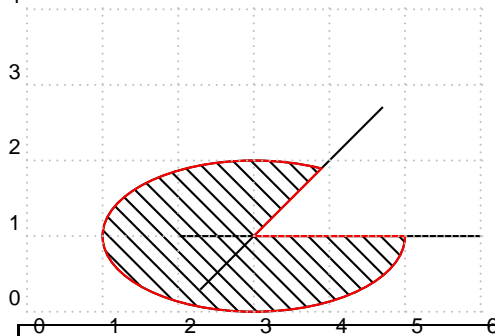
It is an experimental fillstyle. PostScript knows only the `eofill` and the other way round needs some tricky internal commands and may not work in all cases.



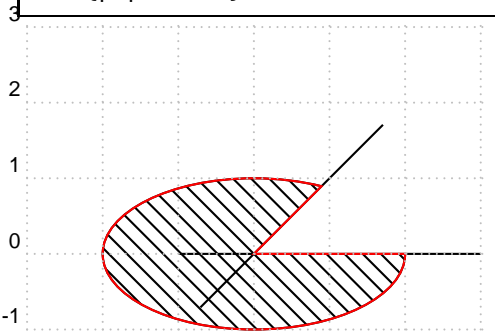
```
\begin{pspicture}[linewidth=2pt](12,4)
\pscustom[linestyle=none,fillstyle=eofill,fillcolor=blue!40]{%
\psellipse(4,2)(2,2)\psellipse(2,2)(2,2)}
\psellipse[linecolor=red](4,2)(2,2)\psellipse[linecolor=green](2,2)(2,2)
%
\pscustom[linestyle=none,fillstyle=oeofill,fillcolor=blue!40]{%
\psellipse(10,2)(2,2)\psellipse(8,2)(2,2)}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

1.4. Option correctAngle

It now works also for `\psellipticwedge`. The setting of origin is needed if the center of the ellipse is not the origin of the underlying coordinate system.



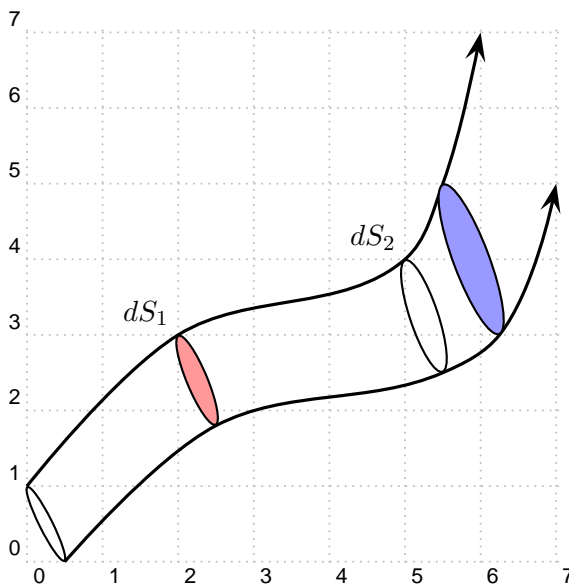
```
\begin{pspicture}[dimen=m,showgrid=top](6,4)
\nodes{P}(3,1)(5,1)(4,2)
\pcline[nodesep=-1](P0)(P1)
\pcline[nodesep=-1](P0)(P2)
\psellipticarc[origin={P0},correctAngle](P0)(2,1){(P2)}{(P1)}
\psellipticwedge[linecolor=red,correctAngle,
fillstyle=vlines](P0)(2,1){(P2)}{(P1)}
\end{pspicture}
```



```
\begin{pspicture}[dimen=m,showgrid=top](-3,-1)(3,3)
\nodes{P}(0,0)(2,0)(1,1)
\pcline[nodesep=-1](P0)(P1)
\pcline[nodesep=-1](P0)(P2)
\psellipticarc[correctAngle](P0)(2,1){(P2)}{(P1)}
\psellipticwedge[linecolor=red,correctAngle,
fillstyle=vlines](P0)(2,1){(P2)}{(P1)}
\end{pspicture}
```

1.5. New macro \psellipseAB

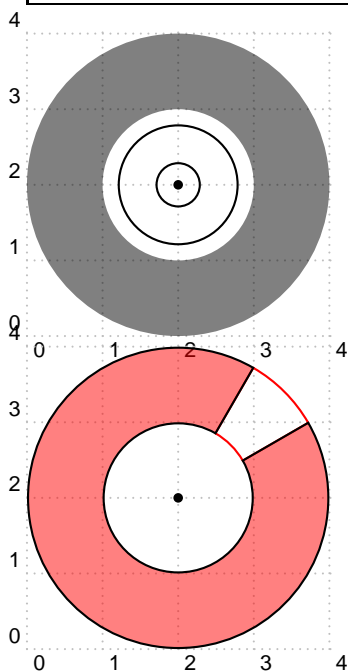
`\psellipseAB * [Options] (x,y) {half radius}`



```
\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}
```

1.6. New macro \psRing

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

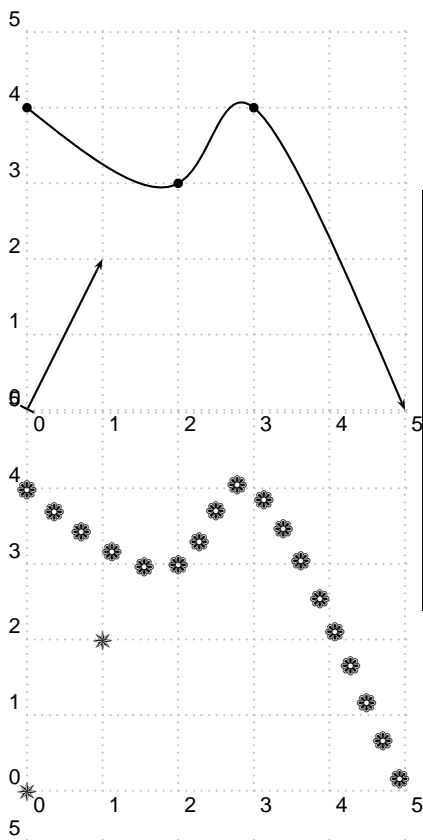


```
\begin{pspicture}[showgrid](4,4)
  \psRing(2,2){0.3}{0.8}
  \psRing*[opacity=0.5](2,2){1}{2}
  \psdot(2,2)
\end{pspicture}
```

```
\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}
```

1.7. New macro \psc spline (by Christoph Bersch)

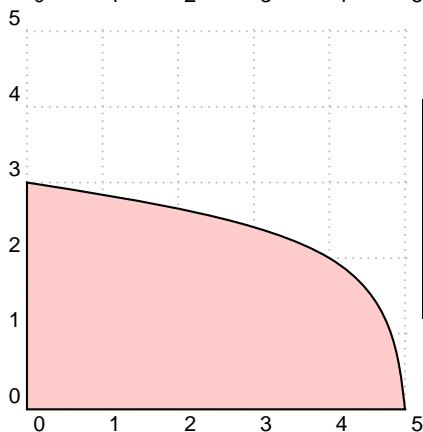
`\psc spline * [Options] (x0,y0) (x1,y1) ... (x,y)`



```

\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}

```

1.8. \Special Coord

The Macro `\SpecialCoord` for scanning special coordinate expressions is now enabled by default. You can disable it with `\NormalCoord`.

References

- [1] Michel Goossens, Frank Mittelbach, Sebastian Rahtz, Denis Roegel, and Herbert Voß. *The L^AT_EX Graphics Companion*. Addison-Wesley Publishing Company, Reading, Mass., 2007.
- [2] Laura E. Jackson and Herbert Voß. Die Plot-Funktionen von pst-plot. *Die T_EXnische 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_EXnische 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^AT_EX Referenz*. DANTE – lehmanns media, Heidelberg/Hamburg, 2. edition, 2010.
- [7] Herbert Voß. *PSTricks – Grafik für T_EX und L^AT_EX*. DANTE – Lehmanns Media, Heidelberg/Hamburg, 6. edition, 2010.
- [8] Herbert Voß. *L^AT_EX Quick Reference*. UIT, Cambridge/UK, 1. edition, 2011.
- [9] Herbert Voß. *PSTricks – Graphics for L^AT_EX*. UIT, Cambridge/UK, 1. edition, 2011.
- [10] Michael Wiedmann and Peter Karp. *References for T_EX and Friends*. <http://www.miwie.org/tex-refs/>, 2003.

Index

dots, 3

eofill, 3

Keyvalue

 dots, 3

 eofill, 3

Keyword

 linestyle, 3

 origin, 4

 plotstyle, 3

 strokeopacity, 3

linestyle, 3

Macro

 \NormalCoor, 6

 \pscspline*, 5

 \psdot, 3

 \psdots, 3

 \psellipticwedge, 4

 \psellipseAB*, 5

 \psRing*, 5

 \SpecialCoor, 6

\NormalCoor, 6

origin, 4

plotstyle, 3

\pscspline*, 5

\psdot, 3

\psdots, 3

\psellipticwedge, 4

\psellipseAB*, 5

\psRing*, 5

\SpecialCoor, 6

strokeopacity, 3