PSTricks

News - 2014

new macros and bugfixes for the basic package pstricks

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2014

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Contents

Part I.
pstricks – package

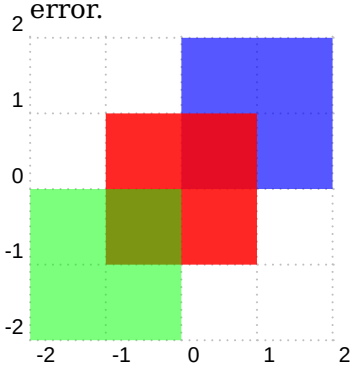
1. pstricks.tex (2.57– 2014/08/27)

1.1. Opacity

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

1.2. PostScript notation for numbers

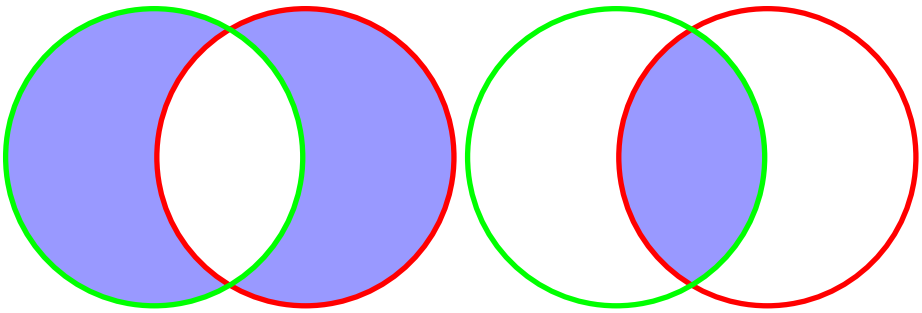
Optional arguments which expects a real number can now have a preceeding ! character for a PostScript notation which is directly passed to PostScript. The user has take care that such a number isn't use before in another TEX macro. In such a case it gives an error.




```
\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

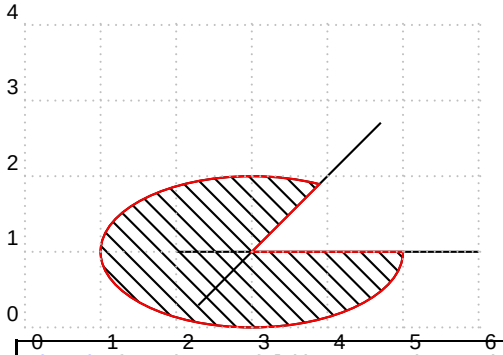
It is an experimental fillstyle. PostScript knows only the `eofill` and the other way round needs some tricky internal commands and may not work in all cases.



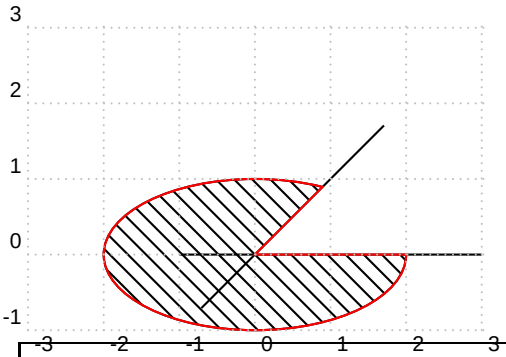
```
\begin{pspicture}[linewidth=2pt](12,4)
\pscustom[linestyle=none,fillstyle=eofill,fillcolor=blue!40]{%
  \psellipse(4,2)(2,2)\psellipse(2,2)(2,2)}
\psellipse[linecolor=red](4,2)(2,2)\psellipse[linecolor=green](2,2)(2,2)
%
\pscustom[linestyle=none,fillstyle=oefill,fillcolor=blue!40]{%
  \psellipse(10,2)(2,2)\psellipse(8,2)(2,2)}
\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 \psellipiticwedge. The setting of origin is needed if the center of the ellipse is not the origin of the underlying coordinate system.



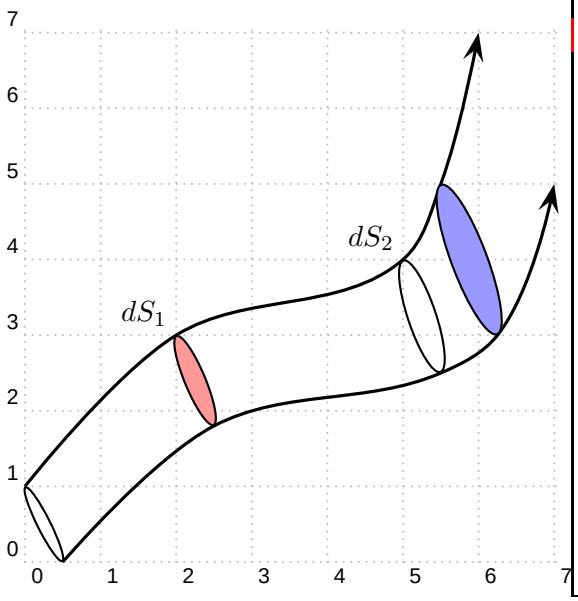

```
\begin{pspicture}[dimen=m,showgrid=top](6,4)
\pnodes{P}(3,1)(5,1)(4,2)
\pcline[nodesep=-1](P0)(P1)
\pcline[nodesep=-1](P0)(P2)
\psellipticarc[origin={P0},correctAngle](P0)(2,1){(P2)}{(P1)}
\psellipticwedge[origin={P0},linecolor=red,correctAngle,
            fillstyle=vlines](P0)(2,1){(P2)}{(P1)}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




```
\begin{pspicture}[dimen=m,showgrid=top](-3,-1)(3,3)
\pnodes{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

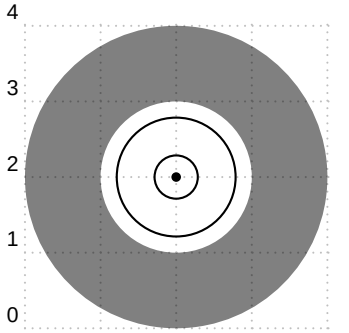
\psellipseAB * [Options] (x,y) {*half radius*}



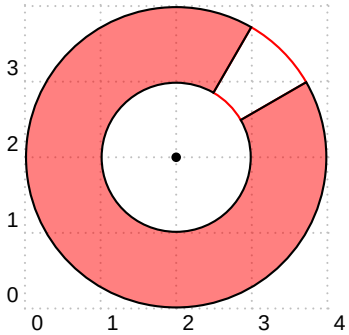

```
\begin{pspicture}[showgrid=true](7,7)%%
    showgrid=true
\pnodes{a}(0.5,0)(2.5,1.8)(5.5,2.5)
    (6.25,3)(7,5)
\pnodes{b}(0,1)(2,3)(5,4)(5.5,5)(6,7)
\pscurve[arrowscale=2,linewidth=1.2pt
    ]{->}(a0)(a1)(a2)(a3)(a4)
\pscurve[arrowscale=2,linewidth=1.2pt
    ]{->}(b0)(b1)(b2)(b3)(b4)
\psellipseAB(a0)(b0){0.1}
\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*}



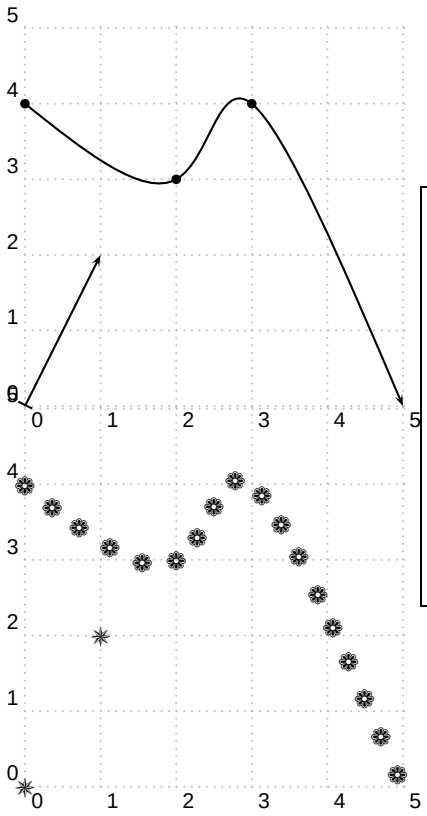

```
\begin{pspicture}[showgrid](4,4)
  \psRing(2,2){0.3}{0.8}
  \psRing*[opacity=0.5](2,2){1}{2}
\psdot(2,2)
\end{pspicture}
```



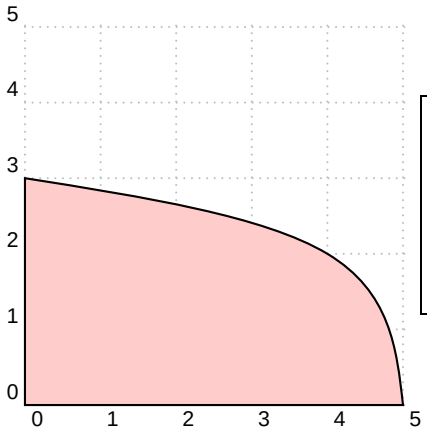

```
\begin{pspicture}[showgrid](4,4)
  \psRing[linecolor=red](2,2)[30,60]{1}{2}
  \psRing[opacity=0.5,fillstyle=solid,
    fillcolor=red](2,2)[60,30]{1}{2}
\psdot(2,2)
\end{pspicture}
```

1.7. New macro \pscspline (by Christoph Bersch)

\pscspline * [Options] $(x_0,y_0)(x_1,y_1)\ldots(x,y)$



```
\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 Coor

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

References

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

[4] Herbert Voß. Die mathematischen Funktionen von Postscript. *Die TeXnische Komödie*, 1/02:40–47, March 2002.

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[6] Herbert Voß. *LaTeX Referenz*. DANTE – lehmanns media, Heidelberg/Hamburg, 2. edition, 2010.

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Index