PSTricks - 2006
new macros and bugfixes for the basic packages \pstricks, \pst-tree, and \pst-node

Herbert Voß*

July 1, 2008

Abstract

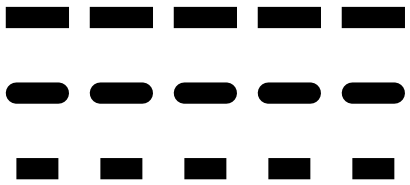
This new version of `pstricks.tex` depends on the also new prologue file `pstricks.pro` (v 1.01) and `pst-dots.pro` (v. 2.00), which should go into the local TEX-directory `$TEXMFLOCAL/dvips/`.

Contents

*Herbert.Voss@pstricks.de

1 linecap

This was already introduced with version 1.14, but I forgot to mentioned it. For the line ends one can use the „arrows“ `c-c`, but only for the ends. For dashed lines the option `linecap` can be set to the value 1 to get the dashes with rounded ends, too.



```
\begin{pspicture}(5,3)
\psline[linestyle=dashed,linewidth=8pt,dash=5mm 5mm,linecap
  =2](0,2.5)(5,2.5)
\psline[linestyle=dashed,linewidth=8pt,dash=5mm 5mm,linecap
  =1](0,1.5)(5,1.5)
\psline[linestyle=dashed,linewidth=8pt,dash=5mm 5mm](0,0.5)(5,0.5)
\end{pspicture}
```

It is obvious that only the value 1 makes sense for the dashed lines.

2 Dots

Long time ago, Etienne Riga sent the code for some new dotstyles which are now part of pstricks.

Name	\psdot	\psdot*	*Name*	\psdot	\psdot*
*	● ● ●	● ● ●	o	○ ○ ○	● ● ●
Bo	○ ○ ○	● ● ●	x	× × ×	× × ×
+	+ + +	+ + +	B+	+ + +	+ + +
Add	+ + +	+ + +	BoldAdd	+ + +	+ + +
Oplus	⊕ ⊕ ⊕	● ● ●	BoldOplus	⊕ ⊕ ⊕	● ● ●
SolidOplus	✪ ✪ ✪	● ● ●	Hexagon	⬡ ⬡ ⬡	⬢ ⬢ ⬢
BoldHexagon	⬡ ⬡ ⬡	⬢ ⬢ ⬢	SolidHexagon	⬢ ⬢ ⬢	⬢ ⬢ ⬢
asterisk	* * *	* * *	Basterisk	* * *	* * *
Asterisk	* * *	* * *	BoldAsterisk	* * *	* * *
SolidAsterisk	❂ ❂ ❂	● ● ●	oplus	⊕ ⊕ ⊕	⊕ ⊕ ⊕

Name	\psdot	\psdot*	*Name*	\psdot	\psdot*
otimes	⊗ ⊗ ⊗	⊗ ⊗ ⊗	Otimes	⊗ ⊗ ⊗	● ● ●
BoldOtimes	⊗ ⊗ ⊗	● ● ●	SolidOtimes	⊗ ⊗ ⊗	● ● ●
Mul	× × ×	× × ×	BoldMul	× × ×	× × ×
|	❙ ❙ ❙	❙ ❙ ❙	B|	❙ ❙ ❙	❙ ❙ ❙
Bar	| | |	| | |	BoldBar	❙ ❙ ❙	| | |
Bullet	● ● ●	● ● ●	Circle	○ ○ ○	● ● ●
BoldCircle	○ ○ ○	● ● ●	square	□ □ □	■ ■ ■
Bsquare	□ □ □	■ ■ ■	square*	■ ■ ■	■ ■ ■
Square	□ □ □	■ ■ ■	BoldSquare	□ □ □	■ ■ ■
SolidSquare	■ ■ ■	■ ■ ■	diamond	◊ ◊ ◊	♦ ♦ ♦
Bdiamond	◊ ◊ ◊	♦ ♦ ♦	diamond*	♦ ♦ ♦	♦ ♦ ♦
Diamond	◊ ◊ ◊	♦ ♦ ♦	BoldDiamond	◊ ◊ ◊	♦ ♦ ♦
SolidDiamond	♦ ♦ ♦	♦ ♦ ♦	triangle	△ △ △	▲ ▲ ▲
Btriangle	△ △ △	▲ ▲ ▲	triangle*	▲ ▲ ▲	▲ ▲ ▲
Triangle	△ △ △	▲ ▲ ▲	BoldTriangle	△ △ △	▲ ▲ ▲
SolidTriangle	▲ ▲ ▲	▲ ▲ ▲	pentagon	⬠ ⬠ ⬠	⬟ ⬟ ⬟
Bpentagon	⬠ ⬠ ⬠	⬟ ⬟ ⬟	pentagon*	⬟ ⬟ ⬟	⬟ ⬟ ⬟
Pentagon	⬠ ⬠ ⬠	⬟ ⬟ ⬟	BoldPentagon	⬠ ⬠ ⬠	⬟ ⬟ ⬟
SolidPentagon	⬟ ⬟ ⬟	⬟ ⬟ ⬟	Hexagon	⬡ ⬡ ⬡	⬢ ⬢ ⬢
BoldHexagon	⬡ ⬡ ⬡	⬢ ⬢ ⬢	SolidHexagon	⬢ ⬢ ⬢	⬢ ⬢ ⬢

3 pstricks.pro

The PostScript header file defines the following functions and constants, which can be used in arguments for \psplot or any other macro, which reads PostScript code.

```
/Sqrt { dup 0 lt { pop 0 } { sqrt } ifelse } def% return 0 for negative
  arguments
/Atan { /atan load stopped { pop pop 0 } if } def% return 0 if atan not
  known
/ATAN1 {neg -1 atan 180 sub } def   % atan(x) (only one parameter)
/Div { dup 0 eq { pop } { div } ifelse } def  % control the division
/NET { neg exch neg exch T } def        % change coordinate system to the
   negative one
/Pyth { dup mul exch dup mul add sqrt } def  % Pythagoras, epects 2
  parameter
/PtoC { 2 copy cos mul 3 1 roll sin mul } def  % Polar to Cartesian
%----------------- hv added 20050516 ---------------
```

```
/Pi 3.14159265359 def
/TwoPi 6.28318530718 def
/Euler 2.71828182846 def
/RadtoDeg { 180 mul Pi div } bind def % convert from radian to degrees
/DegtoRad { Pi mul 180 div } bind def % viceversa
```

4 Packages

The package `pst-char` is now part of `pst-text` and the package `pst-ghsb` is now part of `pst-grad`. The macros and enviroments will work in the same way.

The documented source code of `pstricks` and `pst-node` is now available as a pdf file with a source which can be run by pdfLaTeX. Rolf Niepraschk modified the old sources from Timothy Van Zandt for running with LaTeX and/or pdfLaTeX.