

PSTricks - 2006

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

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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 T_EX-directory `$TEXMFLOCAL/dvips/`.

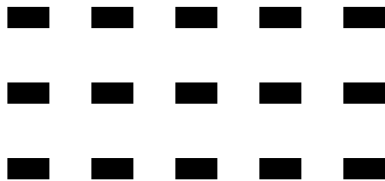
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1 linecap

This was already introduced with version 1.14, but I forgot to mention 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.



```

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

<i>Name</i>	<code>\psdot</code>	<code>\psdot*</code>	<i>Name</i>	<code>\psdot</code>	<code>\psdot*</code>
<code>*</code>	● ● ●	● ● ●	<code>o</code>	○ ○ ○	● ● ●
<code>Bo</code>	○ ○ ○	● ● ●	<code>x</code>	× × ×	× × ×
<code>+</code>	+ + +	+ + +	<code>B+</code>	+ + +	+ + +
<code>Add</code>	+ + +	+ + +	<code>BoldAdd</code>	+ + +	+ + +
<code>Oplus</code>	⊕ ⊕ ⊕	● ● ●	<code>BoldOplus</code>	⊕ ⊕ ⊕	● ● ●
<code>SolidOplus</code>	⊕ ⊕ ⊕	● ● ●	<code>Hexagon</code>	⬡ ⬡ ⬡	● ● ●
<code>BoldHexagon</code>	⬡ ⬡ ⬡	● ● ●	<code>SolidHexagon</code>	● ● ●	● ● ●
<code>asterisk</code>	* * *	* * *	<code>Basterisk</code>	* * *	* * *
<code>Asterisk</code>	* * *	* * *	<code>BoldAsterisk</code>	* * *	* * *
<code>SolidAsterisk</code>	⊗ ⊗ ⊗	● ● ●	<code>oplus</code>	⊕ ⊕ ⊕	⊕ ⊕ ⊕

<i>Name</i>	<code>\psdot</code>	<code>\psdot*</code>	<i>Name</i>	<code>\psdot</code>	<code>\psdot*</code>
<code>otimes</code>	⊗ ⊗ ⊗	⊗ ⊗ ⊗	<code>Otimes</code>	⊗ ⊗ ⊗	● ● ●
<code>BoldOtimes</code>	⊗ ⊗ ⊗	● ● ●	<code>SolidOtimes</code>	⊗ ⊗ ⊗	● ● ●
<code>Mul</code>	× × ×	× × ×	<code>BoldMul</code>	× × ×	× × ×
<code> </code>			<code>B </code>		
<code>Bar</code>			<code>BoldBar</code>		
<code>Bullet</code>	● ● ●	● ● ●	<code>Circle</code>	○ ○ ○	● ● ●
<code>BoldCircle</code>	○ ○ ○	● ● ●	<code>square</code>	□ □ □	■ ■ ■
<code>Bsquare</code>	□ □ □	■ ■ ■	<code>square*</code>	■ ■ ■	■ ■ ■
<code>Square</code>	□ □ □	■ ■ ■	<code>BoldSquare</code>	□ □ □	■ ■ ■
<code>SolidSquare</code>	■ ■ ■	■ ■ ■	<code>diamond</code>	◇ ◇ ◇	◆ ◆ ◆
<code>Bdiamond</code>	◇ ◇ ◇	◆ ◆ ◆	<code>diamond*</code>	◆ ◆ ◆	◆ ◆ ◆
<code>Diamond</code>	◇ ◇ ◇	◆ ◆ ◆	<code>BoldDiamond</code>	◇ ◇ ◇	◆ ◆ ◆
<code>SolidDiamond</code>	◆ ◆ ◆	◆ ◆ ◆	<code>triangle</code>	△ △ △	▲ ▲ ▲
<code>Btriangle</code>	△ △ △	▲ ▲ ▲	<code>triangle*</code>	▲ ▲ ▲	▲ ▲ ▲
<code>Triangle</code>	△ △ △	▲ ▲ ▲	<code>BoldTriangle</code>	△ △ △	▲ ▲ ▲
<code>SolidTriangle</code>	▲ ▲ ▲	▲ ▲ ▲	<code>pentagon</code>	⬠ ⬠ ⬠	⬢ ⬢ ⬢
<code>Bpentagon</code>	⬠ ⬠ ⬠	⬢ ⬢ ⬢	<code>pentagon*</code>	⬢ ⬢ ⬢	⬢ ⬢ ⬢
<code>Pentagon</code>	⬠ ⬠ ⬠	⬢ ⬢ ⬢	<code>BoldPentagon</code>	⬠ ⬠ ⬠	⬢ ⬢ ⬢
<code>SolidPentagon</code>	⬢ ⬢ ⬢	⬢ ⬢ ⬢	<code>Hexagon</code>	⬡ ⬡ ⬡	⬤ ⬤ ⬤
<code>BoldHexagon</code>	⬡ ⬡ ⬡	⬤ ⬤ ⬤	<code>SolidHexagon</code>	⬤ ⬤ ⬤	⬤ ⬤ ⬤

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.

```

1 /Sqrt { dup 0 lt { pop 0 } { sqrt } ifelse } def % return 0 for negative
   arguments
2 /Atan { /atan load stopped { pop pop 0 } if } def % return 0 if atan not
   known
3 /ATAN1 {neg -1 atan 180 sub } def % atan(x) (only one parameter)
4 /Div { dup 0 eq { pop } { div } ifelse } def % control the division
5 /NET { neg exch neg exch T } def % change coordinate system to the
   negative one
6 /Pyth { dup mul exch dup mul add sqrt } def % Pythagoras, expects 2
   parameter
7 /PtoC { 2 copy cos mul 3 1 roll sin mul } def % Polar to Cartesian
8 %----- hv added 20050516 -----

```

```

9 /Pi 3.14159265359 def
10 /TwoPi 6.28318530718 def
11 /Euler 2.71828182846 def
12 /RadtoDeg { 180 mul Pi div } bind def % convert from radian to degrees
13 /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 environments 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 pdf \LaTeX . Rolf Niepraschk modified the old sources from Timothy Van Zandt for running with \LaTeX and/or pdf \LaTeX .