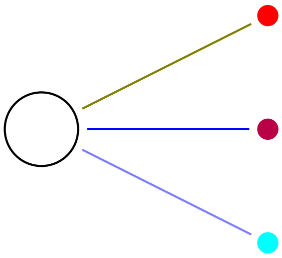
Color extensions with the xcolor package — pstricks examples

Dr. Uwe Kern*

v2.12 (2016/05/11)

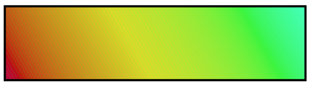
This document is not suitable for pdfLaTeX! Please use LaTeX + `dvips` etc.

Figure 1: Modified version of an example from the pstricks manual; requires pst-tree



```
\begin{pspicture}(-0.5,-2)(3,2)
\cnode(0,0){.5cm}{root}
\cnode*[linecolor=red](3,1.5){4pt}{A}
\cnode*[linecolor=red!72.5375!blue](3,0){4pt}{B}
\cnode*[linecolor=-red](3,-1.5){4pt}{C}
\psset{nodesep=3pt}
\ncline[linecolor=green!50!red]{root}{A}
\ncline[linecolor=blue]{root}{B}
\ncline[linecolor=-green!50!red]{root}{C}
\end{pspicture}
```

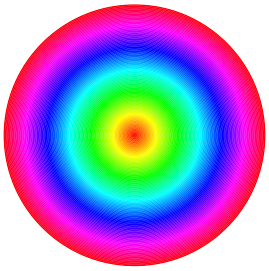
Figure 2: Moving from one color to its complement; requires pst-slpe



```
\begin{pspicture}(4,1)
\psframe[fillstyle=slope,
        slopeangle=30,
        slopebegin=red!72.5375!blue,
        slopeend=-red!72.5375!blue](4,1)
\end{pspicture}
```

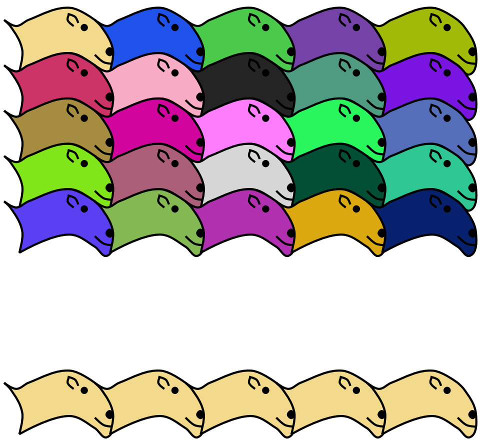
*This file is part of the xcolor distribution which can be downloaded from the CTAN mirrors (`macros/latex/contrib/xcolor/`) or the homepage `www.ukern.de/tex/xcolor.html`. Please send error reports and suggestions for improvements to `xcolor@ukern.de`.

Figure 3: Explicit color specification via a loop command; requires multido



```
\psset{unit=1.75}%
\begin{pspicture}(0,-1)(2,1)
\multido{\rHue=0.00+0.01}{100}%
 {\pscircle[linewidth=0.01,
            linecolor={[hsb]{\rHue,1,1}}](1,0){\rHue}}
\end{pspicture}
```

Figure 4: Color series — modified version of an example from the pst-fill manual; note that the `\multirput` command does not give the desired result here



```
\newcommand*\Sheep
 {\begin{pspicture}(3,1.5)
  \pscustom[liftpen=2,fillstyle=solid,fillcolor=sheep!!+]%
   {\pscurve(0.5,-0.2)(0.6,0.5)(0.2,1.3)(0,1.5)(0,1.5)
     (0.4,1.3)(0.8,1.5)(2.2,1.9)(3,1.5)(3,1.5)(3.2,1.3)
     (3.6,0.5)(3.4,-0.3)(3,0)(2.2,0.4)(0.5,-0.2)}
  \pscircle*(2.65,1.25){0.12\psunit}% Eye
  \psccurve*(3.5,0.3)(3.35,0.45)(3.5,0.6)(3.6,0.4)% Muzzle
  \pscurve(3,0.35)(3.3,0.1)(3.6,0.05)% Mouth
  \pscurve(2.3,1.3)(2.1,1.5)(2.15,1.7)
  \pscurve(2.1,1.7)(2.35,1.6)(2.45,1.4)% Ear
  \end{pspicture}}
\definecolorseries
 {sheep}{rgb}{step}[rgb]{.95,.85,.55}{.17,.47,.37}
\resetcolorseries{sheep}
\psset{unit=0.4}
\begin{pspicture}(-3,-6)(0,7.5)
\Multido{\ry=6.0+-1.5}{5}%
 {\rput(0,\ry){\Multido{}{5}{\Sheep}}}
\resetcolorseries{sheep}%
\multirput(-6,-6)(3,0)5{\Sheep}
\end{pspicture}
```

Figure 5: Interaction with native PostScript code — γ-corrected wavelengths

```
\newcount\WL \unitlength.75pt
\def\WaveToPS#1%
 {\definecolor{tmp}{rgb:wave}{#1}\extractcolorspecs{tmp}\tmpm\tmpc
  \expandafter\WaveToPSi\tmpc,}
\def\WaveToPSi#1,#2,#3,{\pstVerb{/Red{#1}def /Green{#2}def /Blue{#3}def}}
\def\DisplayBar#1#2%
 {\linethickness{1.25\unitlength}\WL=360
  \pstVerb{/Gamma{#1}def}%
  \multiput(360,#2)(1,0){456}%
   {\WaveToPS{\the\WL}{\color{lambda}\line(0,1){50}}\global\advance\WL1}%
  \linethickness{0.25\unitlength}\WL=360
  \multiput(360,#2)(20,0){23}%
   {\picture(0,0)
    \line(0,-1){5}\multiput(5,0)(5,0){3}{\line(0,-1){2.5}}%
    \put(0,-10){\makebox(0,0){\the\WL}}\global\advance\WL20
    \endpicture}%
  \put(350,#2){\makebox(0,50)[r]{\small$\gamma$\,=\,#1}}}
\pstVerb{/Corr{dup 0 gt {Gamma exp}if}def}
\definecolor[ps]{lambda}{rgb}{Red Corr Green Corr Blue Corr}%
\begin{picture}(510,345)(310,-10)
\sffamily\tiny
\DisplayBar{0.4}{0}%
\DisplayBar{0.6}{70}%
\DisplayBar{0.8}{140}%
\DisplayBar{1.0}{210}%
\DisplayBar{1.2}{280}%
\end{picture}
```