Graphics drivers for \LaTeX\2ε*

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This file is maintained by the \LaTeX\ Project team.
Bug reports can be opened (category graphics) at
https://latex-project.org/bugs.html.

1 Driver files

This file implements some of the currently supported drivers. If the driver you use
is not in this list then a `.def' file may be distributed with This graphics bundle,
or may be distributed with your driver.

If not, send us some details of the driver’s `\special' syntax, and we will try
to produce a suitable file.

Note that some of these files are for drivers to which we have no access, so they
are untested. Please send any corrections to the latexbugs address.

2 Colour

Most of the drivers that support colour use one of three methods.

• color1: ‘dvips’ style colour specials.
• color2: ‘textures’ style colour specials.
• color3: Colour implemented via literal PostScript specials.
• color4: Colour implemented by specials that only support RGB, i.e., Red
  Green Blue specified as integers in the range 0–255. Other models converted
to this within \TeX.

Some drivers do not use any of these modules and have their own code. Note that
drivers using the ‘color3’ code can not fully support the \TeX\ colour commands.

\begin{verbatim}
\def\col@r@arg#1{\%\dimen@#1\p@\ifdim\dimen@<\z@\dimen@\maxdimen\fi\ifdim\dimen@>\p@\PackageError{color}{Argument `#1' not in range [0,1]}{\ehd\fi}
\end{verbatim}

*Version v3.0m, revised 2016/06/17
Need to make sure of a trailing .0 for textures. Apparently it is OK to always add a . as 1.3. is accepted by textures. Textures gray special is reversed, so just use rgb instead.

A 0–1 range value will have been left in \dimen@ by \color@arg. The black value (0–1) will be stored in \dimen@ii. Covert to 0–255 integer, and leave in #1.

A 0–1 range value will have been left in \dimen@ by \color@arg. Convert to 0–255 integer, and leave in #1.
\def\c@lor@rgb@RGB#1{\dimen@\@cclv\dimen@\count@\dimen@\divide\count@\p@\edef#1{\the\count@\space}}

\def\color@RGB#1#2{\c@lor@@RGB#2\@@#1}
\def\c@lor@@RGB#1,#2,#3\@@#4{\c@lor@RGB@rgb{#1}\@tempa\c@lor@RGB@rgb{#2}\@tempb\c@lor@RGB@rgb{#3}\@tempc\c@lor@@rgb\@tempa,\@tempb,\@tempc\@@#4\edef#4{#1 #2 #3}}

Convert 0–255 integer, #1, to 0–1 real, and leave in #2.
\def\c@lor@RGB@rgb#1#2{\dimen@#1\p@\divide\dimen@\@cclv\edef#2{\strip@pt\dimen@}}
\def\color@hsb#1#2{\c@lor@@hsb#2\@@#1}
\def\c@lor@@hsb#1,#2,#3\@@#4{\c@lor@arg{#1}\c@lor@arg{#2}\c@lor@arg{#3}\edef#4{hsb #1 #2 #3\sethsbcolor}}
\def\color@named#1#2{\c@lor@@named#2,,\@@#1}
\def\c@lor@@named#1,#2,#3\@@#4{\@ifundefined{col@#1}{\PackageError{color}{Undefined color '#1'}\@ehd}{\edef#4{ #1\if!#2!\else #2.\fi\csname col@#1\endcsname}}}
\def\c@lor@to@ps#1 #2\@@{\csname c@lor@ps@#1\endcsname#2 \@@}
\def\c@lor@to@ps#1\@@{#1}
\def\c@lor@to@ps#1#2 #3 #4\@@{\@ifundefined{col@#1}{\PackageError{color}{Undefined color '#1'}\@ehd}{\edef#4{\csname c@lor@ps@#1\endcsname#2 #3 #4\setrgbcolor}\edef#4{#1 #2 #3 #4\setrgbcolor\@ehd}}}

Conversion from \special syntax to PostScript (for PSTricks).
\def\c@lor@to@ps#1 #2\@@{\csname c@lor@ps@#1\endcsname#2 \@@}
\def\c@lor@to@ps#1\@@{#1}\def\c@lor@to@ps#1#2 #3 #4\@@{\@ifundefined{col@#1}{\PackageError{color}{Undefined color '#1'}\@ehd}{\edef#4{\csname c@lor@ps@#1\endcsname#2 #3 #4\setrgbcolor}\edef#4{#1 #2 #3 #4 #5 #6 #7 #8 #9 #10 #11 #12 #13 #14 #15 #16 #17 #18 #19 #20 #21 #22 #23 #24 #25 #26 #27 #28 #29 #30 #31 #32 #33 #34 #35 #36 #37 #38 #39 #40 #41 #42 #43 #44 #45 #46 #47 #48 #49 #50 #51 #52 #53 #54 #55 #56 #57 #58 #59 #60 #61 #62 #63 #64 #65 #66 #67 #68 #69 #70 #71 #72 #73 #74 #75 #76 #77 #78 #79 #80 #81 #82 #83 #84 #85 #86 #87 #88 #89 #90 #91 #92 #93 #94 #95 #96 #97 #98 #99 #100 #101 #102 #103 #104 #105 #106 #107 #108 #109 #110 #111 #112 #113 #114 #115 #116 #117 #118 #119 #120 #121 #122 #123 #124 #125 #126 #127 #128 #129 #130 #131 #132 #133 #134 #135 #136 #137 #138 #139 #140 #141 #142 #143 #144 #145 #146 #147 #148 #149 #150 #151 #152 #153 #154 #155 #156 #157 #158 #159 #160 #161 #162 #163 #164 #165 #166 #167 #168 #169 #170 #171 #172 #173 #174 #175 #176 #177 #178 #179 #180 #181 #182 #183 #184 #185 #186 #187 #188 #189 #190 #191 #192 #193 #194 #195 #196 #197 #198 #199 #200 #201 #202 #203 #204 #205 #206 #207 #208 #209 #210 #211 #212 #213 #214 #215 #216 #217 #218 #219 #220 #221 #222 #223 #224 #225 #226 #227 #228 #229 #230 #231 #232 #233 #234 #235 #236 #237 #238 #239 #240 #241 #242 #243 #244 #245 #246 #247 #248 #249 #250 #251 #252 #253 #254 #255}
\def\color@ps#1 #2\@@{TeXDict begin #1 end}
\def\color@ps@rgb#1\@@{#1 setrgbcolor}
\def\color@ps@hsb#1\@@{#1 sethsbcolor}
\def\color@ps@cmyk#1\@@{#1 setcmykcolor}
\def\color@ps@gray#1\@@{#1 setgray}
\def\color@to@ps@#1 #2\@@{\csname c@lor@ps@#1@end\endcsname#2 \@@}{#1}
\def\color@ps@#1 #2\@@{%\expandafter\expandafter\expandafter\c@lor@to@ps@\csname col@#1\expandafter\endcsname\space#2. \@@{#1}}
\def\color@ps@rgb#1. #2. #3. #4\@@{#1 #2 #3 setrgbcolor}
\def\color@ps@rgb@#1. #2. #3. #4. #5\@@#6{#1 #2 #3 setrgbcolor}
\def\color@ps@cmyk#1. #2. #3. #4. #5. #6\@@{#1 #2 #3 #4 setcmykcolor}
\def\color@ps@cmyk@#1. #2. #3. #4. #5. #6\@@#7{#1 #2 #3 #4 setcustomcmykcolor}
\if!@firstofone#5!1 \else#5 \fi setcustomcolor}
\def\current@color{ Black}
\def\current@color{gray 0}
\def\current@color{rgb 0. 0. 0.}
\def\current@color{0 setgray}
\def\current@color{0 0 0}
\def\set@color{\special{color push \current@color \current@color}}
\def\reset@color{\special{color pop}}
\def\set@page@color{\c@lor@special\sixt@@n{background \current@color}}
\def\define@color@named#1#2{\expandafter\let\csname col@#1\endcsname\@nnil}
\def\no@page@color{\special{background \string"newpath clip}}
\def\set@color{%\special{color push \current@color \current@color}}
\def\reset@color{\special{color pop}}
\def\set@page@color{\c@lor@special\sixt@@n{background \current@color}}
\def\define@color@named#1#2{%\AtBeginDvi{\special{color define #1 #2}}}
\def\setColor{\Gin@PS@raw{\current@color}\aftergroup\reset@color}
\def\reset@color{\Gin@PS@raw{\current@color}}
⟨/color3⟩
⟨*color4⟩
\def\setColor{\special{textcolor: \current@color}\aftergroup\reset@color}
\def\reset@color{\special{textcolor: \current@color}}
⟨/color4⟩
⟨*color3|color4⟩
\def\set@page@color{\c@lor@special\sixt@@n{background color ignored: \current@color}}
\def\define@color@named#1#2{\expandafter\edef\csname col@#1\endcsname{#2}}
⟨/color3|color4⟩
⟨/color1|color2|color3|color4⟩
⟨*colorfix⟩
\AtBeginDocument{\let\@ldc@l@r\color
\def\color{\if@inlabel\leavevmode\fi\@ldc@l@r}
\let\@lduseb@x\usebox
\def\usebox#1{\@lduseb@x{#1}\set@color}
⟨*colorfix⟩
⟨dvipsnames⟩
\DefineNamedColor{named}{GreenYellow} {cmyk}{0.15,0.0,0.69,0}
\DefineNamedColor{named}{Yellow} {cmyk}{0,0,1,0}
\DefineNamedColor{named}{Goldenrod} {cmyk}{0.0,0.10,0.84,0}
\DefineNamedColor{named}{Dandelion} {cmyk}{0.0,0.29,0.84,0}
\DefineNamedColor{named}{Apricot} {cmyk}{0.0,0.32,0.52,0}
\DefineNamedColor{named}{Peach} {cmyk}{0.0,0.50,0.70,0}
\DefineNamedColor{named}{Melon} {cmyk}{0.0,0.46,0.50,0}
\DefineNamedColor{named}{YellowOrange} {cmyk}{0.0,0.42,1,0}
\DefineNamedColor{named}{Orange} {cmyk}{0.0,0.61,0.87,0}
\DefineNamedColor{named}{BurntOrange} {cmyk}{0.0,0.51,1,0}
\DefineNamedColor{named}{Bittersweet} {cmyk}{0.0,0.75,1,0.24}
\DefineNamedColor{named}{RedOrange} {cmyk}{0.0,0.77,0.87,0}
\DefineNamedColor{named}{Mahogany} {cmyk}{0.0,0.85,0.87,0.35}
\DefineNamedColor{named}{Maroon} {cmyk}{0.0,0.87,0.68,0.32}
\DefineNamedColor{named}{BrickRed} {cmyk}{0.0,0.89,0.94,0.28}
\DefineNamedColor{named}{Red} {cmyk}{0,1,1,0}
\DefineNamedColor{named}{OrangeRed} {cmyk}{0,1.0,0.50,0}
\DefineNamedColor{named}{RubineRed} {cmyk}{0,1.0,0.13,0}
\DefineNamedColor{named}{WildStrawberry}{cmyk}{0.0,0.96,0.39,0}
\DefineNamedColor{named}{Salmon} {cmyk}{0.0,0.53,0.38,0}
\DefineNamedColor{named}{CarnationPink} {cmyk}{0.0,0.63,0,0}
\DefineNamedColor{named}{Magenta} {cmyk}{0,1,0,0}
\DefineNamedColor{named}{VioletRed} {cmyk}{0,0.81,0,0}
\DefineNamedColor{named}{Rhodamine} {cmyk}{0.0,0.82,0,0}
\DefineNamedColor{named}{Mulberry} {cmyk}{0.0,0.34,0.90,0.02}
\DefineNamedColor{named}{RedViolet} {cmyk}{0.0,0.07,0.90,0.34}
\DefineNamedColor{named}{Fuchsia} {cmyk}{0.0,0.47,0.91,0.08}
\DefineNamedColor{named}{Lavender} {cmyk}{0.0,0.48,0,0}
\DefineNamedColor{named}{Thistle} {cmyk}{0.12,0.59,0,0}
\DefineNamedColor{named}{Orchid} {cmyk}{0.32,0.64,0,0}
\DefineNamedColor{named}{DarkOrchid} {cmyk}{0.40,0.80,0.20,0}
\DefineNamedColor{named}{Purple} {cmyk}{0.45,0.86,0,0}
\DefineNamedColor{named}{Plum} {cmyk}{0.50,1,0,0}
\DefineNamedColor{named}{Violet} {cmyk}{0.79,0.88,0,0}
\DefineNamedColor{named}{RoyalPurple} {cmyk}{0.75,0.90,0,0}
\DefineNamedColor{named}{BlueViolet} {cmyk}{0.86,0.91,0.04}
\DefineNamedColor{named}{Periwinkle} {cmyk}{0.57,0.55,0,0}
\DefineNamedColor{named}{CadetBlue} {cmyk}{0.62,0.57,0.23,0}
\DefineNamedColor{named}{CornflowerBlue}{cmyk}{0.65,0.13,0,0}
\DefineNamedColor{named}{MidnightBlue} {cmyk}{0.98,0.13,0.43}
\DefineNamedColor{named}{NavyBlue} {cmyk}{0.94,0.54,0,0}
\DefineNamedColor{named}{RoyalBlue} {cmyk}{1.0,0.50,0,0}
\DefineNamedColor{named}{Blue} {cmyk}{1.1,0,0}
\DefineNamedColor{named}{Cerulean} {cmyk}{0.94,0.11,0,0}
\DefineNamedColor{named}{Cyan} {cmyk}{1,0,0,0}
\DefineNamedColor{named}{ProcessBlue} {cmyk}{0.96,0,0,0}
\DefineNamedColor{named}{SkyBlue} {cmyk}{0.62,0,0.12,0}
\DefineNamedColor{named}{Turquoise} {cmyk}{0.85,0,0.20,0}
\DefineNamedColor{named}{TealBlue} {cmyk}{0.86,0,0.34,0.02}
\DefineNamedColor{named}{Aquamarine} {cmyk}{0.82,0,0.30,0}
\DefineNamedColor{named}{BlueGreen} {cmyk}{0.85,0,0.33,0}
\DefineNamedColor{named}{Emerald} {cmyk}{0.99,0.50,0,0}
\DefineNamedColor{named}{JungleGreen} {cmyk}{0.91,0,0.88,0.12}
\DefineNamedColor{named}{SeaGreen} {cmyk}{0.92,0,0.59,0.25}
\DefineNamedColor{named}{ForestGreen} {cmyk}{0.50,0,1,0}
\DefineNamedColor{named}{LimeGreen} {cmyk}{0.65,0.0,0.74,0}
\DefineNamedColor{named}{YellowGreen} {cmyk}{0.26,0,0.07,0}
\DefineNamedColor{named}{OliveGreen} {cmyk}{0.64,0,0.09,0.40}
\DefineNamedColor{named}{SpringGreen} {cmyk}{0.072,1,0.45}
\DefineNamedColor{named}{Sepia} {cmyk}{0.83,1,0.70}
\DefineNamedColor{named}{Brown} {cmyk}{0.81,1,0.60}
\DefineNamedColor{named}{Tan} {cmyk}{0.14,0.42,0.56,0}
\DefineNamedColor{named}{Gray} {cmyk}{0,0,0,0.50}
\DefineNamedColor{named}{Black} {cmyk}{0,0,0,1}
\DefineNamedColor{named}{White} {cmyk}{0,0,0,0}

3 dvips

A \LaTeX\ graphics driver file for Tom Rokicki's dvips driver; tested with version 5.58f.

3.1 Colour

Uses the generic ‘color1’ code.
3.2 File inclusion

\texttt{\Ginclude@eps} \#1 input file (or command)
\begin{verbatim}
\def\Ginclude@eps#1{% 
  \message{<#1>}% 
  \bgroup 

  \texttt{dvips} likes to work with its own pixel resolution, so mangle the sizes slightly.
  \def\@tempa{!}% 
  \dimen@ \Gin@req@width 
  \dimen@ii.1bp% 
  \divide\dimen@\dimen@ii 
  \@tempdima\Gin@req@height 
  \divide\@tempdima\dimen@ii 
  \special{PSfile="#1" \space 
    llx=\Gin@llx \space 
    lly=\Gin@lly \space 
    urx=\Gin@urx \space 
    ury=\Gin@ury \space 
    \ifx\Gin@scalex\@tempa\else rwi=\number\dimen@ \space\fi 
    \ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima \space\fi 
    \if\Gin@clip clip \fi} 
  \egroup}
\end{verbatim}
\texttt{\Ginclude@bmp} \#1 input file; if zero size is requested, the graphic will come at ‘natural’ size.
\begin{verbatim}
\def\Ginclude@bmp#1{% 
  \message{<#1>}% 
  \dimen@ \Gin@req@height 
  \advance\dimen@ by-\Gin@lly bp 
  \kern-\Gin@llx bp \raise\Gin@req@height \hbox{% 
    \ifdim\Gin@urx bp=\z@ 
    \ifdim\Gin@ury bp=\z@ 
    \special{em: graph #1}% 
    \else 
    \special{em: graph #1,\Gin@urx bp}% 
    \fi 
    \else 
    \special{em: graph #1,\Gin@urx bp,\Gin@ury bp}% 
    \fi 
  } 
\end{verbatim}
\texttt{\oztex@include} PICT/PNTG format from the Mac. Actually only currently supported by the version of dvips distributed with Oz\TeX, and with the built in Oz\TeX drivers, but put here anyway as it is not much code and increases portability between the systems as now [dvips] and [oz\TeX] share the same back end.
\begin{verbatim}
\def\oztex@include#1#2{% 
  \dimen@1bp% 
  \divide\Gin@req@width\dimen@ 
  \divide\Gin@req@height\dimen@ 
  \special{#1=#2\space 
    \@width=\number\Gin@req@width \space 
    \@height=\number\Gin@req@height)}
\end{verbatim}
3.3 Rotation

\def\Grot@start{% 
\special{ps: gsave currentpoint 
currentpoint translate \Grot@angle space neg 
rotate neg exch neg exch translate}}
\def\Grot@end{\special{ps: currentpoint grestore moveto}}

3.4 Scaling

\def\Gscale@start{\special{ps: currentpoint currentpoint translate \Gscale@x \Gscale@y space scale neg exch neg exch translate}}
\def\Gscale@end{\special{ps: currentpoint translate 1 \Gscale@x space div 1 \Gscale@y space div scale neg exch neg exch translate}}

4 Literal Postscript

Raw PostScript code, no save/restore.

\def\Gin@PS@raw#1{\special{ps: #1}}

PostScript code, to be surrounded by save/restore by the driver. Coordinate system standard PostScript, but with origin at current (\TeX) position.

\def\Gin@PS@restored#1{\special{" #1}}

PostScript code to be inserted in the Header section of the final PostScript. Must be issued on the first page of a document.

\def\Gin@PS@literal@header#1{\AtBeginDvi{\special{! #1}}}

Name of external file, the contents of which are to be inserted in the Header section of the final PostScript. Must be issued on the first page of a document.

\def\Gin@PS@file@header#1{\AtBeginDvi{\special{header=#1}}}

5 Page Size

\ifundefined{ifGin@setpagesize}
  {
    \expandafter\let\csname ifGin@setpagesize\expandafter\endcsname
    \csname iftrue\endcsname
  }
\else
  \expandafter\let\csname ifGin@setpagesize\expandafter\endcsname\csname iftrue\endcsname
\fi
\ifGin@setpagesize
  \AtBeginDocument{\AtBeginDvi{% 
    \begingroup 
    \ifx\stockwidth\@undefined\else \paperwidth\stockwidth \paperheight\stockheight \fi 
    \ifdim\paperwidth>\z@ \ifdim\paperheight>\z@ \special{papersize=\the\paperwidth,\the\paperheight}\fi \fi \fi
  \endgroup \fi
\fi

8
6 dvipdf

A \texttt{LPX2e} graphics driver file for \texttt{dvipdf} driver.

6.1 Colour

Uses the generic ‘color1’ code.

6.2 File inclusion

\begin{verbatim}
\Ginclude@eps #1 input file (or command)
\def\Ginclude@eps#1{% 
\message{<#1>}% 
\bgroup 
dvip\ likes to work with its own pixel resolution, so mangle the sizes slightly. 
\def\@tempa{!}%
\dimen@=\Gin@req@width
\dimen@ii=\Gin@req@height
\divide\dimen@\dimen@ii
\@tempdima=\Gin@req@height
\divide\@tempdima\dimen@ii
\special{PSfile="#1" \space
llx=\Gin@llx \space
lly=\Gin@lly \space
urx=\Gin@urx \space
ury=\Gin@ury \space
\ifx\Gin@scalex\@tempa\else rwi=\number\dimen@ \space\fi
\ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima \space\fi
\if\Gin@clip clip \fi}%
\egroup}
\end{verbatim}

\Ginclude@bmp #1 input file; if zero size is requested, the graphic will come at ‘natural’ size.

\begin{verbatim}
\def\Ginclude@bmp#1{% 
\message{<#1>}% 
\dimen@=\Gin@req@height
\advance\dimen@ by-\Gin@lly bp
\kern-\Gin@llx bp\raise\Gin@req@height\hbox{% 
\ifdim\Gin@urx bp=\z@ 
\ifdim\Gin@ury bp=\z@ 
\special{pdf: /GRAPH #1}% 
\else 
\special{pdf: /GRAPH #1 \number\Gin@req@width sp}% 
\fi 
\else 
\special{pdf: /GRAPH #1 \number\Gin@req@width sp}
\fi
\end{verbatim}
6.3 Rotation
\def\Grot@start{\special{pdf: /ROT \Grot@angle space << }}
\def\Grot@end{\special{pdf: /ROT >> }}

6.4 Scaling
\def\Gscale@start{\special{pdf: /S \Gscale@x space \Gscale@y space << }}
\def\Gscale@end{\special{pdf: /S space >> }}

7 Literal Postscript
Raw PostScript code, no save/restore.
\def\Gin@PS@raw#1{\special{ps: #1}}
PostScript code, to be surrounded by save/restore by the driver. Coordinate system standard PostScript, but with origin at current (\TeX) position.
\def\Gin@PS@restored#1{\special{ps: #1}}
PostScript code to be inserted in the Header section of the final PostScript. Must be issued on the first page of a document.
\def\Gin@PS@literal@header#1{\AtBeginDvi{\special{! #1}}}
Name of external file, the contents of which are to be inserted in the Header section of the final PostScript. Must be issued on the first page of a document.
\def\Gin@PS@file@header#1{\AtBeginDvi{\special{header=#1}}}

7.1 File extensions
\@namedef{Gin@rule@.msp}{bmp}{.bb}{#1}
\@namedef{Gin@rule@.jpg}{bmp}{.bb}{#1}
\@namedef{Gin@rule@.bmp}{bmp}{.bb}{#1}
⟨/dvipdf⟩

8 \LaTeX
A \LaTeX\ 2ε graphics driver file for \LaTeX\ (versions 1.42 and later), by Andrew Trevorrow.
\@namedef{(oztex)}

8.1 Graphics inclusion
\def\Ginclude@eps{\Oztex@Include{epsf}}
\def\Ginclude@pntg{\Oztex@Include{pntg}}
\def\Ginclude@pict{\Oztex@Include{pict}}
\ifGin@clip
\typeout{No clipping support in Oz\TeX}%
\fi
\divide\Gin@req@width by 65781% convert sp to bp
\divide\Gin@req@height by 65781\%
\special{#1=#2\space
width=\number\Gin@req@width \space
height=\number\Gin@req@height
}%
}
⟨/oztex⟩

9 Textures

A \LaTeX{}\,2ε graphics driver file for Blue Sky’s Textures

WARNING! There is ongoing work to produce a new version of the
textures support. Do not rely on anything in this file being in the next
version!

(*textures)

9.1 Graphics inclusion

\PackageInfo{graphics/color}
{This file uses the advanced color support\MessageBreak
available in textures1.7\MessageBreak
If you are using color with an earlier version\MessageBreak
of textures, edit graphics.ins where marked,\MessageBreak
and re-latex graphics.ins.\MessageBreak\MessageBreak
If you are using textures1.7\MessageBreak
you may want to delete this warning\MessageBreak
from textures.def.\MessageBreak\MessageBreak
The code for scaling/rotation and file inclusion\MessageBreak
in this file is still rudimentary, and does not\MessageBreak
use textures’ full capabilities.\MessageBreak\MessageBreak
A new textures.def is currently being developed}@gobble}
\def\Ginclude@eps{\Textures@Include{illustration}}
\def\Ginclude@pict{\Textures@Include{pictfile}}
\def\Textures@Include#1#2{%
\def\@tempa{!}%
\ifx\Gin@scaley\@tempa
\let\Gin@scaley\Gin@scalex
\else
\ifx\Gin@scalex\@tempa\let\Gin@scalex\Gin@scaley\fi
\fi
\if\Gin@clip
\typeout{(no clipping support in Textures)\%}
\fi
\setlength\@tempdima{\Gin@scalex\@tempdimb}\%\MessageBreak
\setlength\@tempdima{\Gin@scaley\@tempdimb}\%\MessageBreak
\ifdim\@tempdima>\@tempdimb
\let\Gin@scalex\Gin@scaley\MessageBreak
\else
\let\Gin@scalex\Gin@scaley\MessageBreak
\fi
\if\Gin@clip
\typeout{(no clipping support in Textures)\%}
\fi
\setlength\@tempdima{\Gin@scalex\@tempdimb}\%\MessageBreak
\setlength\@tempdima{\Gin@scaley\@tempdimb}\%\MessageBreak
\special{#1 #2\space scaled \number\@tempdima}%
}
9.2 Rotation

This code was written when no unprotected postscript code was allowed; it could almost certainly be rewritten now with ‘rawpostscript’. 

\def\Grot@start{\special{postscript 0 0 transform grestore matrix currentmatrix 3 1 roll itransform dup 3 -1 roll dup 4 1 roll exch translate \Grot@angle space neg rotate neg exch neg exch translate gsave}}

\def\Grot@end{\special{postscript grestore setmatrix gsave}}

9.3 Colour

This will only work for versions 1.6 and Version 1.7 uses ‘color2’.

\langle color3\rangle \def\Gin@PS@raw#1{\special{rawpostscript #1}} \langle /textures \rangle

10 dvialw

A \LaTeX\n2\epsilon graphics driver file for dvialw, by Nelson Beebe

\langle dvialw \rangle

10.1 Rotation

\def\Ginclude@eps#1{% 
\def\@tempa{!}% 
\ifx\Gin@scaley\@tempa 
\let\Gin@scaley\Gin@scalex 
\else 
\ifx\Gin@scalex\@tempa\let\Gin@scalex\Gin@scaley\fi 
\fi 
\ifGin@clip 
\typeout{no clipping support in dvialw}% 
\fi 
\special{language "PS", 
    literal "\Gin@scalex\space \Gin@scaley\space scale", 
    position = "bottom left", 
    include "#1\space"}% 
}

\langle/\textless dvialw \rangle

11 emtex

A \LaTeX\n2\epsilon graphics driver file for Eberhard Mattes’ emTeX
11.1 Graphics file inclusion
\def\Ginclude@bmp#1{% 
\raise\Gin@req@height\hbox{\special{em:graph #1}}% 
\typeout{WARNING: emtex does not permit graphics to be scaled}% 
}\}
\end{verbatim}

12 dvilaser/ps
A \TeX\ graphics driver file for Arbortext’s dvilaser/ps
\end{verbatim}

12.1 Graphic file inclusion
\def\Ginclude@eps#1{% 
\ifGin@clip 
\typeout{no clipping support in dvilaser/ps}% 
\fi 
\special{ps: epsfile #1\space \the\Gin@req@width}% 
}\}
\end{verbatim}

13 psprint
A \TeX\ graphics driver file for Trevorrow’s psprint
\end{verbatim}

13.1 Graphic file inclusion
\def\Ginclude@eps#1{% 
\ifGin@clipscale\let\Gin@scale\Gin@clipscale\fi 
\if\Gin@clipscale 
\typeout{no clipping support in psprint}% 
\fi 
\special{! \Gin@scalex \Gin@scaley scale \Gin@llx neg \Gin@lly \space neg translate}% 
}\}
\end{verbatim}

14 dvipsone
A \TeX\ graphics driver file for Y&Y’s dvipsone
\end{verbatim}
14.1 Graphic file inclusion

PostScript Files.

\def\Ginclude@eps#1{%
  \message{<#1>}%
  \bgroup
  \def\@tempa{!}%
  \dimen@Gin@req@width
  \dimen@ii.1bp%
  \divide\dimen@\dimen@ii
  \@tempdima\Gin@req@height
  \divide\@tempdima\dimen@ii
  \divide\dimen@\dimen@ii
  \divide\@tempdima\dimen@ii
  \special{PSfile="#1" space llx=\Gin@llx space lly=\Gin@lly space urx=\Gin@urx space ury=\Gin@ury space}
  \ifx\Gin@scalex\@tempa\else rwi=number\Gin@req@width space\fi
  \ifx\Gin@scaley\@tempa\else rhi=number\Gin@req@height space\fi
  \if\Gin@clip clip fii%}
  \egroup}

Tiff files.

\def\Ginclude@tiff#1{%
  \message{<#1>}%
  \special{insertimage: #1 \number\Gin@req@width \number\Gin@req@height}}

Windows Metafiles.

\def\Ginclude@wmf#1{%
  \message{<#1>}%
  \special{insertmf: #1 0 0 \number\Gin@req@width \number\Gin@req@height}}

\def\Gin@PS@raw#1{\special{ps: #1}}

14.2 Rotation

\def\Grot@start{%
  \special{ps: gsave currentpoint
  currentpoint translate \Grot@angle space
  rotate neg exch neg exch translate}}
\def\Grot@end{%
  \special{ps: currentfont currentpoint grestore moveto setfont}}

14.3 Scaling

\def\Gscale@start{%
  \special{ps: currentpoint currentpoint translate
  \Gscale@x \Gscale@y \space \space scale neg exch neg exch translate}}
\def\Gscale@end{%
  \special{ps: currentpoint currentpoint translate
  1 \Gscale@x \space div 1 \Gscale@y \space div scale
  neg exch neg exch translate}}

14.4 File Extensions

\@namedef{Gin@rule@.wmf}{#1}{wmf}{#1}

14
15  Literal Postscript

Raw PostScript code, no save/restore.
\def\Gin@PS@raw#1{\special{ps: #1}}
PostScript code, to be surrounded by save/restore by the driver. Coordinate system standard PostScript, but with origin at current (\TeX) position.
\def\Gin@PS@restored#1{\special{" #1}}
PostScript code to be inserted in the Header section of the final PostScript. Must be issued on the first page of a document.
\def\Gin@PS@literal@header#1{\AtBeginDvi{\special{headertext=#1}}}
Name of external file, the contents of which are to be inserted in the Header section of the final PostScript. Must be issued on the first page of a document.
\def\Gin@PS@file@header#1{\AtBeginDvi{\special{header=#1}}}

16  dviwindo

A \TeX\ 2\e graphics driver file for Y\&\Y’s dviwindo.
This driver now uses the same file as dvipsone.

17  dvitops

A \TeX\ 2\e graphics driver file for James Clark’s dvitops
\def\dvitops{}

17.1 Rotation
\newcount\Grot@count
\Grot@count=\one
\def\Grot@start{\special{dvitops: origin \the\@tempdima}\
\special{dvitops: begin rot\the\Grot@count}}
\def\Grot@end{\special{dvitops: end}\
\special{dvitops: rotate rot\the\Grot@count \space \Grot@angle}}
\global\advance\Grot@count by\@ne
\global\advance\Grot@angle by\@ne

17.2 Graphic file inclusion
\def\Ginclude@eps#1{\multiply\Gin@req@width by \@m\multiply\Gin@req@height by \@m}
\if\Gin@clip\typeout{no clipping support in dvitops}}
18 dvi2ps

A \LaTeX\ 2.ε graphics driver file for original dvi2ps

18.1 Graphic file inclusion

19 pctexps

A \LaTeX\ 2.ε graphics driver file for Personal TeX’s PTI Laser/PS; from information supplied by Lance Carnes and Tao Wang <pti@crl.com>.

19.1 Graphic file inclusion
\ps graphics without bounding box information cannot be scaled. If the file actually contains the information, please rename the file to .eps file extension.

\def\Gin@extensions{.eps,.ps}
\namedef{Gin@rule@.ps}{\ps}{.ps}{#1}
\namedef{Gin@rule@.eps}{\eps}{.eps}{#1}
\def\Gin@PS@raw#1{\special{ps::#1}}
\def\Grot@start{\special{ps::gsave currentpoint translate \Grot@angle\space rotate neg exch neg exch translate}}
\def\Grot@end{\special{ps:: currentpoint grestore moveto}}
\def\Gscale@start{\special{ps:: currentpoint translate \Gscale@x\space \Gscale@y\space scale neg exch neg exch translate}}
\def\Gscale@end{\special{ps:: currentpoint currentpoint translate 1 \Gscale@x\space div 1 \Gscale@y\space div scale neg exch neg exch translate}}

\langle /pctexps \rangle

20 \texttt{pctex32}

A \TeX\ 2e graphics driver file for Personal TeX’s PC TeX for 32 bit Windows; Code supplied by Tao Wang <pti@crl.com>.

20.1 Colour

Uses the generic ‘color1’ code.

	exttt{\langle *pctex32 \rangle}

20.2 Graphic file inclusion

\def\Ginclude@eps#1{\message{<#1>}}
\bgroup\def\@tempa{!}\
\dimen@\Gin@req@width
\dimen@ii.1bp\divide\dimen@\dimen@ii\@tempdima\Gin@req@height\divide\@tempdima\dimen@ii\ifx\Gin@scalex\@tempa\else rwi=\number\dimen@\fi\ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima\fi\ifGin@clip clip\fi
\egroup
including BMP graphics
\def\Ginclude@bmp#1{% \
message{<#1>}% 
\ifGin@clip \typeout{no clipping support for BMP graphics in PCTeX32}% 
\fi 
\Gin@req@width.03515\Gin@req@width 
\Gin@req@height.03515\Gin@req@height 
\special{bmp:#1\space x=\strip@pt\Gin@req@width cm, 
y=\strip@pt\Gin@req@height cm}}

including WMF graphics
\def\Ginclude@wmf#1{% 
\message{<#1>}% 
\ifGin@clip \typeout{no clipping support for WMF graphics in PCTeX32}% 
\fi 
\Gin@req@width.03515\Gin@req@width 
\Gin@req@height.03515\Gin@req@height 
\special{wmf:#1\space x=\strip@pt\Gin@req@width cm, 
y=\strip@pt\Gin@req@height cm}}

20.3 Scaling and Rotating
PostScript rotation and scaling
\def\Grot@start{% 
\special{ps:: gsave currentpoint 
currentpoint translate \Grot@angle\space neg 
rotate neg exch neg exch translate}}
\def\Grot@end{
\special{ps:: currentpoint grestore moveto}}
\def\Gscale@start{
\special{ps:: currentpoint currentpoint translate 
\Gscale@x\space \Gscale@y\space scale neg exch neg exch translate}}
\def\Gscale@end{
\special{ps:: currentpoint currentpoint translate 
1 \Gscale@x\space div 1 \Gscale@y\space div scale 
neg exch neg exch translate}}
\def\Gin@PS@raw#1{\special{ps:: #1}}
\def\Gin@PS@restored#1{\special{" #1}}

20.4 Default Extensions
\def\Gin@extensions{.eps,.ps,.wmf,.bmp}
\@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
\@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
\@namedef{Gin@rule@.bmp}#1{{bmp}{#1}}
\@namedef{Gin@rule@.wmf}#1{{wmf}{#1}}
(/pctex32)

21 pctexwin
A BiTeX2ε graphics driver file for Personal TeX’s PC TeX for Windows; from information supplied by Lance Carnes and Tao Wang <pti@crl.com>.

(*pctexwin)
21.1 Graphic file inclusion

\def\Ginclude@eps#1{\message{<#1>}
\ifGin@clip
\typeout{no clipping support in pctexwin} \fi
\Gin@req@width.03515\Gin@req@width
\Gin@req@height.03515\Gin@req@height
\special{eps:#1\space x=\strip@pt\Gin@req@width cm,
y=\strip@pt\Gin@req@height cm}}

\def\Ginclude@ps#1{\message{<#1>}
\ifGin@clip
\typeout{no clipping support in pctexwin} \fi
\hbox{\kern-\Gin@llx bp\raise-\Gin@lly bp\hbox{\special{ps:#1}}}
\typeout{^^J---------------------------------------------------------^^J.
.ps graphics without bounding box information cannot be scaled. If the file actually contains the information, "^^J
please rename the file to .eps file extension."
---------------------------------------------------------^^J}%

\def\Ginclude@bmp#1{\message{<#1>}
\ifGin@clip
\Gin@req@width.03515\Gin@req@width
\Gin@req@height.03515\Gin@req@height
\special{bmp:#1\space x=\strip@pt\Gin@req@width cm,
y=\strip@pt\Gin@req@height cm}}

\def\Ginclude@wmf#1{\message{<#1>}
\ifGin@clip
\Gin@req@width.03515\Gin@req@width
\Gin@req@height.03515\Gin@req@height
\special{wmf:#1\space x=\strip@pt\Gin@req@width cm,
y=\strip@pt\Gin@req@height cm}}

\def\Gin@extensions{.eps,.ps,.wmf,.bmp}
\namedef{Gin@rule@.bmp}#1{{bmp}{}{#1}}
\namedef{Gin@rule@.wmf}#1{{wmf}{}{#1}}
\namedef{Gin@rule@.ps}#1{{ps}{.ps}{#1}}
\namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}

⟨/pctexwin⟩

22 pctexhp

A \TeX\n2\epsilon graphics driver file for Personal TeX’s PTI Laser/HP; from information supplied by Lance Carnes and Tao Wang <pti@crl.com>.
22.1 Graphic file inclusion

\def\Ginclude@pcl#1{% 
  \message{<#1>}% 
  \ifGin@clip 
  \typeout{no clipping support in pctexhp}% 
  \fi 
  \hbox{\kern-\Gin@llx bp\raise-\Gin@lly bp\hbox{\special{pcl:#1}}}% 
  \typeout{WARNING: pctexhp does not permit graphics to be scaled}}
\@namedef{Gin@rule@.pcl}#1{{pcl}{}{#1}}
\def\Gin@extensions{.pcl}

23 pubps

A \LaTeX \LaTEX 2\eps graphics driver file for Arbortext’s PUBps; information from Peter R Wilson pwilson@rdrc.rpi.edu.

23.1 Rotation

\def\Grot@start{\special{ps: gsave currentpoint 
  currentpoint translate \Grot@angle\space rotate neg exch neg exch translate}}
\def\Grot@end{\special{ps: currentpoint grestore moveto}}

24 dviwin

A \LaTeX \LaTeX 2\eps graphics driver file for Hippocrates Sendoukas’ dviwin

24.1 Graphic file inclusion

Dviwin sorts out the graphics type itself based on extension. They all use the same \special, so as far as graphics.sty is concerned they are all the same ‘type’. Use ‘bmp’ for the type as that is as good a name as any. Make this the default.

\@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
\let\Ginclude@eps\Ginclude@bmp

Add a few default extensions so \includegraphics{a} will pick up a.eps or a.wmf. This list can be reset with \DeclareGraphicsExtensions. Other extensions not in the list may be used explicitly, eg \includegraphics{a.gif}
should work as long as dviwin has access to a gif filter. If \texttt{.gif} is added using \texttt{\DeclareGraphicsExtensions} then \texttt{\includegraphics{a}} would also find \texttt{a.gif}.

\begin{verbatim}
\def\Gin@extensions{.eps,.ps,.wmf,.tif}
\end{verbatim}

25 ln

A \LaTeX\ 2\varepsilon graphics driver file for B Hamilton Kelly’s ln03 driver. Untested, but based on the graphics macros distributed with the driver.

25.1 Graphic file inclusion

\begin{verbatim}
\def\Ginclude@sixel#1{\special{ln03:sixel #1}}
\end{verbatim}

26 truetex

A \LaTeX\ 2\varepsilon graphics driver file for Kinch ‘truetex’ driver.

26.1 Colour

Uses the ‘\texttt{color4}’ colour code.

26.2 Graphic file inclusion

\begin{verbatim}
EPS File inclusion: DVIPS style.
\begin{verbatim}
\def\Ginclude@eps#1{\message{<#1>}%
  \bgroup\def\@tempa{!}%
  \dimen@\Gin@req@width\dimen@ii.1bp
  \divide\dimen@\dimen@ii\@tempdima\Gin@req@height
  \divide\@tempdima\dimen@ii\ifx\Gin@scalex\@tempa\else rwi=\number\dimen@\fi
  \ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima\fi
  \if\Gin@clip clip\fi}
\end{verbatim}
\end{verbatim}

\begin{verbatim}
\def\Ginclude@bmp#1{\message{<#1>}%
  \special{bmpfile #1}}
\end{verbatim}

bmp File Inclusion.

\begin{verbatim}
\def\Ginclude@bmp#1{\message{<#1>}%
  \bgroup\def\@tempa{!}%
  \dimen@\Gin@llx\space\linex=\Gin@llx\space
  \lly=\Gin@lly\space\lly=\Gin@lly\space
  \urx=\Gin@urx\space\urx=\Gin@urx\space
  \ury=\Gin@ury\space\ury=\Gin@ury\space
  \if\Gin@scalax\@tempa\else rwi=\number\dimen0\space fi
  \if\Gin@scalay\@tempa\else rhi=\number\@tempdim\space fi
  \if\Gin@clip clip\fi}
\end{verbatim}

\begin{verbatim}
\end{verbatim}
26.3 Literal PostScript

This is not supported, so uses 'nops' code.

26.4 Default Rules

Support (e)ps, tif and bmp, default to eps.

27 tcidvi

A \TeX\ 2e graphics driver file for Scientific Word/Workplace. Actually for the Kinch truetex driver, augmented with extra \special\ handling with the DLL supplied with SW.

27.1 Colour

Uses the ‘color4’ colour code.

The above colours are handled by the Kinch-supplied dll The TCI dll adds support for \colorbox, but only grey scale The code below accepts any color model, but only the red component is used.
27.2 Graphic file inclusion

EPS File inclusion.
\def\Ginclude@eps#1{% 
\message{<#1>}% 
\raise\Gin@req@height\hbox{%
If the bounding box has been changed by a trim or viewport key then need to
calculate the crop ratios based on the original bb coordinates. (This assumes that
clip key is also used).
\ifx\Gin@ollx\@undefined
\else
\@tempdimb \Gin@ourx bp%
\advance\@tempdimb-\Gin@ollx bp%
\@tempdima \Gin@llx bp%
\advance\@tempdima-\Gin@ollx bp%
\Gscale@div\TCI@cropleft\@tempdima\@tempdimb
\@tempdima \Gin@urx bp%
\advance\@tempdima-\Gin@ollx bp%
\Gscale@div\TCI@cropright\@tempdima\@tempdimb
\@tempdimb \Gin@oury bp%
\advance\@tempdimb-\Gin@olly bp%
\@tempdima \Gin@lly bp%
\advance\@tempdima-\Gin@olly bp%
\Gscale@div\TCI@cropbottom\@tempdima\@tempdimb
\@tempdima \Gin@ury bp%
\advance\@tempdima-\Gin@olly bp%
\Gscale@div\TCI@croptop\@tempdima\@tempdimb
\fi
\special{%
language \TCI@language;%
type \TCI@type;%
valid_file \TCI@validfile;%
width \the\Gin@req@width;%
height \the\Gin@req@height;%
depth 0pt;%
original-width \the\Gin@nat@width;%
original-height \the\Gin@nat@height;%
cropleft "\TCI@cropleft";%
croptop "\TCI@cropright";%
cropright "\TCI@cropright";%
cropbottom "\TCI@cropbottom";%
filename '{#1}';%
}\ifx\TCI@temp\@empty\else tempfilename \TCI@temp;\fi
}}

Default values so documents produced elsewhere should work
\def\TCI@language{"Scientific Word"}
\def\TCI@type{"GRAPHIC"}
\def\TCI@validfile{"F'}
\def\TCI@cropleft{0}
\def\TCI@croptop{1}
\def\TCI@cropright{1}
\def\TCI@cropbottom{0}
\let\TCI@temp\@empty
Non PS Graphic files.
File inclusion macro is always the same. Use a different name though as LaTeX thinks it can read eps files for BoundingBox.
\let\Ginclude@bmp\Ginclude@eps

27.3 Literal PostScript
This is not supported, so uses ‘nops’ code.

27.4 Default Rules
SW always gives the full name with extension. So leave this list empty.
\def\Gin@extensions{}
\ps .PS .eps .EPS are (E)PS rest are ‘bmp’ which is a catch all type for anything that the import filter can handle.
\edef\Gin@rule@.ps\Gin@rule@.eps\Gin@rule@.PS\Gin@rule@.EPS\Gin@rule@*\Gin@ext\ps@raw@#1\ps@restored@#1\ps@literal@header@#1\ps@file@header@#1

28 Literal Postscript
Most drivers writing to PostScript allow some form of ‘literal’ PostScript \special that inserts code into the final PostScript output. However Non-PS drivers can not support this (and some PS one’s can’t either). The code here makes all these commands no ops. Individual driver sections may define the commands to do something useful.
\special\nops
Raw PostScript code, no save/restore. Coordinate system unspecified.
\def\Gin@PS@raw@#1{}

PostScript code, to be surrounded by save/restore by the driver. Coordinate system standard PostScript, but with origin at current (TEx) position.
\def\Gin@PS@restored@#1{}

PostScript code to be inserted in the Header section of the final PostScript. Must be issued on the first page of a document.
\def\Gin@PS@literal@header@#1{}

Name of external file, the contents of which are to be inserted in the Header section of the final PostScript. Must be issued on the first page of a document.
\def\Gin@PS@file@header@#1{}

(/tcidvi)
29 Graphics Inclusion Rules

\def\Gin@extensions{.eps, .ps}
\@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
\@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
\@namedef{Gin@rule@*}#1{{eps}{\Gin@ext}{#1}}
\def\Gin@extensions{.eps, .ps, .ps.gz, .eps.gz, .eps.Z, .mps}
\@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
\@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
\@namedef{Gin@rule@.mps}#1{{eps}{.mps}{#1}}
\@namedef{Gin@rule@.pz}#1{{eps}{.bb}{#1}}
\@namedef{Gin@rule@.eps.Z}#1{{eps}{.eps.bb}{#1}}
\@namedef{Gin@rule@.ps.Z}#1{{eps}{.ps.bb}{#1}}
\@namedef{Gin@rule@.ps.gz}#1{{eps}{.ps.bb}{#1}}
\@namedef{Gin@rule@.eps.gz}#1{{eps}{.eps.bb}{#1}}
\@namedef{Gin@rule@*}#1{{eps}{\Gin@ext}{#1}}
\def\Gin@extensions{.eps, .ps, .pcx, .bmp}
\@namedef{Gin@rule@.pcx}#1{{bmp}{}{#1}}
\@namedef{Gin@rule@.bmp}#1{{bmp}{}{#1}}
\@namedef{Gin@rule@.msp}#1{{bmp}{}{#1}}
\@namedef{Gin@rule@.pntg}#1{{pntg}{}{#1}}
\@namedef{Gin@rule@*}#1{{pict}{}{#1}}
\def\Gin@extensions{{}, .ps, .eps, .pict}
\@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
\@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
\@namedef{Gin@rule@.pict}#1{{pict}{}{#1}}
\@namedef{Gin@rule@.pntg}#1{{pntg}{}{#1}}
\@namedef{Gin@rule@*}#1{{pict}{}{#1}}
\def\Gin@extensions{.tif}
\@namedef{Gin@rule@.tif}#1{{tiff}{}{#1}}
\def\Gin@extensions{}