Graphics drivers for LaTeX 2ε[*]

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1999/02/16

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 ie 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 LaTeX colour commands.

```
1 ⟨∗color1 | color2 | color3 | color4⟩

2 \def\c@lor@arg#1{%
3   \dimen@#1\p@
4   \ifdim\dimen@<\z@\dimen@\maxdimen\fi
5   \ifdim\dimen@>\p@
6     \PackageError{color}{Argument '#1' not in range [0,1]}\@ehd
7   \fi}
```

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.

```
8 \def\color@gray#1#2{%
9   \c@lor@arg{#2}%
10 ⟨color4⟩   \c@lor@rgb@RGB\@tempa
11 ⟨color1⟩   \edef#1{gray #2}%
12 ⟨color2⟩   \edef#1{rgb #2. #2. #2.}%
13 ⟨color3⟩   \edef#1{#2 setgray}%
14 ⟨color4⟩   \edef#1{\@tempa\@tempa\@tempa}%
15   }
```

---

[*]Version v3.0i, revised 1999/02/16

```
16 \def\color@cmyk#1#2{\c@lor@@cmyk#2\@@#1}
17 \def\c@lor@@cmyk#1,#2,#3,#4\@@#5{%
18    \c@lor@arg{#4}%
19 ⟨color4⟩    \dimen@ii#4\p@
20    \c@lor@arg{#1}%
21 ⟨color4⟩  \c@lor@cmyk@RGB\@tempa
22    \c@lor@arg{#2}%
23 ⟨color4⟩  \c@lor@cmyk@RGB\@tempb
24    \c@lor@arg{#3}%
25 ⟨color4⟩  \c@lor@cmyk@RGB\@tempc
26 ⟨color1⟩  \edef#5{cmyk #1 #2 #3 #4}%
27 ⟨color2⟩  \edef#5{cmyk #1. #2. #3. #4.}%
28 ⟨color3⟩  \edef#5{#1 #2 #3 #4 setcmykcolor}%
29 ⟨color4⟩  \edef#5{\@tempa\@tempb\@tempc}%
30    }
```

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

```
31 ⟨∗color4⟩
32 \def\c@lor@cmyk@RGB#1{%
33    \advance\dimen@-\p@
34    \advance\dimen@\dimen@ii
35    \dimen@-\@cclv\dimen@
36    \divide\dimen@\p@
37    \count@\ifdim\dimen@<\z@\z@\else\dimen@\fi
38    \edef#1{\the\count@\space}}
39 ⟨/color4⟩
```

```
40 \def\color@rgb#1#2{\c@lor@@rgb#2\@@#1}
41 \def\c@lor@@rgb#1,#2,#3\@@#4{%
42    \c@lor@arg{#1}%
43 ⟨color4⟩  \c@lor@rgb@RGB\@tempa
44    \c@lor@arg{#2}%
45 ⟨color4⟩  \c@lor@rgb@RGB\@tempb
46    \c@lor@arg{#3}%
47 ⟨color4⟩  \c@lor@rgb@RGB\@tempc
48 ⟨color1⟩  \edef#4{rgb #1 #2 #3}%
49 ⟨color2⟩  \edef#4{rgb #1. #2. #3.}%
50 ⟨color3⟩  \edef#4{#1 #2 #3 setrgbcolor}%
51 ⟨color4⟩  \edef#4{\@tempa\@tempb\@tempc}%
52    }
```

A 0–1 range value will have been left in `\dimen@` by `\c@lor@arg`. Convert to 0–255 integer, and leave in `#1`.

```
53 ⟨∗color4⟩
54 \def\c@lor@rgb@RGB#1{%
55    \dimen@\@cclv\dimen@
56    \count@\dimen@
57    \divide\count@\p@
58    \edef#1{\the\count@\space}}
59 ⟨/color4⟩
```

```
60 \def\color@RGB#1#2{\c@lor@@RGB#2\@@#1}

61 \def\c@lor@@RGB#1,#2,#3\@@#4{%
62 ⟨!color4⟩  \c@lor@RGB@rgb{#1}\@tempa
63 ⟨!color4⟩  \c@lor@RGB@rgb{#2}\@tempb
64 ⟨!color4⟩  \c@lor@RGB@rgb{#3}\@tempc
65 ⟨!color4⟩  \c@lor@@rgb\@tempa,\@tempb,\@tempc\@@#4%
66 ⟨color4⟩  \edef#4{#1 #2 #3}%
67    }
```

Convert 0–255 integer, `#1`, to 0–1 real, and leave in `#2`.

```
68 ⟨∗!color4⟩
69 \def\c@lor@RGB@rgb#1#2{%
```

```
70    \dimen@#1\p@
71    \divide\dimen@\@cclv
72    \edef#2{\strip@pt\dimen@}}
73 ⟨/!color4⟩

74 ⟨∗color1 | color3⟩
75 \def\color@hsb#1#2{\c@lor@@hsb#2\@@#1}

76 \def\c@lor@@hsb#1,#2,#3\@@#4{%
77    \c@lor@arg{#1}%
78    \c@lor@arg{#2}%
79    \c@lor@arg{#3}%
80 ⟨color1⟩    \edef#4{hsb #1 #2 #3}%
81 ⟨color3⟩    \edef#4{#1 #2 #3 sethsbcolor}%
82    }
83 ⟨/color1 | color3⟩

84 \def\color@named#1#2{\c@lor@@named#2,,\@@#1}

85 \def\c@lor@@named#1,#2,#3\@@#4{%
86    \@ifundefined{col@#1}%
87       {\PackageError{color}{Undefined color '#1'}\@ehd}%
88 ⟨color1&!dvipsone⟩   {\edef#4{ #1}}%
89 ⟨color2⟩   {\edef#4{ #1 \if!#2!\else #2.\fi}}%
90 ⟨color3 | dvipsone | color4⟩   {\edef#4{\csname col@#1\endcsname}}%
91    }
```

Conversion from \special syntax to PostScript (for PSTricks).

```
92 ⟨∗color1 | color2⟩
93 \def\c@lor@to@ps#1 #2\@@{\csname c@lor@ps@#1\endcsname#2 \@@}
94 ⟨/color1 | color2⟩
95 ⟨∗color3⟩
96 \def\c@lor@to@ps#1\@@{#1}
97 ⟨/color3⟩
98 ⟨∗color4⟩
99 \def\c@lor@to@ps#1#2 #3 #4\@@{%
100    #1#2 255 div #3 255 div #4 255 div setrgbcolor}
101 ⟨/color4⟩

102 ⟨∗color1⟩
103 \def\c@lor@ps@#1 #2\@@{TeXDict begin #1 end}
104 \def\c@lor@ps@rgb#1\@@{#1 setrgbcolor}
105 \def\c@lor@ps@hsb#1\@@{#1 sethsbcolor}
106 \def\c@lor@ps@cmyk#1\@@{#1 setcmykcolor}
107 \def\c@lor@ps@gray#1\@@{#1 setgray}
108 ⟨/color1⟩
109 ⟨∗color2⟩
110 \def\c@lor@to@ps@#1 #2\@@{\csname c@lor@ps@#1@\endcsname#2 \@@}
111 \def\c@lor@ps@#1 #2\@@{%
112    \expandafter\expandafter\expandafter
113       \c@lor@to@ps@\csname col@#1\expandafter\endcsname\space#2. \@@{#1}}
114 \def\c@lor@ps@rgb#1. #2. #3. #4\@@{#1 #2 #3 setrgbcolor}
115 \def\c@lor@ps@rgb@#1. #2. #3. #4. #5\@@#6{#1 #2 #3 setrgbcolor}
116 \def\c@lor@ps@cmyk#1. #2. #3. #4. #5. #6\@@{#1 #2 #3 #4 setcmykcolor}
117 \def\c@lor@ps@cmyk@#1. #2. #3. #4. #5. #6\@@#7{%
118       #1 #2 #3 #4  (#7)  findcustomcmykcolor
119       \if!\@firstofone#5!1 \else#5 \fi setcustomcolor}
120 ⟨/color2⟩

121 ⟨color1&!dvipsone⟩\def\current@color{ Black}
122 ⟨color1 & dvipsone⟩\def\current@color{gray 0}
123 ⟨color2⟩\def\current@color{rgb 0. 0. 0.}
124 ⟨color3⟩\def\current@color{0 setgray}
125 ⟨color4⟩\def\current@color{0 0 0}

126 ⟨∗color1⟩
127 \def\set@color{%
```

```
128 ⟨!dvipsone&!dvipdf⟩    \special{color push  \current@color
129 ⟨dvipsone⟩              \special{color push}\special{color \current@color
130 ⟨dvipdf⟩                \special{pdf: /C  \current@color\space<<
131                               }\aftergroup\reset@color}
132 \def\reset@color{\special{%
133 ⟨!dvipdf⟩          color pop}}
134 ⟨dvipdf⟩           pdf: /C >> }}
135 \def\set@page@color{\special{%
136 ⟨!dvipdf⟩          background \current@color}}
137 ⟨dvipdf⟩           pdf: /BG \current@color}}
138 \def\define@color@named#1#2{%
139 ⟨!dvipsone⟩  \expandafter\let\csname col@#1\endcsname\@nnil}
140 ⟨dvipsone⟩   \expandafter\edef\csname col@#1\endcsname{#2}}
141 ⟨/color1⟩
142 ⟨∗color2⟩
143 \def\set@color{%
144   \special{color push}%
145   \special{color \current@color}%
146   \aftergroup\reset@color}
147 \def\reset@color{\special{color pop}}
148 \def\set@page@color{\c@lor@special\sixt@@n{background \current@color}}
149 \def\define@color@named#1#2{%
150   \AtBeginDvi{\special{color define #1 #2}}%
151   \expandafter\edef\csname col@#1\endcsname{#2}}
152 ⟨/color2⟩
153 ⟨∗color3⟩
154 \def\set@color{%
155   \Gin@PS@raw{\current@color}\aftergroup\reset@color}
156 \def\reset@color{\Gin@PS@raw{\current@color}}
157 ⟨/color3⟩
158 ⟨∗color4⟩
159 \def\set@color{%
160   \special{textcolor: \current@color}\aftergroup\reset@color}
161 \def\reset@color{\special{textcolor: \current@color}}
162 ⟨/color4⟩
163 ⟨∗color3 | color4⟩
164 \def\set@page@color{%
165   \c@lor@special\sixt@@n{background color ignored: \current@color}}
166 \def\define@color@named#1#2{%
167   \expandafter\edef\csname col@#1\endcsname{#2}}
168 ⟨/color3 | color4⟩
169 ⟨/color1 | color2 | color3 | color4⟩

170 ⟨∗colorfix⟩
171 \AtBeginDocument{%
172   \let\@ldc@l@r\color
173   \def\color{\if@inlabel\leavevmode\fi\@ldc@l@r}%
174   \let\@lduseb@x\usebox
175   \def\usebox#1{\@lduseb@x{#1}\set@color}}
176 ⟨/colorfix⟩

177 ⟨∗dvipsnames⟩
178 \DefineNamedColor{named}{GreenYellow}   {cmyk}{0.15,0,0.69,0}
179 \DefineNamedColor{named}{Yellow}        {cmyk}{0,0,1,0}
180 \DefineNamedColor{named}{Goldenrod}     {cmyk}{0,0.10,0.84,0}
181 \DefineNamedColor{named}{Dandelion}     {cmyk}{0,0.29,0.84,0}
182 \DefineNamedColor{named}{Apricot}       {cmyk}{0,0.32,0.52,0}
183 \DefineNamedColor{named}{Peach}         {cmyk}{0,0.50,0.70,0}
184 \DefineNamedColor{named}{Melon}         {cmyk}{0,0.46,0.50,0}
185 \DefineNamedColor{named}{YellowOrange}  {cmyk}{0,0.42,1,0}
186 \DefineNamedColor{named}{Orange}        {cmyk}{0,0.61,0.87,0}
187 \DefineNamedColor{named}{BurntOrange}   {cmyk}{0,0.51,1,0}
188 \DefineNamedColor{named}{Bittersweet}   {cmyk}{0,0.75,1,0.24}
189 \DefineNamedColor{named}{RedOrange}     {cmyk}{0,0.77,0.87,0}
```

```
190 \DefineNamedColor{named}{Mahogany}        {cmyk}{0,0.85,0.87,0.35}
191 \DefineNamedColor{named}{Maroon}          {cmyk}{0,0.87,0.68,0.32}
192 \DefineNamedColor{named}{BrickRed}        {cmyk}{0,0.89,0.94,0.28}
193 \DefineNamedColor{named}{Red}             {cmyk}{0,1,1,0}
194 \DefineNamedColor{named}{OrangeRed}       {cmyk}{0,1,0.50,0}
195 \DefineNamedColor{named}{RubineRed}       {cmyk}{0,1,0.13,0}
196 \DefineNamedColor{named}{WildStrawberry}{cmyk}{0,0.96,0.39,0}
197 \DefineNamedColor{named}{Salmon}          {cmyk}{0,0.53,0.38,0}
198 \DefineNamedColor{named}{CarnationPink}   {cmyk}{0,0.63,0,0}
199 \DefineNamedColor{named}{Magenta}         {cmyk}{0,1,0,0}
200 \DefineNamedColor{named}{VioletRed}       {cmyk}{0,0.81,0,0}
201 \DefineNamedColor{named}{Rhodamine}       {cmyk}{0,0.82,0,0}
202 \DefineNamedColor{named}{Mulberry}        {cmyk}{0.34,0.90,0,0.02}
203 \DefineNamedColor{named}{RedViolet}       {cmyk}{0.07,0.90,0,0.34}
204 \DefineNamedColor{named}{Fuchsia}         {cmyk}{0.47,0.91,0,0.08}
205 \DefineNamedColor{named}{Lavender}        {cmyk}{0,0.48,0,0}
206 \DefineNamedColor{named}{Thistle}         {cmyk}{0.12,0.59,0,0}
207 \DefineNamedColor{named}{Orchid}          {cmyk}{0.32,0.64,0,0}
208 \DefineNamedColor{named}{DarkOrchid}      {cmyk}{0.40,0.80,0.20,0}
209 \DefineNamedColor{named}{Purple}          {cmyk}{0.45,0.86,0,0}
210 \DefineNamedColor{named}{Plum}            {cmyk}{0.50,1,0,0}
211 \DefineNamedColor{named}{Violet}          {cmyk}{0.79,0.88,0,0}
212 \DefineNamedColor{named}{RoyalPurple}     {cmyk}{0.75,0.90,0,0}
213 \DefineNamedColor{named}{BlueViolet}      {cmyk}{0.86,0.91,0,0.04}
214 \DefineNamedColor{named}{Periwinkle}      {cmyk}{0.57,0.55,0,0}
215 \DefineNamedColor{named}{CadetBlue}       {cmyk}{0.62,0.57,0.23,0}
216 \DefineNamedColor{named}{CornflowerBlue}{cmyk}{0.65,0.13,0,0}
217 \DefineNamedColor{named}{MidnightBlue}    {cmyk}{0.98,0.13,0,0.43}
218 \DefineNamedColor{named}{NavyBlue}        {cmyk}{0.94,0.54,0,0}
219 \DefineNamedColor{named}{RoyalBlue}       {cmyk}{1,0.50,0,0}
220 \DefineNamedColor{named}{Blue}            {cmyk}{1,1,0,0}
221 \DefineNamedColor{named}{Cerulean}        {cmyk}{0.94,0.11,0,0}
222 \DefineNamedColor{named}{Cyan}            {cmyk}{1,0,0,0}
223 \DefineNamedColor{named}{ProcessBlue}     {cmyk}{0.96,0,0,0}
224 \DefineNamedColor{named}{SkyBlue}         {cmyk}{0.62,0,0.12,0}
225 \DefineNamedColor{named}{Turquoise}       {cmyk}{0.85,0,0.20,0}
226 \DefineNamedColor{named}{TealBlue}        {cmyk}{0.86,0,0.34,0.02}
227 \DefineNamedColor{named}{Aquamarine}      {cmyk}{0.82,0,0.30,0}
228 \DefineNamedColor{named}{BlueGreen}       {cmyk}{0.85,0,0.33,0}
229 \DefineNamedColor{named}{Emerald}         {cmyk}{1,0,0.50,0}
230 \DefineNamedColor{named}{JungleGreen}     {cmyk}{0.99,0,0.52,0}
231 \DefineNamedColor{named}{SeaGreen}        {cmyk}{0.69,0,0.50,0}
232 \DefineNamedColor{named}{Green}           {cmyk}{1,0,1,0}
233 \DefineNamedColor{named}{ForestGreen}     {cmyk}{0.91,0,0.88,0.12}
234 \DefineNamedColor{named}{PineGreen}       {cmyk}{0.92,0,0.59,0.25}
235 \DefineNamedColor{named}{LimeGreen}       {cmyk}{0.50,0,1,0}
236 \DefineNamedColor{named}{YellowGreen}     {cmyk}{0.44,0,0.74,0}
237 \DefineNamedColor{named}{SpringGreen}     {cmyk}{0.26,0,0.76,0}
238 \DefineNamedColor{named}{OliveGreen}      {cmyk}{0.64,0,0.95,0.40}
239 \DefineNamedColor{named}{RawSienna}       {cmyk}{0,0.72,1,0.45}
240 \DefineNamedColor{named}{Sepia}           {cmyk}{0,0.83,1,0.70}
241 \DefineNamedColor{named}{Brown}           {cmyk}{0,0.81,1,0.60}
242 \DefineNamedColor{named}{Tan}             {cmyk}{0.14,0.42,0.56,0}
243 \DefineNamedColor{named}{Gray}            {cmyk}{0,0,0,0.50}
244 \DefineNamedColor{named}{Black}           {cmyk}{0,0,0,1}
245 \DefineNamedColor{named}{White}           {cmyk}{0,0,0,0}
246 ⟨/dvipsnames⟩
```

3   dvips

A LaTeX 2_ε graphics driver file for Tom Rokicki's *dvips* driver; tested with version 5.58f.

247 ⟨∗dvips⟩

3.1   Colour

Uses the generic 'color1' code.

3.2   File inclusion

\Ginclude@eps   #1 input file (or command)

```
248 \def\Ginclude@eps#1{%
249 \message{<#1>}%
250   \bgroup
```

dvips likes to work with its own pixel resolution, so mangle the sizes slightly.

```
251   \def\@tempa{!}%
252   \dimen@\Gin@req@width
253   \dimen@ii.1bp%
254   \divide\dimen@\dimen@ii
255   \@tempdima\Gin@req@height
256   \divide\@tempdima\dimen@ii
257     \special{PSfile="#1"\space
258       llx=\Gin@llx\space
259       lly=\Gin@lly\space
260       urx=\Gin@urx\space
261       ury=\Gin@ury\space
262       \ifx\Gin@scalex\@tempa\else rwi=\number\dimen@\space\fi
263       \ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima\space\fi
264       \ifGin@clip clip\fi}%
265     \egroup}
```

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

```
266 \def\Ginclude@bmp#1{%
267 \message{<#1>}%
268 \dimen@\Gin@req@height
269 \advance\dimen@ by-\Gin@lly bp
270 \kern-\Gin@llx bp\raise\Gin@req@height\hbox{%
271  \ifdim\Gin@urx bp=\z@
272    \ifdim\Gin@ury bp=\z@
273       \special{em: graph #1}%
274    \else
275       \special{em: graph #1,\Gin@urx bp}%
276    \fi
277  \else
278       \special{em: graph #1,\Gin@urx bp,\Gin@ury bp}%
279  \fi
280 }%
281 }
```

\Ginclude@pict   PICT/PNTG format from the Mac. Actually only currently supported by the
\Ginclude@pntg   version of dvips distributed with OzTeX, and with the built in OzTeX drivers,
\oztex@include   but put here anyway as it is not much code and increases portability between the
systems as now [dvips] and [oztex] share the same back end.

```
282 \def\oztex@include#1#2{%
283 \dimen@1bp%
284 \divide\Gin@req@width\dimen@
285 \divide\Gin@req@height\dimen@
286 \special{#1=#2\space
```

```
287    \@width=\number\Gin@req@width \space
288    \@height=\number\Gin@req@height}}
```

```
289 \def\Ginclude@pntg{\oztex@include{pntg}}
290 \def\Ginclude@pict{\oztex@include{pict}}
```

3.3 Rotation

```
291 \def\Grot@start{%
292 \special{ps: gsave currentpoint
293 currentpoint translate \Grot@angle\space neg
294 rotate neg exch neg exch translate}}
295 \def\Grot@end{\special{ps: currentpoint grestore moveto}}
```

3.4 Scaling

```
296 \def\Gscale@start{\special{ps:  currentpoint currentpoint translate
297   \Gscale@x\space \Gscale@y\space scale neg exch neg exch translate}}
298 \def\Gscale@end{\special{ps:  currentpoint currentpoint translate
299   1 \Gscale@x\space div 1 \Gscale@y\space div scale
300   neg exch neg exch translate}}
```

4 Literal Postscript

Raw PostScript code, no save/restore.

```
301 \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.

```
302 \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.

```
303 \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.

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

```
305 ⟨/dvips⟩
```

5 dvipdf

A LATEX 2$_\varepsilon$ graphics driver file for *dvipdf* driver.

```
306 ⟨∗dvipdf⟩
```

5.1 Colour

Uses the generic 'color1' code.

5.2 File inclusion

\Ginclude@eps #1 input file (or command)

```
307 \def\Ginclude@eps#1{%
308 \message{<#1>}%
309 \bgroup
```

dvips likes to work with its own pixel resolution, so mangle the sizes slightly.

```
310    \def\@tempa{!}%
311    \dimen@\Gin@req@width
312    \dimen@ii.1bp%
313    \divide\dimen@\dimen@ii
314    \@tempdima\Gin@req@height
```

```
315    \divide\@tempdima\dimen@ii
316      \special{PSfile="#1"\space
317        llx=\Gin@llx\space
318        lly=\Gin@lly\space
319        urx=\Gin@urx\space
320        ury=\Gin@ury\space
321        \ifx\Gin@scalex\@tempa\else rwi=\number\dimen@\space\fi
322        \ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima\space\fi
323        \ifGin@clip clip\fi}%
324    \egroup}
```

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

```
325 \def\Ginclude@bmp#1{%
326    \message{<#1>}%
327    \dimen@\Gin@req@height
328    \advance\dimen@ by-\Gin@lly bp
329    \kern-\Gin@llx bp\raise\Gin@req@height\hbox{%
330     \ifdim\Gin@urx bp=\z@
331       \ifdim\Gin@ury bp=\z@
332          \special{pdf: /GRAPH  #1}%
333       \else
334          \special{pdf: /GRAPH  #1 \number\Gin@req@width sp}%
335       \fi
336     \else
337          \special{pdf: /GRAPH  #1 \number\Gin@req@width sp
338                                   \number\Gin@req@height sp}%
339     \fi}}
```

5.3   Rotation

```
340 \def\Grot@start{%
341 \special{pdf: /ROT \Grot@angle\space << }}
342 \def\Grot@end{\special{pdf: /ROT >> }}
```

5.4   Scaling

```
343 \def\Gscale@start{\special{pdf: /S \Gscale@x\space \Gscale@y\space << }}
344 \def\Gscale@end{\special{pdf: /S \space >> }}
```

6   Literal Postscript

Raw PostScript code, no save/restore.

```
345 \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.

```
346 \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.

```
347 \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.

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

6.1   File extensions

```
349 \@namedef{Gin@rule@.msp}#1{{bmp}{.bb}{#1}}
350 \@namedef{Gin@rule@.jpg}#1{{bmp}{.bb}{#1}}
351 \@namedef{Gin@rule@.bmp}#1{{bmp}{.bb}{#1}}

352 ⟨/dvipdf⟩
```

7 OzTeX

A LaTeX 2ε graphics driver file for OzTeX (versions 1.42 and later), by Andrew Trevorrow.

```
353 ⟨∗oztex⟩
```

7.1 Graphics inclusion

```
354 \def\Ginclude@eps{\Oztex@Include{epsf}}
355 \def\Ginclude@pntg{\Oztex@Include{pntg}}
356 \def\Ginclude@pict{\Oztex@Include{pict}}
357 \def\Oztex@Include#1#2{%
358  \ifGin@clip
359   \typeout{No clipping support in OzTeX}%
360  \fi
361  \divide\Gin@req@width by 65781% convert sp to bp
362  \divide\Gin@req@height by 65781%
363  \special{#1=#2\space
364   width=\number\Gin@req@width \space
365   height=\number\Gin@req@height
366  }%
367 }
368 ⟨/oztex⟩
```

8 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!

```
369 ⟨∗textures⟩
```

8.1 Graphics inclusion

```
370 \PackageInfo{graphics/color}
371  {This file uses the advanced color support\MessageBreak
372   available in textures1.7\MessageBreak
373   If you are using color with an earlier version\MessageBreak
374   of textures, edit graphics.ins where marked,\MessageBreak
375   and re-latex graphics.ins.\MessageBreak\MessageBreak
376   If you are using textures1.7\MessageBreak
377   you may want to delete this warning\MessageBreak
378   from textures.def.\MessageBreak\MessageBreak
379   The code for scaling/rotation and file inclusion\MessageBreak
380   in this file is still rudimentary, and does not\MessageBreak
381   use textures' full capabilities.\MessageBreak\MessageBreak
382   A new textures.def is currently being developed\@gobble}

383 \def\Ginclude@eps{\Textures@Include{illustration}}
384 \def\Ginclude@pict{\Textures@Include{pictfile}}
385 \def\Textures@Include#1#2{%
386  \def\@tempa{!}%
387  \ifx\Gin@scaley\@tempa
388      \let\Gin@scaley\Gin@scalex
389  \else
390      \ifx\Gin@scalex\@tempa\let\Gin@scalex\Gin@scaley\fi
391  \fi
392  \setlength\@tempdima{\Gin@scalex pt}%
393  \setlength\@tempdimb{\Gin@scaley pt}%
394  \ifdim\@tempdima>\@tempdimb
395      \let\Gin@scalex\Gin@scaley
396  \fi
```

9

```
397  \ifGin@clip
398   \typeout{no clipping support in Textures}%
399  \fi
400  \@tempdimb=1000sp%
401  \setlength\@tempdima{\Gin@scalex\@tempdimb}%
402  \special{#1 #2\space scaled \number\@tempdima}%
403  }
```

8.2   Rotation

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

```
404  \def\Grot@start{\special{postscript
405    0 0 transform
406    grestore
407    matrix currentmatrix
408    3 1 roll
409    itransform
410    dup 3 -1 roll
411    dup 4 1 roll exch
412    translate
413    \Grot@angle\space neg rotate
414    neg exch neg exch translate
415    gsave}}
416  \def\Grot@end{\special{postscript grestore  setmatrix  gsave}}
```

8.3   Colour

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

```
417  ⟨color3⟩\def\Gin@PS@raw#1{\special{rawpostscript #1}}
418  ⟨/textures⟩
```

9   dvialw

A LATEX 2ε graphics driver file for dvialw, by Nelson Beebe

```
419  ⟨∗dvialw⟩
```

9.1   Rotation

```
420  \def\Ginclude@eps#1{%
421    \def\@tempa{!}%
422    \ifx\Gin@scaley\@tempa
423      \let\Gin@scaley\Gin@scalex
424    \else
425     \ifx\Gin@scalex\@tempa\let\Gin@scalex\Gin@scaley\fi
426    \fi
427    \ifGin@clip
428     \typeout{no clipping support in dvialw}%
429    \fi
430    \special{language "PS",
431       literal "\Gin@scalex\space
432         \Gin@scaley\space scale",
433       position = "bottom left",
434       include "#1\space"}%
435  }
436  ⟨/dvialw⟩
```

10   emtex

A LATEX 2ε graphics driver file for Eberhard Mattes' emTeX

```
437  ⟨∗emtex⟩
```

10.1 Graphics file inclusion

```
438 \def\Ginclude@bmp#1{%
439   \raise\Gin@req@height\hbox{\special{em:graph #1}}%
440 \typeout{WARNING: emtex does not permit graphics to be scaled}%
441 }
442 ⟨/emtex⟩
```

11 dvilaser/ps

A LATEX 2ε graphics driver file for Arbortext's dvilaser/ps

```
443 ⟨∗dvilaser⟩
```

11.1 Graphic file inclusion

```
444 \def\Ginclude@eps#1{%
445 \ifGin@clip
446   \typeout{no clipping support in dvilaser/ps}%
447 \fi
448 \special{ps: epsfile #1\space \the\Gin@req@width}%
449 }
450 ⟨/dvilaser⟩
```

12 psprint

A LATEX 2ε graphics driver file for Trevorrow's psprint

```
451 ⟨∗psprint⟩
```

12.1 Graphic file inclusion

```
452 \def\Ginclude@eps#1{%
453   \def\@tempa{!}%
454   \ifx\Gin@scaley\@tempa
455     \let\Gin@scaley\Gin@scalex
456   \else
457     \ifx\Gin@scalex\@tempa\let\Gin@scalex\Gin@scaley\fi
458   \fi
459   \ifGin@clip
460     \typeout{no clipping support in psprint}%
461   \fi
462   \special{#1\space
463       \Gin@scalex\space \Gin@scaley\space scale
464       \Gin@llx\space neg
465       \Gin@lly \space neg translate
466 }%
467 }
468 ⟨/psprint⟩
```

13 dvipsone

A LATEX 2ε graphics driver file for Y&Y's dvipsone

```
469 ⟨∗dvipsone⟩
```

13.1 Graphic file inclusion

PostScript Files.

```
470 \def\Ginclude@eps#1{%
471 \message{<#1>}%
472 \bgroup
473 \def\@tempa{!}%
474 \dimen@\Gin@req@width
```

```
475    \dimen@ii.1bp%
476    \divide\dimen@\dimen@ii
477    \@tempdima\Gin@req@height
478    \divide\@tempdima\dimen@ii
479      \special{PSfile="#1"\space
480        llx=\Gin@llx\space
481        lly=\Gin@lly\space
482        urx=\Gin@urx\space
483        ury=\Gin@ury\space
484        \ifx\Gin@scalex\@tempa\else rwi=\number\dimen@\space\fi
485        \ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima\space\fi
486        \ifGin@clip clip\fi}%
487    \egroup}
```

Tiff files.
```
488 \def\Ginclude@tiff#1{%
489 \message{<#1>}%
490 \special{insertimage: #1 \number\Gin@req@width\space
491      \number\Gin@req@height}}
```

Windows Metafiles.
```
492 \def\Ginclude@wmf#1{%
493   \message{<#1>}%
494   \special{insertmf: #1 0 0 \number\Gin@req@width\space
495        \number\Gin@req@height}}

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

13.2   Rotation

```
497 \def\Grot@start{%
498  \special{ps: gsave currentpoint
499  currentpoint translate \Grot@angle\space
500  rotate neg exch neg exch translate}}
501 \def\Grot@end{%
502   \special{ps: currentfont currentpoint grestore moveto setfont}}
```

13.3   Scaling

```
503 \def\Gscale@start{\special{ps:  currentpoint currentpoint translate
504   \Gscale@x\space \Gscale@y\space scale neg exch neg exch translate}}
505 \def\Gscale@end{\special{ps:  currentpoint currentpoint translate
506   1 \Gscale@x\space div 1 \Gscale@y\space div scale
507   neg exch neg exch translate}}
```

13.4   File Extensions

```
508 \@namedef{Gin@rule@.wmf}#1{{wmf}{}{#1}}
509 \@namedef{Gin@rule@.clp}#1{{wmf}{}{#1}}
```

14   Literal Postscript

Raw PostScript code, no save/restore.
```
510 \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.
```
511 \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.
```
512 \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.
```
513 \def\Gin@PS@file@header#1{\AtBeginDvi{\special{header=#1}}}

514 ⟨/dvipsone⟩
```

15 dviwindo

A LaTeX 2_ε graphics driver file for Y&Y's dviwindo.
  This driver now uses the same file as `dvipsone`.

16 dvitops

A LaTeX 2_ε graphics driver file for James Clark's dvitops

515 ⟨∗dvitops⟩

16.1 Rotation

```
516 \newcount\Grot@count
517 \Grot@count=\@ne
518 \def\Grot@start{\special{dvitops: origin
519     rot\the\@tempdima}%
520 \special{dvitops: begin rot\the\Grot@count}}%
521 \def\Grot@end{\special{dvitops: end}%
522 \special{dvitops: rotate rot\the\Grot@count \space
523     \Grot@angle}%
524 \global\advance\Grot@count by\@ne}%
```

16.2 Graphic file inclusion

```
525 \def\Ginclude@eps#1{%
526 % These cause an arithmetic overflow, so I've commented them
527 % out. Presumably they were there for some reason.
528 % Any dvitops users out there??
529 % \multiply\Gin@req@width by \@m
530 % \multiply\Gin@req@height by \@m
531 \ifGin@clip
532   \typeout{no clipping support in dvitops}%
533 \fi
534 \special{import #1\space \the\Gin@req@width\space
535                   \the\Gin@req@height\space fill}}
```

536 ⟨/dvitops⟩

17 dvi2ps

A LaTeX 2_ε graphics driver file for original dvi2ps

537 ⟨∗dvi2ps⟩

17.1 Graphic file inclusion

```
538 \def\Ginclude@eps#1{%
539   \def\@tempa{!}%
540   \ifx\Gin@scaley\@tempa
541     \let\Gin@scaley\Gin@scalex
542   \else
543    \ifx\Gin@scalex\@tempa\let\Gin@scalex\Gin@scaley\fi
544   \fi
545   \ifGin@clip
546     \typeout{no clipping support in dvi2ps}%
547   \fi
548   \special{psfile=#1\space
549       hscale=\Gin@scalex\space 1000 mul
550       vscale=\Gin@scaley\space 1000 mul}}
```

551 ⟨/dvi2ps⟩

18 pctexps

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

552 ⟨∗pctexps⟩

18.1 Graphic file inclusion

```
553 \def\Ginclude@eps#1{%
554 \message{<#1>}%
555   \ifGin@clip
556     \typeout{no clipping support in pctexps}%
557   \fi
558   \Gin@req@width.03515\Gin@req@width
559   \Gin@req@height.03515\Gin@req@height
560   \special{ps:#1\space x=\strip@pt\Gin@req@width cm,
561                       y=\strip@pt\Gin@req@height cm}}
562 \def\Ginclude@ps#1{%
563 \message{<#1>}%
564   \ifGin@clip
565     \typeout{no clipping support in pctexps}%
566   \fi
567   \hbox{\kern-\Gin@llx bp\raise-\Gin@lly bp\hbox{\special{ps:#1}}}%
568   \typeout{^^J%
569 -------------------------------------------------------^^J%
570 .ps graphics without bounding box information cannot be^^J%
571 scaled.  If the file actually contains the information,^^J%
572 please rename the file to .eps file extension.^^J%
573 -------------------------------------------------------^^J}}
574 \def\Gin@extensions{.eps,.ps}
575 \@namedef{Gin@rule@.ps}#1{{ps}{.ps}{#1}}
576 \@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
577 \def\Gin@PS@raw#1{\special{ps::#1}}
578 \def\Grot@start{%
579  \special{ps::gsave currentpoint
580  currentpoint translate \Grot@angle\space
581  rotate neg exch neg exch translate}}
582 \def\Grot@end{\special{ps:: currentpoint grestore moveto}}
583 \def\Gscale@start{\special{ps:: currentpoint currentpoint translate
584  \Gscale@x\space \Gscale@y\space scale neg exch neg exch translate}}
585 \def\Gscale@end{\special{ps::  currentpoint currentpoint translate
586  1 \Gscale@x\space div 1 \Gscale@y\space div scale
587  neg exch neg exch translate}}
588 ⟨/pctexps⟩
```

19 pctex32

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

19.1 Colour

Uses the generic 'color1' code.

589 ⟨∗pctex32⟩

19.2 Graphic file inclusion

```
590 % including PostScript graphics
591 \def\Ginclude@eps#1{%
```

14

```
592  \message{<#1>}%
593  \bgroup
594  \def\@tempa{!}%
595  \dimen@\Gin@req@width
596  \dimen@ii.1bp%
597  \divide\dimen@\dimen@ii
598  \@tempdima\Gin@req@height
599  \divide\@tempdima\dimen@ii
600    \special{PSfile="#1"\space
601       llx=\Gin@llx\space
602       lly=\Gin@lly\space
603       urx=\Gin@urx\space
604       ury=\Gin@ury\space
605       \ifx\Gin@scalex\@tempa\else rwi=\number\dimen@\space\fi
606       \ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima\space\fi
607       \ifGin@clip clip\fi}%
608  \egroup}
```

  including BMP graphics
```
609  \def\Ginclude@bmp#1{%
610  \message{<#1>}%
611    \ifGin@clip
612      \typeout{no clipping support for BMP graphics in PCTeX32}%
613    \fi
614    \Gin@req@width.03515\Gin@req@width
615    \Gin@req@height.03515\Gin@req@height
616    \special{bmp:#1\space x=\strip@pt\Gin@req@width cm,
617       y=\strip@pt\Gin@req@height cm}}
```

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

19.3 Scaling and Rotating

PostScript rotation and scaling
```
627  \def\Grot@start{%
628  \special{ps:: gsave currentpoint
629  currentpoint translate \Grot@angle\space neg
630  rotate neg exch neg exch translate}}
631  \def\Grot@end{\special{ps:: currentpoint grestore moveto}}
632  \def\Gscale@start{\special{ps::  currentpoint currentpoint translate
633   \Gscale@x\space \Gscale@y\space scale neg exch neg exch translate}}
634  \def\Gscale@end{\special{ps::  currentpoint currentpoint translate
635   1 \Gscale@x\space div 1 \Gscale@y\space div scale
636   neg exch neg exch translate}}
```

```
637  \def\Gin@PS@raw#1{\special{ps:: #1}}
638  \def\Gin@PS@restored#1{\special{" #1}}
```

19.4 Default Extensions

```
639  \def\Gin@extensions{.eps,.ps,.wmf,.bmp}
640  \@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
641  \@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
642  \@namedef{Gin@rule@.bmp}#1{{bmp}{}{#1}}
643  \@namedef{Gin@rule@.wmf}#1{{wmf}{}{#1}}
```

644 ⟨/pctex32⟩

20   pctexwin

A LaTeX 2ε graphics driver file for Personal TeX's PC TeX for Windows; from information supplied by Lance Carnes and Tao Wang `<pti@crl.com>`.

645 ⟨∗pctexwin⟩

20.1   Graphic file inclusion

```
646 \def\Ginclude@eps#1{%
647 \message{<#1>}%
648    \ifGin@clip
649      \typeout{no clipping support in pctexwin}%
650    \fi
651    \Gin@req@width.03515\Gin@req@width
652    \Gin@req@height.03515\Gin@req@height
653    \special{eps:#1\space x=\strip@pt\Gin@req@width cm,
654                       y=\strip@pt\Gin@req@height cm}}
655 \def\Ginclude@ps#1{%
656 \message{<#1>}%
657   \ifGin@clip
658     \typeout{no clipping support in pctexwin}%
659   \fi
660   \hbox{\kern-\Gin@llx bp\raise-\Gin@lly bp\hbox{\special{ps:#1}}}%
661   \typeout{^^J%
662 -------------------------------------------------------^^J%
663 .ps graphics without bounding box information cannot be^^J%
664 scaled.  If the file actually contains the information,^^J%
665 please rename the file to .eps file extension.^^J%
666 -------------------------------------------------------^^J%
667 }}
668 \def\Ginclude@bmp#1{%
669 \message{<#1>}%
670    \ifGin@clip
671      \typeout{no clipping support in pctexwin}%
672    \fi
673    \Gin@req@width.03515\Gin@req@width
674    \Gin@req@height.03515\Gin@req@height
675    \special{bmp:#1\space x=\strip@pt\Gin@req@width cm,
676                       y=\strip@pt\Gin@req@height cm}}
677 \def\Ginclude@wmf#1{%
678 \message{<#1>}%
679    \ifGin@clip
680      \typeout{no clipping support in pctexwin}%
681    \fi
682    \Gin@req@width.03515\Gin@req@width
683    \Gin@req@height.03515\Gin@req@height
684    \special{wmf:#1\space x=\strip@pt\Gin@req@width cm,
685                       y=\strip@pt\Gin@req@height cm}}
686 \def\Gin@extensions{.eps,.ps,.wmf,.bmp}
687 \@namedef{Gin@rule@.bmp}#1{{bmp}{}{#1}}
688 \@namedef{Gin@rule@.wmf}#1{{wmf}{}{#1}}
689 \@namedef{Gin@rule@.ps}#1{{ps}{.ps}{#1}}
690 \@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
691 ⟨/pctexwin⟩
```

21   pctexhp

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

692 ⟨∗pctexhp⟩

21.1   Graphic file inclusion

```
693 \def\Ginclude@pcl#1{%
694 \message{<#1>}%
695    \ifGin@clip
696       \typeout{no clipping support in pctexhp}%
697    \fi
698    \hbox{\kern-\Gin@llx bp\raise-\Gin@lly bp\hbox{\special{pcl:#1}}}%
699    \typeout{WARNING: pctexhp does not permit graphics to be scaled}}
700 \@namedef{Gin@rule@.pcl}#1{{pcl}{}{#1}}
701 \def\Gin@extensions{.pcl}
702 ⟨/pctexhp⟩
```

22   pubps

A LATEX 2ε graphics driver file for Arbortext's PUBps; information from Peter R
Wilson `pwilson@rdrc.rpi.edu`.

703 ⟨∗pubps⟩

22.1   Rotation

```
704 \def\Grot@start{\special{ps: gsave currentpoint
705       currentpoint translate \Grot@angle\space
706       rotate  neg exch neg exch translate}}
707 \def\Grot@end{\special{ps: currentpoint grestore moveto}}
708 ⟨/pubps⟩
```

23   dviwin

A LATEX 2ε graphics driver file for Hippocrates Sendoukas' dviwin

709 ⟨∗dviwin⟩

23.1   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.

```
710 \@namedef{Gin@rule@*}#1{{bmp}{}{#1}}
711 \def\Ginclude@bmp#1{%
712    \raise\Gin@req@height\hbox{%
713    \special{anisoscale #1,
714    \the\Gin@req@width\space \the\Gin@req@height}}}
```

The only exception is EPS files, as they may be read for BoundingBox

```
715 \@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
716 \@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
717 \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 ex-
tensions 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 `.gif` is added us-
ing `\DeclareGraphicsExtensions` then `\includegraphics{a}` would also find
`a.gif`.

```
718 \def\Gin@extensions{.eps,.ps,.wmf,.tif}
```

719 ⟨/dviwin⟩

24 ln

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

720 ⟨∗ln⟩

24.1 Graphic file inclusion

```
721 \def\Ginclude@sixel#1{\special{ln03:sixel #1}}
722 ⟨/ln⟩
```

25 trutex

A LaTeX 2ε graphics driver file for Kinch 'truetex' driver.

723 ⟨∗truetex⟩

25.1 Colour

Uses the 'color4' colour code.

25.2 Graphic file inclusion

EPS File inclusion: DVIPS style.

```
724 \def\Ginclude@eps#1{%
725  \message{<#1>}%
726   \bgroup
727   \def\@tempa{!}%
728   \dimen@\Gin@req@width
729   \dimen@ii.1bp%
730   \divide\dimen@\dimen@ii
731   \@tempdima\Gin@req@height
732   \divide\@tempdima\dimen@ii
733    \special{PSfile="#1"\space
734      llx=\Gin@llx\space
735      lly=\Gin@lly\space
736      urx=\Gin@urx\space
737      ury=\Gin@ury\space
738      \ifx\Gin@scalex\@tempa\else rwi=\number\dimen@\space\fi
739      \ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima\space\fi
740      \ifGin@clip clip\fi}%
741   \egroup}
```

bmp File Inclusion.

```
742 \def\Ginclude@bmp#1{%
743  \message{<#1>}%
744  \special{bmpfile #1}}
```

tif(f) File inclusion

```
745 \def\Ginclude@tiff#1{%
746  \message{<#1>}%
747  \special{tifffile #1}}
```

25.3 Literal PostScript

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

25.4 Default Rules

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

```
748 \def\Gin@extensions{.eps,.ps}
749 \@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
```

```
750 \@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
751 \@namedef{Gin@rule@.tif}#1{{tiff}{}{#1}}
752 \@namedef{Gin@rule@.bmp}#1{{bmp}{}{#1}}

753 \@namedef{Gin@rule@*}#1{{eps}{\Gin@ext}{#1}}

754 ⟨/truetex⟩
```

26   tcidvi

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

755 ⟨*tcidvi⟩

26.1   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.

```
756 \AtBeginDocument{\def\color@block#1#2#3{%
757   {\rlap{\ifcolors@
758       \@defaultunits\count@\current@color\@nnil
759       \dimen@\count@\p@
760       \divide\dimen@\@cclv
761       \dimen@ii#2%
762       \advance\dimen@ii#3%
763       \lower#3\hbox{%
764       \special{language "Scientific Word";%
765               type "greybox";%
766               greyscale \strip@pt\dimen@;%
767               height \the\dimen@ii;%
768               width \the#1;%
769               depth 0pt;}}%
770          \fi}}}}
```

26.2   Graphic file inclusion

EPS File inclusion.

```
771 \def\Ginclude@eps#1{%
772 \message{<#1>}%
773 \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).

```
774   \ifx\Gin@ollx\@undefined
775   \else
776     \@tempdimb \Gin@ourx bp%
777     \advance\@tempdimb-\Gin@ollx bp%
778     \@tempdima\Gin@llx bp%
779     \advance\@tempdima-\Gin@ollx bp%
780     \Gscale@div\TCI@cropleft\@tempdima\@tempdimb
781     \@tempdima\Gin@urx bp%
782     \advance\@tempdima-\Gin@ollx bp%
783     \Gscale@div\TCI@cropright\@tempdima\@tempdimb
784     \@tempdimb \Gin@oury bp%
785     \advance\@tempdimb-\Gin@olly bp%
786     \@tempdima\Gin@lly bp%
787     \advance\@tempdima-\Gin@olly bp%
```

19

```
788    \Gscale@div\TCI@cropbottom\@tempdima\@tempdimb
789    \@tempdima\Gin@ury bp%
790    \advance\@tempdima-\Gin@olly bp%
791    \Gscale@div\TCI@croptop\@tempdima\@tempdimb
792   \fi

793    \special{%
794      language \TCI@language;%
795      type \TCI@type;%
796      valid_file \TCI@validfile;%
797      width \the\Gin@req@width;%
798      height \the\Gin@req@height;%
799      depth 0pt;%
800      original-width \the\Gin@nat@width;%
801      original-height \the\Gin@nat@height;%
802      cropleft "\TCI@cropleft";%
803      croptop "\TCI@croptop";%
804      cropright "\TCI@cropright";%
805      cropbottom "\TCI@cropbottom";%
806      filename '#1';%
807      \ifx\TCI@temp\@empty\else tempfilename \TCI@temp;\fi
808      }}}
```

Default values so documents produced elsewhere should work

```
809 \def\TCI@language{"Scientific Word"}
810 \def\TCI@type{"GRAPHIC"}
811 \def\TCI@validfile{'F'}
812 \def\TCI@cropleft{0}
813 \def\TCI@croptop{1}
814 \def\TCI@cropright{1}
815 \def\TCI@cropbottom{0}
816 \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.

```
817 \let\Ginclude@bmp\Ginclude@eps
```

26.3   Literal PostScript

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

26.4   Default Rules

SW always gives the full name with extension. So leave this list empty.

```
818 \def\Gin@extensions{}
```

.ps .PS .eps .EPS are (E)PS rest are 'bmp' which is a catch all type for anything that the inport filter can handle.

```
819 \@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
820 \@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
821 \@namedef{Gin@rule@.PS}#1{{eps}{.PS}{#1}}
822 \@namedef{Gin@rule@.EPS}#1{{eps}{.EPS}{#1}}

823 \@namedef{Gin@rule@*}#1{{bmp}{\Gin@ext}{#1}}

824 ⟨/tcidvi⟩
```

27   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.

825 ⟨∗nops⟩

Raw PostScript code, no save/restore. Coordinate system unspecified.

826 `\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.

827 `\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.

828 `\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.

829 `\def\Gin@PS@file@header#1{}`

830 ⟨/nops⟩

28   Graphics Inclusion Rules

831 ⟨∗psrules⟩

832 `\def\Gin@extensions{.eps,.ps}`

833 `\@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}`
834 `\@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}`

835 `\@namedef{Gin@rule@*}#1{{eps}{\Gin@ext}{#1}}`

836 ⟨/psrules⟩
837 ⟨∗psrulesZ⟩

838 `\def\Gin@extensions{.eps,.ps,.eps.gz,.ps.gz,.eps.Z}`

839 `\@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}`
840 `\@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}`
841 `\@namedef{Gin@rule@.pz}#1{{eps}{.bb}{`gunzip -c #1}}`
842 `\@namedef{Gin@rule@.eps.Z}#1{{eps}{.eps.bb}{`gunzip -c #1}}`
843 `\@namedef{Gin@rule@.ps.Z}#1{{eps}{.ps.bb}{`gunzip -c #1}}`
844 `\@namedef{Gin@rule@.ps.gz}#1{{eps}{.ps.bb}{`gunzip -c #1}}`
845 `\@namedef{Gin@rule@.eps.gz}#1{{eps}{.eps.bb}{`gunzip -c #1}}`

846 `\@namedef{Gin@rule@*}#1{{eps}{\Gin@ext}{#1}}`

847 ⟨/psrulesZ⟩
848 ⟨∗dosrules⟩

849 ⟨!psrulesZ⟩`\def\Gin@extensions{.eps,.ps,.pcx,.bmp}`

850 `\@namedef{Gin@rule@.pcx}#1{{bmp}{}{#1}}`
851 `\@namedef{Gin@rule@.bmp}#1{{bmp}{}{#1}}`
852 `\@namedef{Gin@rule@.msp}#1{{bmp}{}{#1}}`

853 ⟨/dosrules⟩
854 ⟨∗macrules⟩
855 `%\def\Gin@extensions{{},.ps,.eps,.pict}`
856 `%\@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}`
857 `%\@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}`
858 `\@namedef{Gin@rule@.pict}#1{{pict}{}{#1}}`
859 `\@namedef{Gin@rule@.pntg}#1{{pntg}{}{#1}}`
860 `%\@namedef{Gin@rule@}#1{{pict}{\relax}{#1}}`
861 ⟨/macrules⟩
862 ⟨∗tiffrules⟩
863 `\@namedef{Gin@rule@.tif}#1{{tiff}{}{#1}}`
864 ⟨/tiffrules⟩