

REDRAW

12 January 1981
Bruce D. Lucas

This document corresponds to ReDraw Version 2.0

Redraw is a program which runs on the Altos and converts Draw files to Press files using a vector font, thus achieving much higher resolution than is possible using the ^P command of the Draw program. The program is found on [Onyx]<Alto>REDRAW.RUN.

A Redraw command line has the form

```
>redraw{/<flag>} { <value>/<switch> } { [<press-file>] <draw-file> }
```

where "[" encloses optional arguments and "{" encloses arguments which can be repeated zero or more times. See the EXAMPLES section below.

The Draw files given on the command line are converted to Press files, under control of the flags and switches as described below, suitable for printing using Empress or merging with Scribe output using PressEdit. The name given to the press file is determined in one of three ways:

1. No <press-file> is specified, in which case the extension of the Draw file is stripped off and .PRESS appended; this is the usual case;
2. <press-file> has the form foo.press, in which case foo.press would be used; or
3. <press-file> has the form foo/p, in which case foo would be used.

FLAGS AND SWITCHES

The <flag>s attached to the Redraw command set Boolean values which govern the conversion of the Draw file(s) into Press file(s). The <value>s set various parameters, and the /<switch> appended to each <value> determines the value's interpretation.

The flags are

- /s Make arrangements to allow the Press file to be merged another Press file which uses the PressEdit "<==<" marker (such as a Scribe .PRESS file which has used the PressPicture command). Produces a "<==<" string pointing to the bottom middle of the picture; see the PressEdit documentation.
- /c Causes any splines with a color other than black to be printed as lines 3/4 as wide as they would normally be.
- /v verbose - Print each vector's length as it is output.
- /q quiet - Don't print out the usual S for each spline, k for each knot, etc.
- /m Merge the named Draw files rather than creating a separate Press file for each one. Helps to overcome Draw's inability to handle lots of splines. If no <press-file> is given, the first <draw-file> with its extension replaced by ".PRESS" will be used.

The parameter switches are

/l0 /l1 /l2 /l3

Parameter is the half the line width, in microns, of the respective Draw line size (l0 represents the thinnest Drawline, l3 the thickest). Defaults are 16, 32, 64, and 128 microns, as for Draw. For non-horizontal and non-vertical lines, the desired width line must exist as a vector font; currently available widths are 8, 16, 24, 32, 48, 64, 96, and 128 microns. Widths are specified as half the actual line width for compatibility with Draw.

/f0 /f1 /f2 /f3

Parameter is the name of a font to use for Draw font 0, 1, 2, or 3. Example of a font name: Helvetica10b is 10-point bold-face Helvetica. Default fonts are the same as the default Draw fonts.

/d Length of solid (black) portion of dashed lines, in 384ths inch (Dover scan lines). Use a multiple of 16 for best results. Default is 80.

/o Like /d, only for the omitted (white) portion of dashed lines. Default is 48.

/x A global x offset for the picture. Redraw normally attempts to center the picture on the page; this offset is measured with respect to the centered position. Default is 0.

/y Like /x only for the y dimension.

/M Maximum "length" vector character that will be used, in Dover scan lines. Must be 16, 8, 4, 2, or 1. Default is 16. Case of switch is significant. For best results, don't use this switch.

/m Like /M, only for minimum "length" vector used. Default is 1. Case of switch is significant. For best results, don't use this switch.

/u Unit table size. Each maximal portion of a spline curve that is monotonically nondecreasing or nonincreasing in the x direction, and each Draw caption, is a unit. Default is approximately 5500, and will depend on the size of your sysfont, etc.

/k Knot table size. Determines maximum number of knots per spline. Default is 100.

EXAMPLES

```
>redraw/s foo.draw
```

will create foo.PRESS with Scribe interface.

```
>redraw 8/L0 foo.draw gorp.draw
```

will produce foo.PRESS and gorp.PRESS, using 16 micron lines for Draw's thinnest line size.

```
>redraw/m/s Helvetica10b/f2 gorp.press foo1.draw foo2.draw
```

will merge foo1.draw and foo2.draw into gorp.press, using Helvetica10b for font 2 in the Draw files. A Scribe interface will be built into gorp.press.

USER.CM INTERFACE

Redraw will obtain fonts and line widths from the [DRAW] section of User.cm. It will also obtain these parameters from a [REDRAW] section, if one is present. The section which occurs later in User.cm will prevail. Thus, you can have Redraw use different fonts than Draw, if you really want to. In addition, you can specify in the [REDRAW] section the length of the dashes, with the DASHON entry, and of the

omitted portions of dashed lines, with the DASHOFF entry, in just the same way you set these parameters using the /d and /o switches (q.v.). Thus, a typical entry might be

```
[DRAW]
FONT:0 Helvetica10.al
FONT:1 Helvetica10b.al
FONT:2 Helvetica8.al
FONT:3 Math10.al
LINEWIDTH:3 96

[REDRAW]
DASHON:32
DASHOFF:32
```

Note that Draw records no information in the Draw file about what fonts and line thicknesses you were using when you used Draw. Thus, fonts and line thicknesses produced by Redraw are determined entirely by the defaults built in to Redraw, by your User.cm entries, and by the command-line /f and /l switches, in that order.

CAUTION ABOUT VERTICAL LINES

Since the Dover scans the page vertically, it will not be able to correctly print pages which have too many characters in any one vertical stripe (of sixteen scan lines); this corresponds to the missed scan line problem on the XGP. To forestall this problem, Redraw represents exactly vertical (and horizontal) lines in a form which the Dover can scan convert more quickly, namely rectangles of black. A line is exactly vertical (resp. horizontal) to Redraw only if it is a spline with two knots whose x (resp. y) coordinates are exactly equal. Moral: make vertical lines exactly vertical by using Draw's grid points and the mouse button which gravitates to them.